# Sharpening the Falcon's Claws

## United Arab Emirates Strengthens Its Defence

**Heiko Borchert and Shehab al Makahleh**

**Events matter as they shape national security policy. From the perspective of the United Arab Emirates (UAE) three events perfectly capture the country's evolving security and defence role. Since 2007, when the UAE first deployed troops to support the international stabilisation mission in Afghanistan, the country's leadership has been steadily working on strengthening its defence capabilities.**

This ambition culminated in combat operations of the UAE Air Force against targets in Iraq and Libya in 2014. But the growing international footprint of the UAE also took its toll. In September 2015 the UAE lost 45 soldiers in an attack against a military base of the Saudi and UAE-led forces fighting Houthi rebels in Yemen. One year later, in October 2016, the same conflict caused another blow for the UAE. This time Houthi rebels fired missiles at the HSV-2 naval vessel operating off the coast of Yemen and severely damaged the platform.

These events and the underlying developments have accelerated the maturation of the UAE's security and defence policy. Past clichés such as the belief that "glitter" matters more than real capabilities no longer hold true. The UAE has emerged as a serious regional power that is gradually projecting power beyond the Arabian Gulf into the Eastern Mediterranean as well as Northern and Eastern Africa. The country's growing economic ties with trade partners in the Asia-Pacific region drive its strategic interests eastwards, thus outlining the future geostrategic trajectory of the UAE.

(Photo: Izfumbles)

*The UAE is heading toward a modern army, in equipment, training and structure, with female soldiers also serving in the army.*

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### Geostrategic Setting

The development of the UAE since 1971 is remarkable. Today, the country ranks 16th in the 2016 World Economic Forum Global Competitiveness Index ahead of all Gulf neighbours and international heavyweights such as China, France, India or South Korea. The UAE is a key oil and gas producer and has positioned itself as a global transportation hub. Dubai is the only non-Asian port among the world's ten most important container terminals. In 2015 Dubai airport handled the world's 3rd largest passenger turnover and 6th largest cargo turnover. Etihad and Emirates are world-leading airlines and strategic customers of Airbus and Boeing. DP World is one of the world's leading port operators managing ports in over 60 countries around the world. By mid-2016 the Abu Dhabi Investment Authority was the world's 5th largest sovereign wealth fund by assets under management.

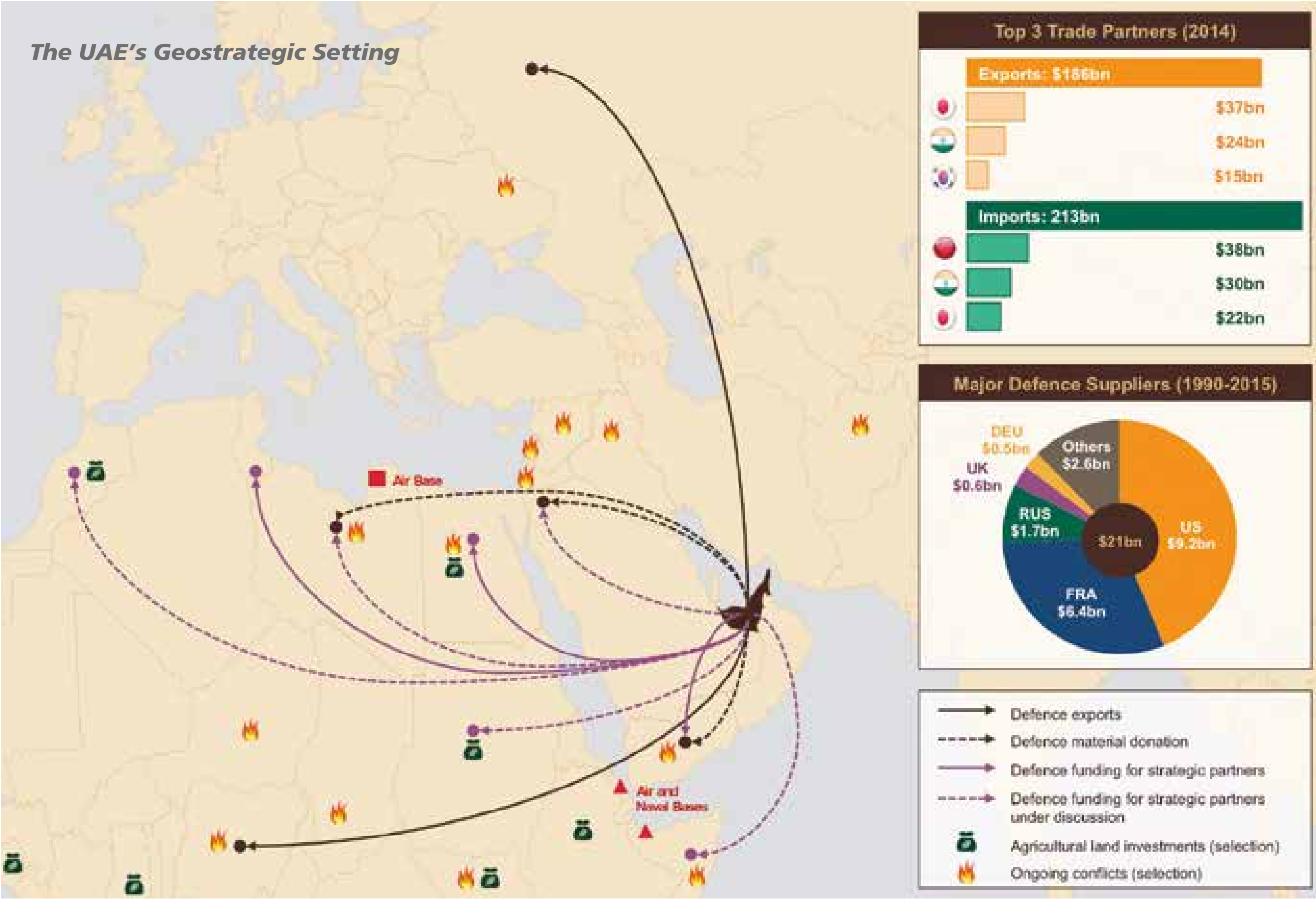
The success of the UAE is most impressive given the country's vulnerable geostrategic setting. Four strategic vectors are important in understanding the current trajectory of the Emirates' security and defence policy:

