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**Editor-in-Chief:** Andrew Drwiega

**General Manager:** Jakhongir Djalmetov

**International Marketing Manager:** Roman Durksen

**Digital Manager:** David Siriphonphutakun

**Art Director:** Rachata Sharma

**Chairman:** J.S. Uberoi

**President:** Egasith Chotpakditrakul

**Chief Financial Officer:** Gaurav Kumar

**Advertising Sales Offices**

**FRANCE/SPAIN**

Stephane de Remusat, REM International  
Tel: (33) 5 3427 0130  
E-Mail: sremusat@rem-intl.com

**GERMANY**

Sam Baird, Whitehill Media  
Tel: (44-1883) 715 697 Mobile: (44-7770) 237 646  
E-Mail: sam@whitehillmedia.com

**UK**

Zena Coupé  
Tel: +44 1923 852537, zena@expomedia.biz

**NORDIC COUNTRIES/ITALY/SWITZERLAND**

Emanuela Castagnetti-Gillberg  
Tel: (46) 31 799 9028  
E-Mail: emanuela.armada@gmail.com

**RUSSIA**

Alla Butova, NOVO-Media Ltd,  
Tel/Fax: (7 3832) 180 885 Mobile: (7 960) 783 6653  
Email: alla@mediatransasia.com

**USA (EAST/SOUTH EAST)/CANADA (EAST)**

Margie Brown, Blessall Media, LLC.  
Tel: (+1 540) 341 7581  
Email: margiespub@rcn.com

**USA (WEST COAST)/CANADA (WEST)/SOUTH AMERICA**

Robert Sitch  
Tel: +1 703 856-7612  
E-Mail: rjsitch@gmail.com

**INDIA**

Sanjay Seth  
Global Exposures  
Tel: +91 11 466 96566 Mob: +91 9818 697279  
Email: sseth.globex@gmail.com

**TURKEY**

Zeynep Özlem Baş  
Mob: +90 532 375 0046  
Email: media@oz-ist.com

**ALL OTHER COUNTRIES**

Jakhongir Djalmetov  
Media Transasia Limited  
Tel: +66 2204 2370, Mobile: +66 81 6455654  
Email: joha@mediatransasia.com

Roman Durksen  
Media Transasia Limited  
Tel: +66 2204 2370, Mobile +66 83 6037989  
E-Mail: roman@mediatransasia.com



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Tel +66 2204 2370 Fax: +66 2204 2387  
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**THIS MONTH ON ARMADAINTERNATIONAL.COM**



■ **RUSSIA FIRES FOR THE FIRST TIME AT SEA THE NAVAL PANTSIR**

The Russian Navy has tested for the first time from a ship the Pantsir-M surface-to-air missile and anti-aircraft artillery system, which is a naval version of the land mobile Pantsir-S1 system.



■ **JAMMING BACKPACKS**

The US Army could receive backpack-based electronic warfare/cyber attack systems in the coming years.



■ **DECOY AND DESTROY**

A new addition to Saab's Araxis electronic warfare product line provides added protection for Gripen.



■ **RASISR SHARP**

L3Harris expects to have its new RASISR Signals Intelligence collection pod ready for delivery in 2021, the firm has told Armada.



An F-35A Lightning II pilot assigned to the 4th Expeditionary Fighter Squadron prepares for a combat sortie in the US Air Force's Central Command area of responsibility 26 April 2019, Al Dhafra Air Base, United Arab Emirates.

# NEW DIMENSION TO GULF DEFENCE MARKET

The normalisation of relationships with Israel through the Abraham Accords will potentially stimulate the growth of the defence industry, not least among the signatories.

**Gordon Feller and Andrew Drwiega**

Leaders in Washington DC have concluded that President Biden will probably not seek to change “the Abraham Accords”. Those are the US-brokered agreements of 2020 which normalised Israeli diplomatic relations with the UAE on 13 August, 2020 and Bahrain on 15 September 2020. Sudan normalised relations with Israel on 23 September and a formal letter confirmed Morocco’s ‘new era of relations’ with Israel on 22 December 2020. It was the first breakthrough in the normalisation of relations between Israel and Arab countries

since Jordan in 1994. While defence and hi-tech trade did exist ‘out of sight’ before these Accords and agreements, these public statements will formalise such business into the future.

At the time of their signing, the broad consensus was that these Accords would alter the arms trade dynamic in the region. What might be expected in the short to medium term is the expansion of not only international defence industries looking to grow their footprints, and their profits, in the Gulf, but also a maturing of the Gulf’s own fledgling national defence industries.

Saudi Prince Alwaleed bin Talal once admitted that arms sales in the Middle East and the Gulf are ordinarily “highly secretive and subject to no ministry of finance oversight or controls.” Gulf monarchies (plus the governments of the Arab world, Iran, and some developing states) are governed in ways such that that are not subject to the same arms trade rules of the kind prevailing inside NATO members or allies.

Gulf monarchies operate under none of the arms restrictions which most democracies have in place, nor is there any

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The General Atomics Predator XP is an updated version of the Predator RPA. It has been licensed by the US Government for sale to a broader customer base, including Middle Eastern, North African, and South American regions.

**PRESIDENT BIDEN PAUSES DEFENCE SALES TO SAUDI ARABIA AND UAE**

As *Armada International* was going to press news was breaking that newly inaugurated President Biden was pausing arms sales to the United Arab Emirates and Saudi Arabia. These sales and others, such as arms sales to Taiwan, were cleared by ex-President Trump as he neared the end of his tenure as President. As noted elsewhere in this article, this directly impacts high value arms sales including Lockheed Martin F-35As, General Atomics Predator XPs and munitions among many others. Although not specifically mentioned in the announcement, there has been growing concern regarding how the war in Yemen has been fought, particularly with weapons and munitions from arms manufacturers in the West.

