

Trends in Military Buildup in the Middle East

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The shockwaves that have swept through the Middle East since December 2010 were primarily oriented toward internal issues, and for the most part did not deal with inter-state conflicts. Consequently, to date there has been no essential change in inter-state relations, even if in some cases there was increased intervention by one state in the affairs of another. Nonetheless, some armed forces began to disintegrate in the course of the clashes with the protestors; the armed forces of Libya and Yemen, for example, were divided between loyalists and rebels. The Syrian military did not disintegrate, but there were many reports of desertions of officers and soldiers who refused to take part in suppressing the uprising. Other than in these instances, the militaries of the region retained their primary frameworks.

At the same time, the socio-political shockwaves may well spark political changes in states that have hitherto appeared stable. Both new and veteran regimes will be called on to revamp economic agendas in order to quell mass popular protests. As a result, it is possible that in many states economic reforms will reduce the resources available for military acquisition. Nonetheless, in light of the ongoing regional tensions and conflicts, the region's armed forces will likely try to continue the trends in buildup that have been evident in recent years.

Major Events and the Region's Armed Forces

Egypt

The Egyptian military played an important role during the civil unrest that erupted in January 2011 and removed President Hosni Mubarak from power. Many prominent politicians in Egypt have been members of the armed forces. Indeed, the close ties between the military and the political establishment help explain the military's interest in preserving the foundations of the existing order, even while it supported Mubarak's removal from the presidency. During the demonstrations in January-February 2011, the Egyptian military labored to dispel the tension and avoided violence as much as possible. It ultimately helped the popular movement oust President Mubarak, even though Mubarak was of military background himself. The army was not damaged by the upheaval in Egypt, and through the Supreme Military Council and the transitional government that was appointed, it is administering the affairs of state until a new leadership is elected. The Council does not aspire to establish a military dictatorship in Egypt.

Libya

Inspired by the events in Tunisia and Egypt, civil unrest erupted in Libya in mid February 2011. The Libyan security forces reacted harshly and the events escalated rapidly. Forces loyal to Qaddafi's regime used live ammunition against protesters, and the unrest turned into a full scale rebellion. Rebels in the eastern region stormed military installations and seized weapons, and other points of unrest erupted in tribal areas in the mountains off the western coast of Libya, near the border with Tunisia. The rebels in the eastern provinces set up the interim Transitional National Council (TNC), which was recognized by some foreign governments as a legitimate representative of the Libyan people. Some military commanders and their units joined the rebels, which enabled the popular forces to advance westwards through the country. However, the regular army largely remained loyal to Qaddafi and managed to recapture some of the towns from the rebels' and advance towards Benghazi, using artillery and air strikes against the rebels, even in populated areas.

On March 17 the UN Security Council passed Resolution 1973, which imposed a no-fly zone over Libya – in part to protect the local population from attacks by the army – and authorized use of force to enforce the zone, as well as to defend the civilian population. Air strikes by coalition forces began on March 19 within the framework of Operation Unified Protector and targeted Libyan air defense and air bases, as well as command and control and logistics installations. On March 31 the North Atlantic Treaty Organization (NATO) took control over the military operations in Libya, and on June 1 NATO announced that it was extending the operation for an additional 90 days. The foreign intervention did not include any land forces, although assistance to the rebels included the positioning of French and Italian military advisors, who dealt mostly with training and assisting the rebels' logistics and command and control. Forces loyal to the TNC are equipped with light weapons, as well as single and multiple rocket launchers, some of them improvised. Although the arms embargo on Libya is still in effect, some NATO and Arab states began to supply arms to the rebels. Overall, however, the rebels lack organization, discipline, and adequate training.

The NATO air strikes comprised thousands of sorties, including combat sorties, and have caused much damage to the Libyan military. Most of the Libyan air force has almost certainly been destroyed, as well as a substantial part of the air defense and the regular army's infrastructure. The air strikes enabled the rebels to withstand the advance by Qaddafi's forces and achieve a victory in the military campaign. Nevertheless, Libya's political future remains unclear, and consequently, the ramifications for the military are uncertain.