First, the ongoing pan-regional power struggle sets the scene. The power struggle results from a plethora of different trends such as the overall reshuffling of political loyalties across the region in light of a perceived US retreat, Russia's re-emergence as a key strategic player in the region, ideological differences between the members of the Gulf Cooperation Council (GCC) and neighbouring Iran, and the growing economic footprint of Asia-Pacific countries in the region.

Second, because of the pan-regional power struggle, ideological radicalisation and terrorism flourish. The UAE and Saudi Arabia have stepped up efforts to fight terrorism, but diverging policy preferences among the GCC nations render coherent action very difficult.

Third, as a global transportation hub, the UAE depends on the safety and security of global air and sea corridors that integrate the country into global trade flows. As a consequence, cyber security and maritime security have risen in importance and led the UAE to set up relevant authorities and launch national programmes to deal with these challenges.

Finally, food security is an emerging top security challenge. Harsh climatic condi-




(Source: Authors)

tions are detrimental to local agriculture. That is why the UAE is importing almost all agro products. In 2014 the food import bill stood at around €94Bn and is likely to grow to €375Bn over the next ten years. Food import dependence has led to UAE land investments in Egypt, Ethiopia, Ghana, Mozambique, Sudan and South Sudan as well as Zimbabwe. As the strategic relevance of these countries increases, it is hardly surprising that the UAE is taking a closer look at their geostrategic environment in order to ensure its own food supply security.

## National Defence Priorities

The UAE has used strategic partnerships to offset regional risks. In 1991 it signed a security and defence cooperation agreement with the United States followed by a similar agreement signed with France in 2008. More recently, the UAE has ramped up cooperation with Russia, China, Japan, and South Korea. In addition, the UAE leverages the GCC to advance its own military ambition and stabilise the region.

With regard to the UAE's defence and military ambition three shifts are noteworthy as they drive the country's procurement and defence industrial priorities:

The first shift results from ongoing operations in Yemen. The increasing operational tempo absorbs the leadership's attention and puts the military equipment under stress. As Abu Dhabi is fast-tracking material urgently needed at the frontline, logistics support and life cycle issues come to the fore.

Second, the operation in Yemen is not only land-based but also involves air force and navy assets. The Air Force has been at the core of Emirati force development for the past decades. The Navy clearly emerges as a new priority, because the UAE have come to acknowledge that naval support from strategic partners can no longer be taken for granted. As a consequence, the Emirates are stepping up significant naval procurement projects.

The third shift refers to the UAE's growing strategic footprint outside the Arabian Peninsula. In late 2016 news reports revealed that the UAE had been building an air force base in Libya as well as air force and navy bases in Eritrea and Somaliland. These bases play a role in the GCC's efforts to forge diplomatic alliances with these regions. In addition, the UAE donates defence material and funds defence procurement to strengthen strategic partners in these regions (see Figure). Overseas bases also reinforce the need for logistics support to sustain troops. This explains the growing interest in supplementing existing strategic airlift capacities (e.g., C-17, tanker aircraft) with additional naval transport assets.