With the IDEX and NAVEX 2021 defence exhibitions already reconfirmed to take place at the Abu Dhabi National Exhibition Centre (ADNEC), Abu Dhabi, UAE, from 21 - 25 February 2021, this breaking development is likely to cause considerable confusion for those major defence companies attending.

national institution which regulates arms acquisition standards. In essence, the Gulf's governments have created decision-making processes which are intentionally meant to be opaque. This may continue to cause difficulties for defence manufacturers located in highly regulated countries.

According to a tracker developed by one US-based non-profit, Forum on the Arms Trade, more than \$42 billion has been specified in mandatory Foreign Military Sales notifications since 30 March, 2020.

To better understand the impact of the Accords we asked notable experts to provide their views about the interplay between the Gulf's monarchies, the US government, and those defence firms which are looking to sell arms to the Gulf monarchies. These discussions were conducted before the 20 January inauguration of President Biden. Here's what we learned:

Raffaella A. Del Sarto, associate professor of Middle East Studies at The Johns Hopkins University School of Advanced International Studies. Ms Sarto thinks that "it is very unlikely that the Accords will bring any degree of greater transparency to the region. The accords with Israel have further boosted the international reputation of these countries and their image as 'moderate' regimes, especially in the US. They are likely to be

seen as real partners in a turbulent region, and the sale of advanced weapons to these countries is likely to increase. In addition, the Accords promise to boost business deals on advanced technology with Israel even further (which were conducted secretly before).

The weapons industry provides huge profits and employment, which is even more relevant in times of economic crises, most recently experienced globally as a result of the COVID pandemic. The Gulf states are key clients as the Middle East is currently one of the most militarised regions in the world.

Dr. Osamah Khalil, associate professor of History at Syracuse University in New York believes that "the Abraham Accords will facilitate greater arms sales to the Persian Gulf region. Even before the agreement, the United Arab Emirates (UAE) sought a greater role in US military planning and operations, and purchased large quantities of US weapons." It also was a consumer of Israeli surveillance technologies.

Bahrain is home to the US Naval Forces Central Command and the US Fifth Fleet, and is responsible for US naval activities in the Persian Gulf, Red Sea, Arabian Sea, and parts of the Indian Ocean. Both the UAE and Bahrain have sought expanded

ties with Washington to contain Iran's influence in the region. As demonstrated by the sale of up to 50 Lockheed Martin F-35 fighters, 18 armed General Atomics MQ-9 Predator XP unmanned aerial systems and other defence equipment to the UAE worth around \$23 billion, there will be an even greater demand for US and Israeli weapons and technology.

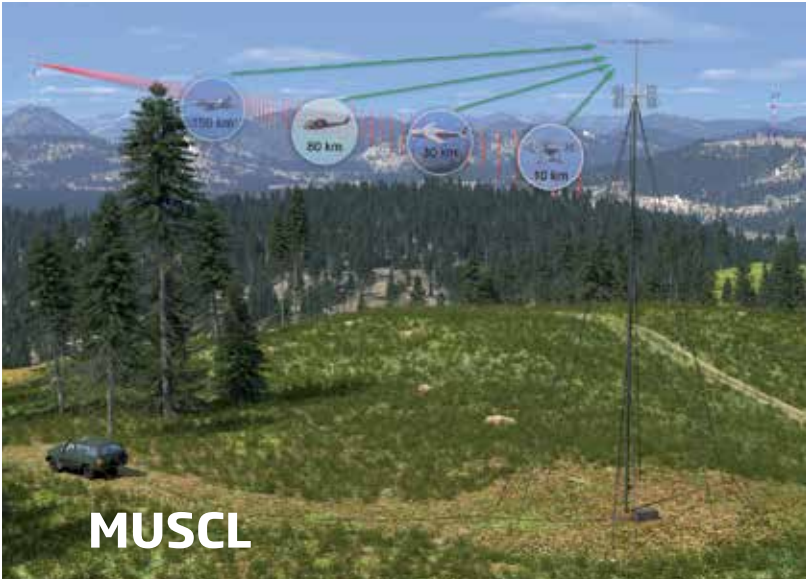
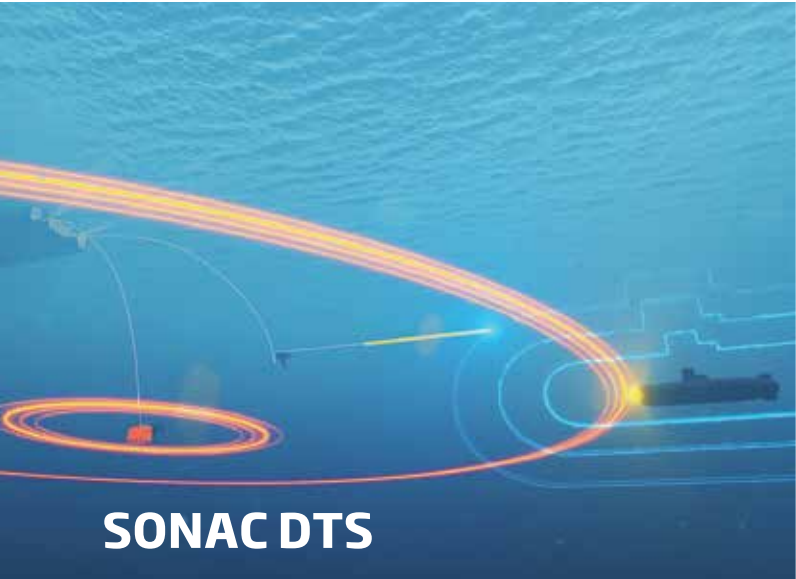
Dr. Eckart Woertz, director of the German-based GIGA Institute for Middle East Studies sees an additional benefit, in that "one aspect of the arms trade in the Gulf is to cultivate foreign alliances, not necessarily to increase military effectiveness."