Syria

Civil unrest in Syria began in early February with small scale demonstrations in a number of cities. On March 18 a large scale demonstration in Dar'a, in southern Syria, was met by live fire from the security services, and a number of demonstrators were killed. The following day their funerals turned into a large demonstration against the regime of Bashar al-Asad. Since then demonstrations have been held in many cities throughout Syria,

and the regime has responded with heavy handed repression. Beginning in June 2011, several cities in Syria were placed under military siege.

In its effort to counter the demonstrators, the regime has employed mostly its internal security forces, and in some cases, military units – usually the Republican Guard and the 4th division, commanded by Maher al-Asad, Bashar's younger brother. The soldiers in these units are primarily Alawite, the ethnic community of the Asad family. There have been some reports of desertion, as well as reports of officers who were killed following their refusal to open fire at civilians. Overall, however, as much as can be determined from the limited available information, the armed forces have not been seriously affected by the domestic unrest. The strength of the army, which relies on the Alawite minority, explains the ability of the regime to retain its power over many months of violent demonstrations. The question remains how long the regime will be able to keep the army, which comprises mostly Sunnis, distanced from the domestic grievances, and as such, guarantee its loyalty to the regime.

Yemen

At the same time that protests began in Libya and Syria, Yemen too experienced civil unrest. Although the early demonstrations were relatively quiet, in the months that followed the violence between military forces and demonstrators escalated as opposition parties demanded the removal of President Ali Saleh. Mediation attempts by the Gulf Cooperation Council (GCC) were unsuccessful. Meanwhile Saleh began to gradually lose his power base, and some of his long time allies and supporters, including a number of generals, defected. Tribes loyal to Saleh's regime likewise withdrew their support.

Yemen's military forces are divided between those remaining loyal to Saleh and those supporting the opposition. The country's civil unrest should be seen in the context of the fragmented Yemenite society divided between the north and the south (which were two separate states until 1990), and between Sunni and Zaidi Muslims, with each group subdivided into competing tribes and competing clans within each tribe. It is possible that the continued weakness of the central government will lead to the re-partition of the country into North and South Yemen, or perhaps to total

anarchy. Meantime, al-Qaeda and separatist militias are exploiting this civil conflict to take control over different areas in the state.

The Persian Gulf

The Gulf states were mostly spared the internal strife of other Arab states, although some regimes were propelled to try to quiet the unrest, out of fear that it would spill over to their territory. The popular uprising in Bahrain, for example, threatened the regime and pitted the Sunni royal family against the Shiite majority. The uprising in Bahrain was seen as a severe threat to other Gulf monarchies, especially since it was perceived as an Iranian sponsored revolt. At the Bahraini government's request, the Gulf states, led by Saudi Arabia, sent military forces to help the Bahraini royal family suppress the revolt.

Another interesting development was the decision by both Qatar and the UAE to take an active role in the international effort in Libya. Both countries sent combat aircraft to Italy, where they joined NATO's Operation Unified Protector over Libya's air space. This reflected the two countries' desire to assume a higher profile in world affairs than would be expected from their size and location.

Major Developments in Military Buildup

Since arms deals are processes that proceed slowly, trends in arms acquisitions presented in previous recent INSS annual publications are still valid. These include: acquisitions of the most advanced and sophisticated weapon systems, primarily by oil-rich countries; efforts to develop indigenous military industries; and reduction of expenses by upgrading older weapon systems rather than purchasing new ones. The countries in the region with limited monetary resources that do not receive defense assistance from the US cannot compete in the advanced weaponry market. Instead, they tend to adopt asymmetrical approaches that enable them to counter the technological advantages of their rivals. They rely on guerilla warfare and terrorism on the one hand, and on the other hand, on strategic capability offered by ballistic missiles, artillery rockets, and weapons of mass destruction. Non-state actors such as Hizbollah and Hamas continue

to develop semi-regular military forces with large inventories of artillery rockets, as well as anti-tank and anti-aircraft capabilities.