## Established Defence Industrial Capacities

Under the leadership of Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, the UAE has established a local defence industry as a means to diversify the national economy. During the first phase, joint ventures with international defence companies were crucial to provide access to knowledge and technology. For example the Advanced Military Maintenance, Repair and Overhaul Center emerged from cooperation between Abu Dhabi Aircraft Technologies, Sikorsky and Lockheed Martin; Burkan Munition Systems resulted from the teaming of Mubadala, Bin Jabr Grup and Rheinmetall; Tawazun Dynamics is a joint venture by Tawazun and Denel; and Abu Dhabi Shipbuilding (ADSB) and former Selex-SI established Abu Dhabi Systems Integration. Joint ventures were the preferred way to fulfil offset obligations, which led to a very large and diversified portfolio of companies that started to become inefficient.

The time was ripe for consolidation. The second phase was launched in 2014 by reorganising most of the subsidiaries of Tawazun Holding, Mubadala, and Emirates Advanced Investments Group under the newly established Emirates Defence Industries Company (EDIC). The International Golden Group serves as an additional defence technology holding company. In addition, Mubadala and Tawazun cooperate on knowledge transfer and potential offset projects. So far, results are mixed. The reorganisation seems to have accelerated the development of technology capabilities. But infighting between EDIC and Tawazun has emerged. This is detrimental to setting up and implementing strategic guidance for the national companies as well as processing offset projects worth several billions. So far, a proper defence industrial strategy is missing.

Against this background the current UAE defence industrial base looks as follows:

(Photo: Imre Solt)

***Under the leadership of Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, the UAE has established a competitive local defence industry.***

**Naval Systems**

The Emirati defence industry is highly advanced in the naval sector, with ADSB as the key player. ADSB sees itself as the prime contractor that also engages in through-life support, whereas subcontractors are mainly in charge of designing, manufacturing, and testing naval platforms. Among other projects, ADSB has built five of the six BAYNUNAH Class corvettes. French partner Constructions Mécaniques de Normandie built the first vessel.

**Land Systems**

The UAE land systems industry develops, manufactures, and maintains armoured vehicles mainly through NIMR Automotive and Emirates Defense Technology. Finland's Patria and Renault Trucks Defense of France, a division of Volvo Group Governmental Sales, are important international partners. Rosomak of Poland, working together with Patria, has recently also made inroads into the UAE. Keen to broaden the expertise in this segment, the Emirates are using locally built armoured vehicles in ongoing operations in Yemen to assess their performance. The UAE Armed Forces are also looking into the possibility of buying 4x4 and 8x8 vehicles for the new overseas bases.

(Photo: US Air Force)

***An Emirati MIRAGE 2000 aircraft during an international training exercise***

**Air Systems**

The Emirates strive to establish the most potent air power in the region. As a consequence the country has set up military aerospace companies focusing on maintenance, repair and overhaul (MRO) to complement the vibrant commercial aerospace sector. In addition, the UAE has ambitious plans to establish the first truly national defence industrial base in the field of UAV/UCAV with companies like Abu Dhabi Autonomous Systems Investments (ADASI) and ADCOM Systems. ADASI has teamed with Schiebel to locally manufacture the CAMCOPTER S-100. ADCOM has been working on its UNITED-40 platform, which can also be armed. Among the different international partners involved in setting up ADCOM, Ukraine was pivotal to transfer technology. Reportedly ADCOM is also in the process of exporting UAVs, in particular to Russia and Nigeria.

**Missiles and Electronics**

In the missiles and electronics business Emirati ambitions have faced more obstacles. In October 2016, Tawazun Dynamics completed the delivery of 600 AL TARIQ guided weapons for the UAE's MIRAGE 2000 fighter jets. This programme suffered significant delays due to technical challenges to develop the new weapon systems. In the electronics segment, Abu

Dhabi Advanced Radar Systems, a joint venture formed in 2013 between Saab and Tawazun, was meant to establish the first radar maker in the region. The company failed, leaving a gap hard to close for local actors like Emirates Technology and Innovation Center.