Dr. William D. Hartung, director of the Arms and Security Program at the Washington, DC-based Center for International Policy does not expect the Abraham Accords to lead to more transparent arms procurement: "They are the result of a pragmatic decision by the governments of the UAE and Israel to publicly align in service of their de facto

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**The Ticonderoga-class guided-missile cruiser USS Leyte Gulf transits the Persian Gulf after a port visit. The vessel was on a routine deployment to the US 5th Fleet area of responsibility.**

alliance against Iran; curry favour with the (then) Trump administration; and open up potentially beneficial economic and security ties. For its part, the Israeli government has discussed a countervailing \$8 billion arms package from the US, one that would include additional F-35s beyond those it already possesses, along with attack helicopters and other offensive weaponry.

Taufiq Rahim, senior fellow in New America Foundation's International Security programme stated that “the normalisation of relations between the UAE and Israel take a relationship previously in the shadows into the public view, which will inevitably lead to greater attention, security, and ultimately heightened transparency.”

Rahim was asked about the possible implications of the Abraham Accords – especially for those who are seeking to encourage more transparency in arms procurement. He thinks that “there will

be opportunities for media and academic institutions to openly engage in further exploration of the relationship between the defence sectors ...and given the open media in Israel, this will be a natural result.”

Dr. Seema Gahlaut, director, Strategic Trade Management Initiative & Senior Fellow, Trade, Technology and Security Program at The Henry L. Stimson Center; a noted expert on munitions export controls and sanctions, was asked about the most likely categories of arms that the US might sell (via the FMS process) or allow its companies to sell via direct commercial sales (DCS) and 600 Series programs (through the Commerce Control List) to Bahrain. “In 2018, Bahrain’s arms imports were reported to be \$65 million. These figures do not include military equipment such as small arms and light weapons, trucks, small artillery, ammunition, support equipment, technology transfers, and other services. Some of these excluded

categories have been part of what US allies (such as the UK) have been selling to Bahrain for over a decade.” Dr Gahlaut says these categories are “now part of the 600 Series in the Commerce Control List, where the traditional emphases has been on promoting US sales, with much lower level of due diligence than the State/DDTC-managed, ITAR-controlled, arms sales.”

Dr. Gahlaut concludes that, “on the issue of diversion, Bahrain’s own regulatory structures provide some protection: arms, ammunition, explosives and military weapons cannot be imported/exported into/from Bahrain without a No Objection Certificate from the Ministry of the Interior.”

While the defence industries of the signatories are all likely to benefit directly from the brokered Accords, international defence manufacturers and suppliers will also find an expanded market which is likely to be less restricted than before. **▲**



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(BAE Systems)

Saudi Arabia's Eurofighter Typhoons use the Thales Damocles laser designation pod rather than Litening or Sniper.

# THE EXPANSION OF GCC AIR POWER

The expansion of GCC air power has been rapid and in no small measure driven by region rivalry with Iran.

By Jon Lake

In recent years, the air forces of the Gulf Co-operation Council (GCC) nations (the Kingdoms of Saudi Arabia and Bahrain, the States of Kuwait and Qatar, the United Arab Emirates and the Sultanate of Oman) have undergone major modernisation and expansion programmes. Though the scale and pace of this process has increased markedly in recent years, it is more deep-rooted than is sometimes supposed. The process dates back to before Operation Desert Storm (1990-91), though it accelerated significantly about ten years ago, following the so-called US "Pivot to Asia" pursued by

the Obama administration, and with the associated publication of Hillary Clinton's 'America's Pacific Century.'

It became increasingly clear that although the US would remain engaged in the region, its allies in the Middle East would be expected to shoulder a greater share of the burden of defending themselves, supporting and co-operating with deployed US, British and French forces rather than substantially relying on these foreign elements. This added impetus to the drive to achieve greater interoperability with US forces, ensuring that new military installations were built to US and

NATO specifications, and that personnel were trained to operate alongside allied forces. GCC air forces increasingly began to train with air arms from outside the Gulf – sometimes hosting exercises such as the UAE's Advanced Tactical Leadership Course (ATLC), and sometimes deploying to exercise overseas. The Royal Saudi Air Force (RSAF), for example, participated in the Red Flag exercise in the USA, and in exercises in the United Kingdom and France.

At much the same time, some of the larger GCC nations embraced a more outward-looking stance, and adopted a greater willingness to operate on the international

stage. Sometimes this meant using national wealth to support humanitarian assistance to other nations (especially other Muslim nations) – and this drove Qatar's acquisition of the Boeing C-17 Globemaster, for example. Sometimes this new more international outlook resulted in GCC members participating in combat operations as part of an international coalition. The UAE beginning a rotational deployment in Afghanistan from 2007, and just four years later, both the UAE and Qatar deployed fast jet aircraft to participate in the NATO-led intervention in Libya.

GCC air forces demonstrated their readiness to operate under US command, as part of an international coalition from 22 September 2014, when Saudi, Emirati, Qatari, Jordanian and Bahraini fast jets joined US aircraft in air strikes against Daesh targets in Syria, and were themselves later augmented by Moroccan General Dynamics F-16s.

#### RIVALRY WITH IRAN

For Saudi Arabia, growing rivalry with the Islamic Republic of Iran was a major

concern, especially after a multi-sided civil war began in Yemen on its southern border in late 2014, with Iran supporting and arming the Houthi rebels.