The US remains the biggest weapons supplier to the region. Russia has also made attempts to extend its market share in the region, but so far with limited success. Other important players are key European Union countries, particularly France and the UK. In addition, indigenous military industries play an important role in some states in the region. Israel and Turkey operate the most advanced industries, while the UAE is investing extensive resources to build its own military industry. Iran too aims to be as autonomous as possible in its weapons production, although its industry's actual capability is far smaller than what is officially declared.

What follows is a concise review of the leading recent developments in some of the region's countries.

Algeria

Algeria is in the midst of a massive military expansion. At the heart of this expansion is a large weapons deal with Russia (approximately \$8 billion). Within the framework of this arms deal Algeria received 180 T-90 tank and 28 Su-30MKA combat aircraft. The first batches of these aircraft arrived in 2007 and are already operational. Recently Algeria signed a further contract for additional Su-30. Algeria received two Il-78 refueling aircraft and its air defense forces received some Tunguska and Pantsyr point defense systems, although no heavy systems, such as the S-300 PMU-2, arrived. Aside from the Russian deal, Algeria signed a large deal for some 30 utility helicopters of several types from Italy. This deal follows a previous deal for ten helicopters that were already supplied.

The Algerian navy received two Type 636 submarines, but there is no news regarding its intention to acquire four frigates. This deal is still under negotiations with potential suppliers in France, Germany, Italy, and Great Britain. Meanwhile Algeria began taking deliveries of its FPB-98 small patrol boats from France.

Another significant development was the launch of Algeria's first satellite with some military capabilities: the ALSAT-2A. This satellite carries a multi-spectral camera with resolution of 2.5m, manufactured by EADS Astrium. A second satellite is being assembled in Algeria.

Egypt

Egypt, like Israel, benefits from ongoing American defense aid and receives \$1.3 billion a year. An agreement signed in 2007 ensures Egypt continued aid at least until 2018, which enables Egypt to purchase American-made weapons without having to worry about economic difficulties. The future regime in Egypt will likely make efforts to maintain this aid, and therefore Egypt's armament programs will not change course abruptly.

Egypt, which already boasts a substantial fleet of 217 F-16s, has ordered 20 more of these multi-role combat aircraft for \$3.2 billion. Apart from this deal, Egypt's primary deals in recent years have included AH-64D Apache attack helicopters (though the acquisition of the Longbow radar system for these helicopters has not yet been approved) and additional M1A1 Abrams tanks. These tanks are bought as kits for assembly in Egypt. Since starting to purchase these tanks, the Egyptian defense industry has assembled 880 tanks, and the new transaction, now underway, includes an additional 125 tanks.

Egypt also buys weapons from other sources, finances permitting. It is negotiating with Germany to buy Type 214 submarines (a model quite similar to the Israeli Dolphin class submarines). It maintains military contacts with Russia and other former Soviet Union countries – both for the upgrade of its aging Soviet era weapons (such as the recent upgrade of APCs in the Ukraine), and for acquisition of new weapon systems – such as the recent acquisition from Russia of Strelets point defense SAMs. In addition, the Egyptian navy has a standing order for four fast missile patrol boats from the US, the first of which is scheduled to be delivered in mid 2012.

Iran

Iran is in the midst of a long process of rearming its military, although reliable weapons suppliers are scarce because of the Security Council sanctions in force. Hopes for large arms deal with Russia were shelved as Russia, in light of the sanctions, officially declined to supply Iran with S-300 air defense systems ordered (and paid for) by Iran.

Iran continues to arm itself with locally produced arms, mainly missiles and rockets. In the field of long range ballistic missiles, Iran has made

progress on two tracks: in the first track, Iran based its efforts on liquid fueled missiles, such as the Shehab-3. On the basis of this technology Iran developed the Safir-e-Omid satellite launcher, a two stage missile that launched the Kavoshgar research capsule and the Omid satellite in February 2009. A further development in the same direction was the heavy satellite launcher Simorgh, which was displayed in public but not yet tested. Another development in this direction was the Qiam-1 missile, test-launched in August 2010, probably to test new guidance and control systems. In the second track, Iran is also developing a two stage solid fuel powered surface-to-surface missile intended to reach a range of up to 2000 km. This missile, alternatively known as Ghadr, Sejjil, or Ashura was tested for the first time in November 2007 (and again in May and December 2009 – and possibly in early 2011 as well). These missiles will likely become operational within a few years.