## Defence Procurement Priorities

The shifts in the UAE's defence priorities become most visible in current and future procurement priorities. Today's focus on supplying ongoing missions does not mean that the UAE should cut back on its long-term priorities. But reshuffling funds and rescheduling projects is needed to stabilise the procurement portfolio. In addition, defence contractors interested in cooperating with the UAE must be aware of existing and envisioned defence industrial capacities as the Emirates design future procurement projects with an eye on expanding the local defence industry.

| | | Procurement priority is... | |
|---|---|---|---|
| | | ...well established | ...emerging |
| Local defence industrial capacity... | ...has been established, but needs to grow | ▪ UAV and UCAV<br>▪ Armoured vehicles (4x4, 8x8) | |
| | ...is emerging | ▪ Fast patrol craft<br>▪ Frigates<br>▪ Rescue vessels for humanitarian assistance and disaster relief | ▪ Cyber security<br>▪ C4ISR<br>▪ Supply and logistic ships |
| | ...is missing | ▪ CBRN vehicles<br>▪ Fighter jets | ▪ Active protection systems for armoured vehicles<br>▪ Optronic systems for armoured vehicles<br>▪ GCC coastal air surveillance network<br>▪ Maritime patrol aircraft<br>▪ Helicopter carriers<br>▪ Autonomous underwater vehicles<br>▪ Submarines |

Against this background, Table 1 provides an overview of selected Emirati defence procurement projects:

Unmanned systems continue to reign high on the UAE's priority list. Most recently, Northrop Grumman has emerged as a key partner to further develop local capacities. The UAE also wants to embark on developing unmanned systems for the land and sea domain. Thus the expansion of the unmanned systems segment at the 2017 IDEX defence exhibition can be seen as an indicator of future developments.

Given the country's growing naval ambitions, several different naval surface platforms are being envisaged. Whereas fast patrol craft, frigates, and rescue vessels seem within reach of the local naval shipbuilding industry, helicopter carriers and specific types of logistics ships likely go beyond currently available capacities. International partners will thus be needed in all of these programmes. The UAE is interested in talking to different partners like Italy for helicopter carriers, the UK for frigates, and Turkey for fast patrol craft.

In addition, maturing undersea threats have prompted the UAE leadership to establish a need for different types of undersea assets such as submarines and autonomous underwater vehicles.

Of great interest to industry is the emerging C4ISR priority of the UAE Armed Forces. This clearly reflects an urgent need from ongoing operations, but this is also an area where the UAE significantly relies on foreign partners and suppliers. The same can be said for Saudi Arabia. Thus it is not surprising that both countries seem to have a common interest in joining forces to establish the respective capacities in the region.

Along similar lines, the UAE considers setting up a GCC coastal air surveillance network. This would partly play into the hands of the national UAV industry, but segments like sensor development, sensor data management, and communication and data links to set up a federated solution would most likely require support from international partners.

Operation-driven demands clearly emerge in fields like CBRN protection, active protection systems and optronic systems for armoured vehicles. In all three segments the UAE lacks local industrial capacities and relies on partners. Suppliers from the United States and Germany are said to be of interest in these segments.

Finally, there are long-held plans to further strengthen the country's air power. Here, too, new priorities emerge. Additional fighter jets would complement the portfolio, with the F-35 Joint Strike Fighter being a particular priority. Maritime patrol aircraft, by contrast, are a new priority, in particular as they are to be used to patrol coastal areas, notably along the coasts of Aden, the Horn of Africa and the Arabian Gulf, and for anti-submarine operations.

## Outlook

The UAE's military capabilities are a force to be reckoned with. In order to balance operational requirements and long-term strategic ambitions, the UAE will need to strengthen defence industrial capacities that have hitherto not been prioritised:

First of all, increased investments in MRO and supply chain management for all military services will be needed as a consequence of current operations. Professional service contractors are important, but the UAE Armed Forces would be well advised to beef up indigenous capabilities in order to improve agility and sustainability to uphold the operational tempo and sustain overseas bases.

Second, the Emirates' new emphasis on C4ISR is testimony of the fact that warfighting assets need to be seamlessly integrated in order to provide maximum effect. Systems integration, however, is still in its infancy in the UAE. Therefore future procurement projects should help close this gap. In addition, tailored programmes for national capacity building in this domain are needed.

Finally, state of the art defence technology is only as good as the concepts of operations driving them. Because the Emirates are tech savvy, military concepts development must be strengthened in order to fully leverage the options provided by modern defence equipment. This requires dedicated attention to doctrine development. In addition, the Emirates would benefit from creating an environment where concept developers, operators as well as national and international defence suppliers interact to analyse the country's lessons learned from ongoing operations. This would help address existing capability gaps while at the same time producing defence equipment that truly reflects the needs of the UAE's Armed Forces. ■