Tensions between Saudi Arabia and Iran go back many years, based in part on the rivalry between the Sunni and Shia branches of Islam, and on competition between the two for leadership of the Islamic World, as well as the very different forms of government – one an absolute monarchy, the other a theocratic Republic. These tensions are exacerbated by their very different relationships with the US and their attitudes to its influence over, and presence in, the Gulf region. The two Islamic powers even differ in their approach to oil pricing, with Saudi Arabia taking a longer-term view of the global oil market with a willingness to moderate prices, while Iran, with much smaller reserves and a larger population, tends to focus on high prices in the shorter term.

Saudi Arabia's concerns about Iran grew as Iran attempted to spread its influence, funding and training insurgent groups in Lebanon, Syria and post-Saddam

Iraq, and as Iran intensified its efforts to build up its own nuclear arsenal.

In June 2017, Saudi Arabia, the UAE, Bahrain and Egypt severed diplomatic relations with Qatar, citing Qatar's supposed "embrace of various terrorist and sectarian groups aimed at destabilising the region", but also motivated by rivalry between these major oil and natural gas producers and by Qatar's relations with Iran (they share the world's biggest natural gas field). Relations are now being restored.

The Yemeni civil war has dragged on, however, and Saudi Arabia and its allies (including Sudan and Egypt) have continued to mount airstrikes against Houthi targets, with inevitable collateral damage to Yemeni civilians and civilian infrastructure provoking widespread condemnation.

State-owned Saudi Aramco oil processing facilities at Abqaiq and Khurais in eastern Saudi Arabia came under attack by unmanned aerial vehicles (UAVs) on 14 September 2019. The Houthi movement in Yemen claimed responsibility, but direct Iranian involvement was widely suspected.

The need to deter and counter the



A pair of Qatar Emiri Air Force Rafales; Qatar has opted for a mixed fleet of fighters.

Dassault Aviation - A. Pecchi

Qatari Emiri Air Force's (QEAF) Mirage 2000s and Rafales fly in formation over Doha, Qatar, alongside US Air Force (USAF) F-15E Strike Eagles during the Qatar-US Air Forces Central Command Friendship Event, 24 August 2020.

Iranian threat has been a significant factor behind ongoing efforts by GCC air arms to modernise and expand.

### AIR POWER EXPANSION

Even 30 years ago, one GCC air force was operating at significant scale, and was beginning to reduce its reliance on expatriate personnel. According to the US Air Force's official Gulf War Air Power Survey, the RSAF flew more sorties than any other non-US coalition air arm during Operation Desert Storm (5,829 of them), and was the only non-US partner air force to score an air-to-air 'kill' during the conflict.

The Douglas A-4 Skyhawks and Dassault Mirage F1s that fled in the face of Iraq's invasion also allowed the 'Free Kuwait Air Force' to fly 780 interdiction sorties (more than the French Armée de

l'Air, for example), but generally, the GCC air forces were too small to play a leading part in the Allied air campaign, and the GCC nations' most important contribution was in providing bases for US, British and other allied aircraft.

Even before Iraq invaded Kuwait, Arab air forces were embarking on modernisation programmes. Saudi Arabia had introduced McDonnell Douglas (now Boeing) F-15 Eagle interceptors and British-supplied Panavia Tornados, Kuwait had already ordered some 40 McDonnell Douglas (Boeing) Hornets (32 single-seat F/A-18Cs and eight two-seat F/A-18Ds), and Bahrain had started to receive the first of 22 General Dynamics (now Lockheed Martin) F-16C/Ds, while the UAE was looking at options for a new fighter to augment its Mirage 2000s. Oman replaced its ageing

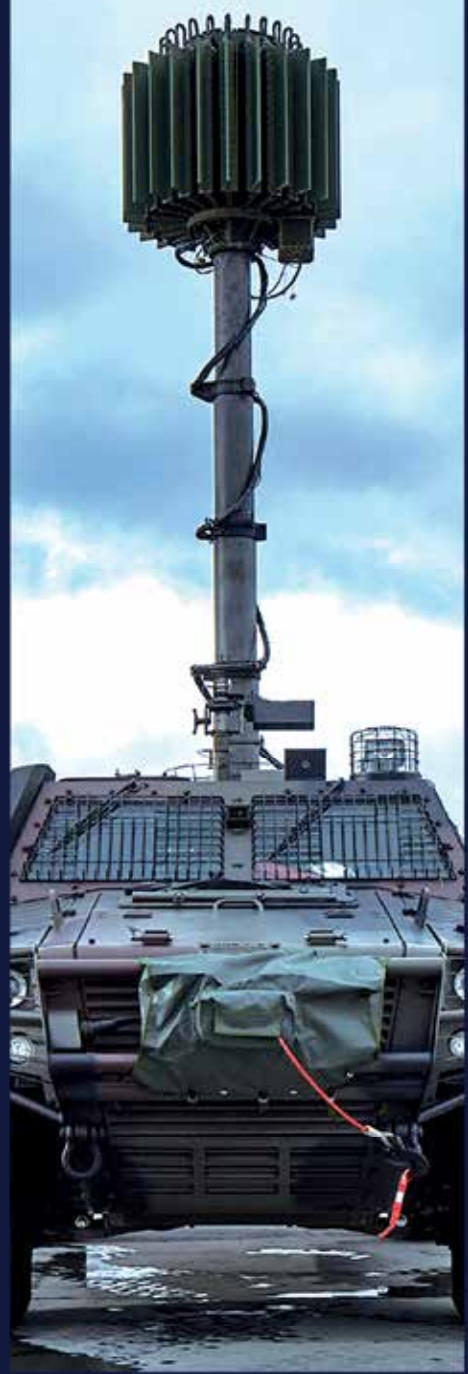
Hawker Hunters with new BAE Hawks in the mid-1990s, and ordered F-16s in 2005, while Qatar replaced 14 Dassault Mirage F1s with 12 Mirage 2000s from 1997.