It is harder to estimate Iran's true R&D and production capabilities in other fields. The Iranian media reports regularly about the development of innovative weapon systems – tanks, armored personnel carriers, fighter planes, helicopters, various missiles (sea-to-sea, air-to-air, air-to-ground, surface-to-air), and more – but it is difficult to distinguish between propaganda and actual progress. For example, only recently the Iranian media reported on new precision guided munitions for combat aircraft and helicopters, new air defense systems, and new versions of coastal defense missiles, as well as the construction of a new destroyer and mini submarines. It does not seem that Iran is in fact capable of producing all the types and models it professes to produce in significant quantities. Iran is certainly capable of producing several models of artillery rockets and perhaps some anti-tank and sea-to-sea missiles (based on Russian and Chinese designs). However there is no evidence, for example, that Iran is producing fighter planes with real capabilities of engaging in a modern battle, although it claims to have this capability.

Iraq

The process of rebuilding the Iraqi military is taking longer than expected, and has been accompanied by a host of problems, including the lack of suitable personnel and graft and corruption connected to questionable arms

deals. In purchasing, the Iraqi army is mostly engaged in basic outfitting of a military force. However, investment in rebuilding the army will also be complicated by the withdrawal of the remaining US forces, which have thus far guaranteed the day to day security of the country.

Sources for arms acquisitions are varied. The US supplied Iraq with its first M1A2 Abrams main battle tanks, APCs, T-6A training aircraft, helicopters, and fast patrol boats. France supplied helicopters; Ukraine supplied APCs; Russia supplied Mi-17 helicopters, and Serbia supplied more training aircraft. The Iraqi government also announced its intention to procure F-16 combat aircraft, but no contracts have yet been signed.

Israel

Israel's military buildup occurs according to a multiyear plan, based in part on a fixed sum of annual American aid. Accordingly, Israel's rearmament is a fairly continuous process that does not portend any unexpected reversals, and is also less affected by changes in the global or local economic situation than are acquisitions programs in other countries.

The US military aid to Israel for 2011 is in the amount of \$3 billion. This sum is intended almost entirely for military buildup. On top of this, Israel receives \$440 million for its various ballistic missile defense programs such as the Arrow-3, David's Sling, and Iron Dome. On the basis of an agreement reached with the US in August 2007, this aid is slated to increase gradually and in the decade ending in 2018 will total \$30 billion.

After the Second Lebanon War (2006), the IDF invested heavily in restocking weapons and munitions, with an emphasis on procurement of large quantities of modern types of munitions for the air force, such as the GBU-39 small diameter bombs and GPS-guided JDAM bombs. As for new large arms deals, Israel announced its intention to equip its air force with F-35 planes in the coming decade. There are still numerous obstacles to the deal at the moment, mostly because the F-35 program itself suffers from delays and runoffs. The price of a single unit is rising as delays accumulate, and is now estimated at over \$130 million. Recent reports spoke of further delays that pushed the possible date of delivery to 2018. Other possible hurdles are Israel's demands to access the aircraft's software codes, as well

as the ability to install Israeli-made systems – requests that have not been granted.

The Israeli air force ordered three advanced C-130J transport aircraft – with the intention to eventually buy up to nine of these aircraft, estimated at \$1.9 billion. The air force has also retired its Tzukit training planes after more than 50 years of service and replaced them with the US-made Beechcraft T-6A Texan II, which received the name Efroni (“lark”) in the IAF. In addition, the Israeli navy ordered two more Dolphin class submarines, which are being constructed in Germany, and is negotiating purchase of a third submarine (which will be Israel’s sixth such submarine).