Arguably more significant than the delivery of 'teen series' fighters to GCC air forces was the US decision to supply more advanced weapons, including Raytheon GBU-10/12 laser guided bombs, AGM-65D/G Maverick air-to-ground missiles and above all, the AIM-120 AMRAAM air-to-air missile, which gave the new generation of warplanes a real long-range punch that had previously been lacking. The US was initially resistant to the idea of introducing this capability into the region, in part to limit proliferation of this advanced technology but also to try to allow Israel to maintain a (Congressionally mandated) 'Qualitative Military Edge' (QME) over its neighbours.



(DVIDS)

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The US rationale for maintaining this QME is to support what it regards as a reliable and democratic ally, compensating for Israel's smaller size and population than its potential adversaries. It also allows the US to use Israel to advance its geostrategic goals without the need to deploy additional US military forces. Israel has been used as a cost-effective, trustworthy, battle-hardened, force-multiplier and as a useful laboratory for US defence equipment, technology and tactics.

Eventually, in November 1999 Bahrain was given permission to procure AIM-120B Advanced Medium-Range Air-to-Air Missiles for its F-16 fighters, becoming the first Gulf Arab country to acquire these advanced missiles. The then-defence secretary William Cohen also promised to sell the AIM-120 to Saudi Arabia.

By the turn of the Millennium, it was clear that the 'teen'-series fighters equipping GCC fighter arms would soon be rendered obsolete – increasingly unable to guarantee success against developed versions of the Sukhoi Su-27 'Flanker' (then viewed as the baseline threat), and by the new generation of fighters exemplified by the Eurofighter Typhoon, Dassault Rafale and Saab Gripen.

After evaluating the Rafale, the UAE opted instead to acquire a new, bespoke derivative of the F-16, equipped with a new Northrop Grumman AN/APG-80 AESA radar, an internal FLIR and a state of the art electronic warfare suite. The Block 60 F-16E/F Desert Falcon was the most advanced F-16 variant ever produced, and was more capable than any



(BAE Systems)

On 18 May 2017 BAE Systems rolled out initial deliveries of the Eurofighter Typhoon and Hawk aircraft to the Royal Air Force of Oman.

USAF version. It also represented the most advanced fighter aircraft in the GCC. The F-16s augmented the UAE's Mirage 2000s, rather than replacing these, and effectively doubled the UAE's fighter force at a stroke. The UAE announced the purchase of 55 single-seat F-16Es and 25 two-seat F-16Fs in May 1998, and deliveries began in 2004. Subsequent efforts to acquire further advanced fighters saw the announcement of deals for the Dassault Rafale, Eurofighter Typhoon and Block 61 F-16s, but none were concluded. Most recently, the UAE appeared to have acquired the Lockheed Martin F-35A Lightning Joint Strike Fighter – if ITAR and Israeli QME concerns can be overcome, as well as a pause of sale initiated by President Biden's administration.

In Saudi Arabia, the RSAF announced its intention to purchase the Eurofighter Typhoon from BAE Systems in December 2005, subsequently signing a Memorandum of Understanding (MoU) for 72 aircraft in 2006. In December 2011, Saudi Arabia signed a \$29.4 billion deal for 84 Boeing F-15SA (Saudi Advanced) aircraft, with 70 existing F-15S fighter bombers to be converted to the same standard. Though there have been persistent rumours of a further Typhoon order, and though an MoI for 48 further aircraft has reportedly been signed, a contract remains stubbornly just out of BAE's reach!

In Oman, by contrast, the original batch of 12 F-16C/Ds were augmented by 12 further aircraft after a second contract was signed in December 2011, and one year later, a contract was signed for 12 Eurofighter Typhoons. But whereas the Saudi Typhoon

armament package included the Diehl BGT Defence IRIS-T IR-homing AAM, the Omani aircraft was armed with the BAE ASRAAM – arguably the most capable close-range missile exported to the region. This was because when Saudi Arabia signed up for Typhoon the only option was the ASRAAM Block 4 (which used a seeker that was subject to ITAR restrictions) whereas Oman (and now Qatar) have bought the ASRAAM Block 6, which uses an MBDA-made (non ITAR) seeker.

Kuwait ordered 28 Typhoons (six of them two-seaters) in April 2016, and will arm its aircraft with the IRIS-T missile. These aircraft will be the first Typhoons equipped with a production AESA radar, and the first fighters in the region with a new generation AESA with a repositioner. The 28 Typhoons will be augmented by 22 F/A-18Es and six twin-seat F/A-18Fs, all being delivered to a standard close to the US Navy's new Block III version, with an Elbit Systems wide-area cockpit display. The 56 Typhoons and Super Hornets will replace the survivors of 40 'Heritage' Hornets, marking a small but significant expansion.

Qatar's air power expansion was, by contrast, anything but modest. The Qatar Emiri Air Force had operated a single fighter squadron equipped with 12 Dassault Mirage 2000-5s, but ordered 24 Dassault Rafale fighters in May 2015, 24 F-15QAs (plus an option for 12 more), in November 2016 and 24 Eurofighter Typhoons in September 2017. The QEAF ordered 12 additional Rafales in December 2017, with an option for 36 more! The expansion of the QEAF

fighter element from 12 to 84 aircraft was an unparalleled step, and necessitated a huge investment in both training and infrastructure.

Bahrain, whose acquisition of the AIM-120 AMRAAM triggered the latest round of air power modernisation sought a new fighter for many years, but was limited by budgetary constraints. The sale of 19 new Block 70 F-16s was first approved by the US State Department in 2016 but was delayed as a result of the Obama administration's human rights concerns. Incoming President Donald Trump dropped the human rights conditions that Obama had imposed and in June 2018 a contract was signed for the sale of 16 new-build Block 70 F-16Vs, accompanied by the upgrade of Bahrain's existing fleet of 20 F-16C/Ds to the F-16V Viper configuration.

Though we have highlighted the expansion and modernisation of GCC fighter forces, there has been similar progress in the fielding of new and more capable intelligence, surveillance and reconnaissance (ISR), airborne early warning (AEW), tanker and airlift capabilities, and with the introduction of larger numbers of more sophisticated and more modern helicopters. Moreover, the modernisation and expansion of GCC air power continues at pace, and the region is becoming increasingly self sufficient and independent of the US. The biggest 'gap' is now in the 'infrastructure' of air power – especially on a supranational level, with no real co-ordinated and integrated air defence and command and control network at above national level. **▲**



The French Navy frigate Courbet, part of the European-led Maritime Awareness mission in the Strait Of Hormuz (EMASOH) escorts a tanker to ensure freedom of navigation in the Persian Gulf and the Strait of Hormuz.

# GCC NAVIES BUILD FOR PERSISTENT PATROLS IN HOME WATERS

While international navies provide larger warships to patrol the waters of the Gulf, GCC nations are building their strength to sustain a constant presence.

**Dr Lee Willett**

**T**he Gulf region remains a global security hotspot, and its waters are a melting pot of different security challenges. Moreover, the region's security context is in some senses unique: whereas, in other global regions, low- and high-end risks can to a degree be compartmentalised, the restricted geophysical and constricted geostrategic nature of the Gulf's maritime layout means that low-end and high-end maritime challenges to good order at sea are intertwined, creating a highly volatile area

of hybrid, 'grey zone' risks.

Lower-end, maritime security-based threats in the region include counter-narcotics and other smuggling across the Northern Arabian Sea as well as other maritime terrorism risks to commercial ships transiting the Straits of Hormuz. At the opposite end of the risk spectrum, the Gulf region reflects the global trend of a return to state-based naval competition: Iran continues to improve its naval potential across the board, while also developing joint capability that poses an anti-access/area

denial risk to the Straits of Hormuz; Western navies – notably, the United States Navy (USN), the Royal Navy (RN), and the French Navy (FN) – continue to build permanent high-end naval presence in the region, both at sea and ashore, to support national and multinational security interests.

## **GREY ZONE THREAT**

In between these two ends of the spectrum, hybrid, 'grey zone' risks are playing out actively at sea across the region. In one of the most prominent recent episodes, in



UAE Navy's Abu Dhabi Baynunah Corvette has multi-mission capabilities including coastal patrol and surveillance, mine detection and avoidance, helicopter operations, and anti-air / anti-surface capabilities.

mid-2019 several commercial ships were attacked with explosive devices while at anchor and underway, and others were boarded at sea or were seized with the crew held. These incidents prompted substantial international response, for example with two multinational naval task forces established to increase maritime surveillance

and security capacity in the region: the nine-country International Maritime Security Construct (IMSC) – for which Coalition Task Force (CTF) Sentinel is the operational component; and the European-led European Maritime Awareness in the Straits of Hormuz (EMASoH) task force.

These two new task forces sit alongside

the maritime security presence already provided by the USN-led, Bahrain-based Combined Maritime Forces (CMF) partnership. With 33 international partners contributing, CMF generates three separate Combined Task Forces (CTFs): the counter-terrorism-focused CTF-150; the counter-piracy-focused CTF-151; and the maritime-



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Inside one of the construction facilities at Abu Dhabi Shipyards.

and wider theatre security-focused CTF-152.

The strategic ethos of many regional and extra-regional navies operating in and around the Gulf region is to provide presence to support both national and multinational maritime security interests. This is reflected very much, too, in the perspective of another key group of navies operating in the region – the indigenous forces of the Gulf Co-operation Council (GCC) navies.

#### GULF NAVAL STRENGTH

The six GCC members – Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE) – all have naval forces that contribute actively to national and multinational operations in the region.

In the multinational context, for example, five GCC members – Bahrain, Kuwait, Qatar, Saudi Arabia, and the UAE – are also CMF members. Bahrain, Kuwait, Saudi Arabia, and the UAE have all commanded different CTFs at different times. The Saudi Arabian navy and border guard are currently commanding CTF-150 and -152, respectively; the Pakistan Navy is commanding CTF-151.

Across the Gulf region, while the USN, RN, FN, and other Western navies bring the higher-end capability, the GCC navies bring a collection of key maritime security capabilities. Moreover, they have the locality and capacity to bring persistent presence.

The Saudi Arabian navy operates modern frigates, and it (along with the UAE) also has mine warfare and maritime patrol aircraft capability. However, where the GCC navies collectively add prominent capability to the regional maritime security

mix is in patrol forces – namely, corvettes, patrol vessels, fast attack craft (FACs), and interceptors. All six bring patrol force in some form. While these forces are a mix of old and new capabilities, some of the new platforms are notable – for example, the Royal Navy of Oman's Khareef-class corvettes and Al-Ofouq-class patrol vessels, and the UAE Navy's Abu Dhabi-class corvette and Baynunah-class FACs. Also of note from a maritime security context, all six GCC member states have a coastguard or maritime police force. This underlines the lower-end capacity GCC naval forces bring in providing maritime security presence across the region. One capability highlight here is the UAE coastguard receiving two new Arialah-class offshore patrol vessels.

When combined with their local presence, the ability of the collective GCC navies to generate patrol force and coastguard capacity at sea adds significantly to the region's maritime security balance.