In many areas Israel is rearming with locally produced arms. Recent emphasis has been on development and production of active anti-ballistic missile defense systems and anti-rocket defense systems. Israel ordered more Arrow batteries on top of the two operational batteries it already deploys. At the same time the entire Arrow project is undergoing a process of upgrading to help it achieve greater success in handling the long range missile threat from Iran. Similarly, Israel is investing in two additional active defense systems. The first is David’s Sling, meant to provide defense against rockets and short range ballistic missiles with a range of 40-200 km (particularly heavy rockets of the kind fired from Lebanon in 2006). The second is Iron Dome, meant to defend against shorter range rockets and missiles such as the Qassams and Grads fired both from the Gaza Strip and Lebanon. David’s Sling is scheduled to finish the development stage in 2012, while Iron Dome is already operational and has scored its first successful intercept.

Israel is still leading the region in space assets, with the Ofeq-9 and TECHSAR reconnaissance satellites in orbit, as well as the Amos-3 communication satellite. Preparations for the launch of an advanced reconnaissance satellite and another communication satellite (the Amos-4) are underway. In the area of UAVs, Israel likewise has little competition. Recently the air force deployed the new Heron and Heron TP (called by the IAF Shoval and Eitan, respectively) long endurance UAVs, capable of loitering in the air for extended missions – over 40 hours long – for reconnaissance and intelligence gathering missions. Side by side with the larger UAVs, IDF units are being equipped with the Skylark – mini UAVs,

made by Elbit. These are small, quiet, and easily operated systems, carried by soldiers in combat units for the purpose of intelligence gathering from “the other side of the hill” at short distances (up to 10 km). Recently the Skylark I LE, with somewhat extended endurance, was chosen as the model for additional military units.

Finally, Israel has expanded its acquisition of indigenously produced weapon systems for the ground forces. One of the lessons of the Second Lebanon War led to the military starting to equip itself with the Namer IFV, based on the hull of the Merkava MBT. In addition, both the Merkava Mk IV and the Namer are being equipped with active defense systems. The Trophy system installed on the Merkava Mk IV MBTs has already scored its first intercept.

Morocco

Morocco is yet another country in the region that has undergone a substantial military buildup in recent years. After long and heated competition between suppliers, the Moroccan air force decided to procure 24 F-16 multi-role combat aircraft. These aircraft have apparently already been supplied. In addition, the Moroccan air force procured 24 T-6A Texan II trainers (12 of which have already been supplied), as well as four C-27J transport planes.

The Moroccan navy became the first export customer for the new French made FREMM frigates when it signed a deal for one such frigate, which is now being constructed in France.

Saudi Arabia

When the deal was signed in 2007, Saudi Arabia’s acquisition of 72 Typhoons from the UK, at an estimated cost of \$7.9 billion, was the most impressive deal in the Middle East. At the same time, Saudi Arabia also ordered upgrades for its Tornado and for its F-15S combat aircraft. Other major deals that exceeded the Typhoon deal have since followed. Another major deal, signed in mid 2009, involves an upgrade to the Saudi Arabian National Guard (SANG). The contract, worth some \$2.2 billion, is for the acquisition of different types of combat armored vehicles. The upgrade program is typically divided between the US and France, from which SANG ordered new artillery pieces.

Additional arms orders include more M1A2 tanks from the US, as well as upgrades for existing tanks – a transaction of some \$3 billion. This project also includes setting up a large facility that will assemble the tanks in the kingdom. In late 2010 the US administration approved further sales valued at \$60 billion. These include the sale of 84 new F-15S combat aircraft, as well as upgrade of the existing F-15S in Saudi inventory, and hundreds of helicopters – AH-64D Apache attack helicopters and UH-60 M Black Hawk utility helicopters, as well as light reconnaissance helicopters – for the Saudi land forces and for the Saudi National Guard. These authorizations have yet to be turned into actual contracts but they are indicative of Saudi intentions, as well as US willingness to support the country.

UAE

The UAE armed forces are among the military forces that have grown most intensively. The UAE, like other Gulf states, prefers to deal with a variety of vendors and buys primarily from the US and France. The UAE beefed up its air force with 63 Mirage 2000-9 planes from France and 80 F-16E/F planes, a model developed specifically for the Emirates, and the country has continued to procure equipment for the air force, navy, and air defense forces. It signed a deal to upgrade the 30 Apache helicopters to the AH-64D model, and ordered three Airbus A330 refueling aircraft. More recently it ordered twelve C-130J tactical transport aircraft as well as six C-17 Globemaster strategic transport aircraft.

The Baynunah ships project has been underway for several years. These corvettes were designed in France, and the first of them is being built by the CMN shipyard in Cherbourg, France. The rest are constructed in Abu Dhabi by ADSB. Despite the French design and local manufacture, some of the armaments will actually be American-made. Thus, for example, the UAE has ordered RAM missiles from Raytheon Corporation to defend the ships against cruise missiles.

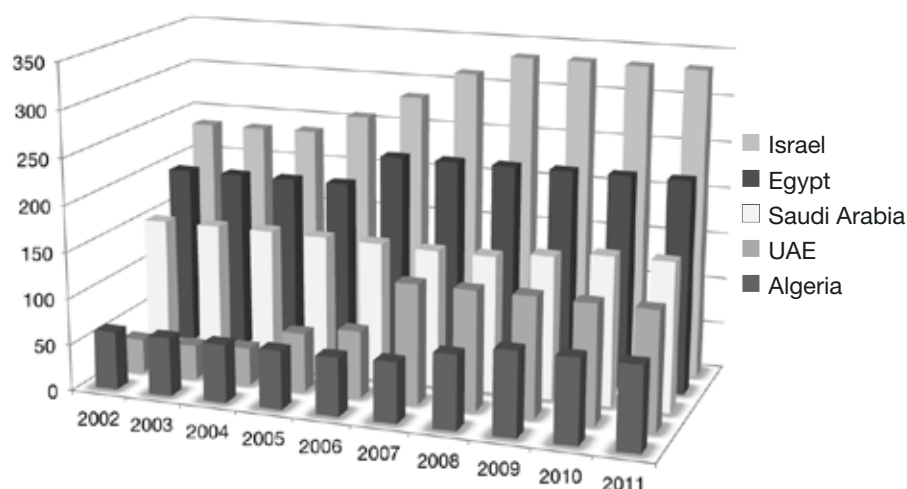
The UAE is investing heavily in air defense systems and ballistic missile defense systems that will be supplied in the coming years in different deals estimated at some \$9 billion. In the realm of air defense, the UAE was scheduled to receive the Russian-made Pantsyr S-1 systems,

short range mobile air defense systems developed in Russia at the UAE's request and with its funding. It will also include in the short term upgrades for the Patriot missile batteries it already has and purchases of the PAC-3 interceptors (for ballistic missile interception) for these batteries. In the longer run it will include the purchase from the US of THAAD dedicated anti-ballistic missile defense systems. The value of this transaction is estimated at about \$7 billion.

Conclusion

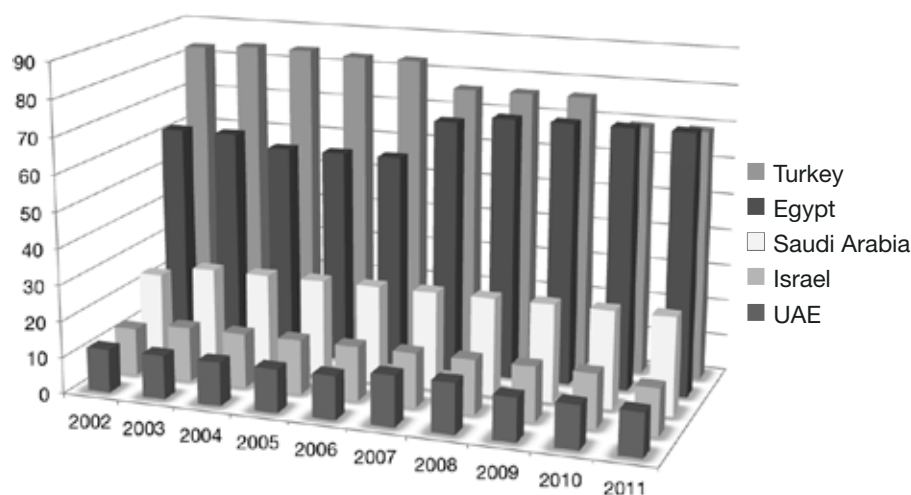
Middle East arms acquisitions are dominated by Persian Gulf markets, as these states perceive a growing threat from Iran's drive toward regional hegemony. The fact that all the countries along the coast of the Gulf procured and deployed Patriot SAM batteries with added capabilities against ballistic missiles testifies to the severity of the threat they perceive. Iraq is investing large amounts of money to rebuild its military from scratch, while Iran, unable to acquire weapons in the open markets is relying mostly on its indigenous industry. The Arab Maghreb is also arming itself. Algeria is absorbing its acquisitions from Russia and from Europe, while Morocco