The CTF Sentinel/IMSC maritime security construct provides a good example of where and how regional navies bring significant security impact. From amongst the six GCC navies, three – Bahrain, Saudi Arabia, and the UAE – are IMSC members. CTF Sentinel's concept of operations is that 'Sentinel' duties – requiring more capable platforms (like destroyers and frigates) to be present in more risky regions (like around the Straits of Hormuz) – are performed by larger navies like the RN and the Royal Australian Navy; 'Sentry' duties – requiring, in principle, patrol forces focused on a wider range of regions to bring surveillance and reassurance presence – are performed largely by the regional navies.

Despite this clear division of labour in a construct like CTF Sentinel, providing more consistent presence more widely across the region will require the GCC navies, individually and collectively, to maintain and augment key capabilities. Such capabilities might include improved sensors and communications – allowing these navies to more ably enhance and share collective understanding of the recognised maritime and common operating pictures. Such enhanced, shared collective understanding of the regional maritime picture is essential to understanding the 'grey zone' risk in particular, and boosting the effectiveness of the presence required to address it. **A**



The patrol coastal ship USS Tempest (PC 2) transits the Strait of Hormuz acting as an escort on 2 December 2020.



# DESIGNED FOR SPEED AND OFFSHORE SECURITY

Coastal and fast patrol craft are being increasingly used to protect coastlines and offshore economic assets. Armada talked to Israeli Shipyards' Oded Brier about recent and future developments.

—  
by Andrew Drwiega

**I**srael Shipyards (ISL) has a built a reputation for designing and manufacturing fast attack craft and offshore patrol vessels. At the end of 2019 it was engaged by Israel's Ministry of Defence to design a new advanced combat vessel, the Reshef-class based on the S-72 design, to replace its existing SAAR 4.5 fast attack missile corvettes. However, in November its flexibility was also proved when the Israel MOD and the Israeli Navy requested ISL to supply of a floating dock and mainte-

nance for 10 years.

Initially established as part of the Israeli Government's defence base, it was privatised in 1995 and is now managed by ex-naval officers. It has been in business by the side of Haifa Bay since 1959, celebrating its 60th Anniversary in 2019. It is on a 330,000 square metres site by the coastline and within the site has up to 45,000 square metres of internal space. Infrastructure includes long deep water docks and a floating dock for repair and maintenance.

The first vessels that it built were SAAR 4 fast attack craft for the Israeli Navy in 1960. The modern day equivalent is the Shaldag fast patrol craft which is capable of speeds up to 50 knots, and offshore patrol vessels (OPVs) that can travel at 24kts. These OPVs can be specified to lengths of 45m, 58m or 62m.

In July 2020 the shipyard announced a contract to supply an West African country with two OPV 45s complete with ongoing support, training and a maintenance programme as part



Fast patrol craft such as the Shaldag have been one focus for ISL since its founding in 1959.

of its Logistic Support (ILS) services. The vessels will feature day/night observation systems and a stabilised weapon systems.

Israel Shipyards vice president marketing, Mr. Oded Breier, talked to Armada International about how his organisation was addressing the current and future needs of the Israeli Navy and positioning itself for other international naval customers.

Armada International: How has the product portfolio of ISL changed from five years ago?

Oded Breier: Naturally, developing a new vessel is a long process that involves extensive resources and effort. Nevertheless, over the last five years, ISL was able to develop and launch two new vessels. The SAAR S-72 which is a medium-size corvette, that can also serve as an OPV, depends on the required weapons configurations. The SAAR S-72 was chosen during 2020 by the Israeli Navy and Israeli Ministry of Defense to be the basis from which to develop the Israeli Navy's future platform (Reshef-class) to replace the successful SAAR 4.5. The SAAR S 72 will be exceptionally low cost to

maintain as a result of its hybrid propulsion system and economic design.

The second vessel that was launched is the OPV-45 which is, like all of our products, based on a combat-proven design and being supervised by the International Association of Classification Societies (AICS).

The OPV-45 is a modular and versatile vessel that can conduct a wide range of missions starting from naval operations and homeland security missions, to civilian hydrographic survey, anti-pollution missions, and more. The OPV-45 will be



able to carry up to two 20 feet containers which could be fitted with various configurations, from mission-ready weapons and search and rescue (SAR) equipment to humanitarian support/disaster relief supplies.

These two vessels expanded the range of solutions ISL provides to its customers by offering a range from interceptors and fast patrol craft up to larger corvettes and OPV sized vessels.

**AI: What are currently building?**

OB: As mentioned, the OPV45 was just recently launched and already we have started constructing two vessels for a customer in West Africa. The vessel is built to a unique production method that better enables the vessel to be able to share future transfer of technology (ToT) if required. It also allows ISL to build some compartments and sections outside of our facility to significantly shorten the construction time in special cases. We have had extensive discussions with various customers across the world regarding the OPV45 underlining

its cost-effective operation and mission adaptability.

**AI: What investments has IS made in specialist machinery so that a new component design can be manufactured?**

OB: Although the following year was unorthodox in every single way, ISL managed the situation internally and even made some investments during the year. We are renewing all of our heavy machinery in accordance with the highest standards found in the naval shipbuilding industry in all disciplines, both in terms of software and hard ware.

**AI: What does ISL produce that is/or can be unmanned?**

OB: Unmanned technology is steadily evolving in the naval and maritime domain and is currently more focused on anti submarine warfare (ASW) and mines counter-measure (MCM) missions, and less on core naval operations. Adding this to the fact that ISL's vessels are relatively large platforms, starting from 25m length overall (LOA) and

up to 72m. These vessels are not engineered by design to be unmanned. However, being part of Israel's defense community, we constantly monitor recent developments in the unmanning possibilities and capabilities that will help in the future create operational and mission-ready unmanned vessels.

**AI: Where do you see new international business today and into the future? I am think of the international customer tour that you have just completed?**

OB: In the foreseeable future, ISL will expand its reach in the strategic markets, which are Africa, Latin, and Central America as well as the Asia Pacific with numerous projects already signed and many more on the line. Additionally ISL will expand collaboration with the supplementary defense industry to maximise the value given in each solution and project. In terms of new markets, the Indian market, as well as the European markets are currently being evaluated. 



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# ABRAHAM ACCORDS LETS IDEX WELCOME NEW FIRST TIMERS

The flurry of normalisation agreements between Israel and Arab countries means Israeli defence contractors can now exhibit at Gulf defence events.

**Andrew Drwiega**

**T**he political and public disunity between many Arab nations, including those in the Gulf, and the state of Israel has gradually been easing over the last few decades. Egypt and Jordan were early signatories to peace treaties in 1979 and 1994 respectively.

Now in 2020, there has been a significant breakthrough with the United States brokered Abraham Accords which has seen Israel and four Arab League countries - Bahrain, the United Arab Emirates, Sudan

and Morocco - normalising diplomatic relations. While a certain amount of 'below the table' business and commerce has always been present, including surveillance defence equipment, this normalisation has allowed all parties to now engage formally and openly (as much as that ever does in defence).

One of the main 'drivers' in terms of security is that the majority of Gulf Arab states and Israel share a common adversary, the Islamic Republic of Iran. Islamic fundamentalism is as much of a threat to

**FNSS**



the absolute rulers of the Gulf states as it is to the western democratic nations. Israel too would not wish to have any of its Arab neighbours transformed into hostile countries.

For the first time therefore, Israeli defence companies will be exhibiting at IDEX, the major Gulf international defence exhibition and conference, 21-25 February 2021.

We talked to a couple of Israeli companies - the Aeronautics Group and SK group (IWI, Meproflight, Camero) - to get their thoughts on exhibiting for the first time at IDEX.

**Armada International: How will the agreement to normalise relations between Israel and some of the Arabic countries affect your business opportunities?**

Aeronautics: Aeronautics is proud to participate for the first time at IDEX exhibition. The recently signed peace agreement with the UAE opens up many avenues for regional cooperation. Israel and the Emirates share similar operational needs and Aeronautics Group offers solutions to meet those needs. Thus, we believe that there are many potential and different opportunities for mutual cooperation that up until now was restricted. Moreover, there is a significant openness for business collaborations and productive partnerships in the Gulf region. SK Group: The new agreement between

the governments opens new opportunities for the entire SK Group, including IWI, Meproflight, Camero and Uniscope. Our solutions meet with the needs of defence and security forces in the region. Marketing and selling efforts will be according to the Israeli MOD regulations.

**AI: What are the key products/systems that you believe are suitable for this market?**

Aeronautics: These are among the top

[defence] markets in the world and so are seeking the best of breed when it comes to defence applications and solutions. UAVs in particular provide the most accurate intelligence while maintaining confidentiality and reliability, can be rapidly deployed and easily maintained.

Aeronautics offers integrated turnkey solutions based on unmanned systems platforms, payloads and communications for defence and homeland security (HLS) markets. These include: the Dominator – a Medium Altitude Long Endurance (MALE) UAS is designed to carry multiple large payloads and to perform tactical and strategic, long-range BLOS missions; and the Orbiter UAS family (Orbiter 2, Orbiter 4, and Orbiter 1K).

Orbiter 2: More than 1000 units of the Orbiter 2 have been delivered and supplied to dozens of customers worldwide. It offers a low silhouette and silent operation, a 100km range, dual payload, encrypted, digital datalink, frequency hopping and simple assembly.

Orbiter 4 STUAS, is an advanced multi-mission platform that can simultaneously carry multiple payloads, extending its ISTAR capabilities. It can be operate in all weather conditions, under-cloud base, with optional satellite communications capability providing high image quality.

Orbiter 1K is a loitering munition class UAS based on Aeronautics' mature, combat-proven Orbiter 2B Mini UAS. it offers long endurance, persistence presence over the target area, high precision strike



with low collateral effects, is covert, electric powered, has artillery mode capability and fully operational in GPS denied areas. SK Group: Day and night sights including our thermal solutions and variety of our small arms weapon and light machine gun that are relevant for defence and security personnel.

At IDEX, IWI will highlight the Carmel assault rifle, the ARAD multi caliber assault rifle, which was launched in 2019, the 5.56mm and 7.62mm NEGEV light machine gun, the Dan 338 Bolt Action Sniper Rifle and the Masada striker fired pistol. Meprolight will highlight its Mini-Hunter - lightweight night vision weapon sight, the MEPRO NYX-200, an uncooled thermal sight and the Mepro M21 day/night self-illuminated reflex sight.

**AI: Are you now contemplating (or are in the process of forming / or have already formed) a joint venture company in the Gulf (GCC)?**

**Aeronautics:** The Group has a vast experience creating partnerships and business cooperation including know-how technology transfer final assembly capabilities, production for government authorities in those countries where there is a significant activity and a need for local support. The company is looking into different opportunities in the region,




whether it is JV, partnership or any other business cooperation in order to provide the end user with the best solutions and systems Aeronautics offers and local support if needed.

SK Group: We are looking for a local cooperation

**AI: Are you restricted in what you can export by technology transfer issues?**

**Aeronautics:** Aeronautics' solutions have dozens of years of proven experience

in developing defence and Intelligence solutions, based on identifying and recognising operational challenges and needs of the end user. We are proud to be an Israeli company and as such we are subject to the Israeli and the international laws and regulations regarding the exporting of intelligence systems and products and we will continue to work accordingly.

SK Group: The SK Group always complies with the Israeli MOD restrictions and regulations. 

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