Figure 1. Advanced Combat Aircraft, 2002-2011



Source: INSS Middle East Military Balance Project

Figure 2. Naval Combat Vessels, 2002-2011



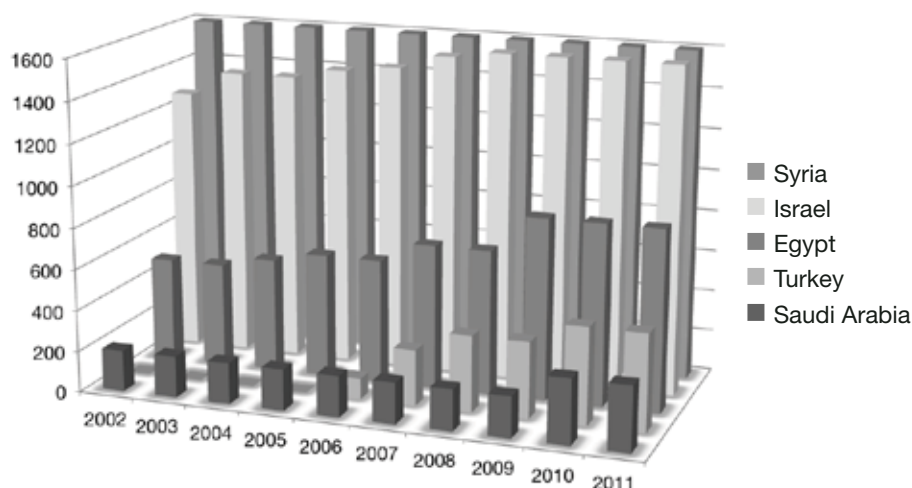
Source: INSS Middle East Military Balance Project

is making an effort and stretches its limited resources to renew its military with acquisitions in the US and Europe.

Israel continues to implement the lessons of the Second Lebanon War (2006) and Operation Cast Lead (2008-9). It continues to buy advanced fighter jets and surveillance and early warning planes and expand its satellite capabilities. At the same time, it has accelerated the rate of outfitting the military with anti-rocket systems and with better protected armored personnel carriers and tanks.

As a result of the recent developments in the region, most of the Arab states that are not monarchies are undergoing changes. In some cases these changes have already affected the command structure and the military forces (e.g., in Libya, Syria, and Yemen), and are expected to affect existing and future programs (e.g., in Egypt). Yet the uprising in many Arab states notwithstanding, the Middle East continues to be a major market for weapons, and of late there have been no substantial changes in the main trends of arms procurements. General trends in the region's inventories of main aerial, naval, and ground platforms appear in figures 1, 2, and 3. States with financing capabilities will continue to arm themselves with precision

Figure 3. High Quality Tanks ORBAT Development, 2002-2011



Source: INSS Middle East Military Balance Project

guided weapon systems, aerial warning systems, and intelligence. At the same time, the threats of guerilla warfare and terrorism originating in the region and in neighboring countries will increase the importance of arms dedicated to fighting terrorism, defending against rockets and missiles, and protecting population centers.