BİLGESAM | WISE MEN CENTER FOR STRATEGIC STUDIES

INTERNATIONAL POLITICS PROGRAM

BILGESAM Analysis / International Politics No: 1318 10 May 2016

What Really Necessitates Turkey to Develop its own Drones and New Long Range Air Defense System: What seems to have changed?

by Nurşin ATEŞOĞLU GÜNEY

The changing character of military warfare is affecting Ankara's overall plans for military procurement. Turkey in this regard continues to pay particular attention to the armed forces requirements in two main areas: meeting the needs required to wage war in cooperation with its strategic allies in NATO and being at the face of the new security challenges posed by asymmetrical warfare like terrorism. Therefore, Ankara is also attempting to adapt its military resources according to this newly arising insecure environment. Although Turkey currently maintains a vast conscripted army of over one million men, due to the radically changed conditions of military warfare since the end of Cold War, it has become an obligation for Turkey to introduce new military reforms. These military reforms, some of which have been implemented or are still under way, aim to reduce the size of the army by 20-30 per cent and Ankara intends to simultaneously raise the level of professionalism, training and technological capabilities.

Examining Turkey's achievements, one can now convincingly see various successes both in the making of civilian aviation and military air armaments. Turkey, as a result of its arm industry initiatives, is currently trying to be competitive in the areas of aircraft, UAVs, air-defense weaponry and other military mechanisms to be launched from ground forces.

In today's non-traditional warfare environment, intelligence, surveillance, reconnaissance and information management are certainly accepted as the keys to military success. Therefore, it is natural that the Turkish defense force is currently pushing the Turkish arms industry in the direction of the independent production of high-tech weapons so as to meet the emerging asymmetrical threats. Mastering these technologies will allow Turkey both to expand its export market, which can in turn help finance arms production for Turkey's internal needs, and also to enable Turkey to remain a regional power into the future. What is most important is that this capability is expected to provide Turkey with the much needed flexibility required in the times when it feels that its national security is threatened and will allow Ankara to act independently outside its borders, though of course in line with its existing rights from the international law.

Wise Men Center for Strategic Studies (BILGESAM)
Mecidiyeköy Yolu Caddesi, No:10, 34387 Şişli -İSTANBUL www.bilgesam.org www.bilgestrateji.com bilgesam@bilgesam.org Phone: 0212 217 65 91 - Fax: 0 212 217 65 93

Turkey has been hit by a series of rocket attacks from ISIS forces in Syria since January. In the Kilis province per se, these attacks have so far claimed 18 lives and 60 other people have been wounded. That is why Ankara has recently demanded that the US army use their UAVs armed with Hellfire missiles to be more effective against ISIS.[1] Moreover, following the ISIS Katyusha rockets launches from Syria into Kilis, Turkey has further demanded that Washington deploy the High Mobility Artillery (HIMARS) rocket launchers on Turkey's Syrian border, in the belief that the stationing of American HIMARS rocket launchers would push ISIS militants southwards and out of the border province of Kilis and out of ISIS rockets ranges. According to Hürriyet Daily News, "a bomb factory belonging to [ISIS] was hit and destroyed by Turkish drones in AZA district of Syria's Aleppo on May 1."[2] Also, as the Anadolu Agency stated so, "[as the result of] the MQ-1 modelled drone strike [that] took off from the Incirlik base in the southern province of Adana two ISIS militants were killed and many others were trapped in the building that was hit."[3]

Thus, realizing the importance of having air defense capabilities, I will focus on the success story of the Turkish aerospace industry. Given the current insecure situation, particularly in Kilis province and also along the Iraqi border, where the development of indigenous armed UAVs and missile defense system have gained the most immanence, it is now necessary to determine where Ankara stands in the development of these capabilities through the Turkish airspace industries.

Should Turkey Develop its Own Indigenous UAVs?

The rise of the Turkish industry in the last decade has been noticeable not only at home but also abroad. For instance, in early 2015 a very well-known and an established institution SIPRI placed the Turkish defense market among the emerging arms producers alongside South Korea, Singapore, Brazil and India. In the same year, Turkey reached the position of exporting nearly one third of its production in the overseas defense market.

In the face of a radically changing security environment, Turkey has been obliged to adapt its procurement requirements accordingly. NATO's Patriot and similar air defense systems today fall short of deterring the new ISIS base Katyusha assaults. Originally NATO's Patriots, in the Cold War years were designed to deter incoming ballistic missiles from beyond the Alliance's borders. However today it is not an easy business to set an effective counter to these Kaytyusha rockets. According to the current wisdom of military experts, the most effective way to deter a Katusyha attack is to have a strong reconnaissance and an adequate surveillance and intelligence system that could detect and destroy these rockets before they are fired. Hence, the armed UAVs have been identified as the best defensive system available in the deterrence mission against these rockets.[4]

As has been affirmed by military experts, the

1 Currently, four predators and 12 A-10 bomber aircrafts are based in Turkey's İncirlik base in Adana.

2 "Coalition Drones Take off from Turkey, Hit ISIL's Bomb Factory in Syria", *Hürriyet Daily News*, 1 May 2016.

3 *Ibid*.

4 Metin Gürcan, "Will Turkey Ask NATO for Help Defending against IS Rockets?", *Al Monitor*, 2016.

UAVs are expected to have a force-multiplier effect, especially in low-intensity warfare, and Ankara has been expediting the manufacture of home-made unmanned aerial vehicles. It is true that Ankara has been trying to compensate for its security deficiency on the Syrian and Iraqi borders with the integration of these armed drones into a system, ensuring that the ground control stations will provide aerial reconnaissance- and if necessary - a capability that will enable Ankara to conduct an armed intervention. According to Metin Gurcan "now that most of the cities in Turkey do have airports, TB2s can be deployed closer to operational zones"[5] and they could therefore become an important force multiplier in the fighting capacity of Turkish armed forces. 12 Bayraktar TB2s have been operational in the Turkish military since the beginning of 2016. More importantly, Turkey tested its first armed UAV flight on 17 December 2015. This is a locally made tactical unmanned aerial vehicle, Bayraktar TB2, that has fired an air-to- ground missile on its test flight. This UMTAS[6] missile, which was dropped during the test flight, was also a homogenous product developed as a result of a Kale-Bayraktar joint venture. Though the result of this successful UAV flight can be considered a crucial achievement of the Turkish defense industry, especially from a technological standpoint, one needs to bear in mind that it is too early to be sure of the net results of these test flights. However, Ankara seems determined to step these up, so that it can better upgrade its overall UAV capacity, particularly in the field of altitude limit as well as payload, which are known to be the key requirements for multitasking and multi-targeting of the armed drones. Turkish Aero Space Industries (TAI) has so far succeeded in adding several homogenous UAVs to the county's existing arms inventory. Among these are the ANKA A and ANKA B certainly being the most well-known ones. Karayel, which is produced by Vestel Defence Industry, is also used by the Turkish Air Force for intelligence and reconnaissance purposes. Locally produced drones are held in high regard and looked upon as a source of national pride for many Turks. These projects are naturally the great successes achieved by the Turkish defense companies.

Turkey in recent decades has managed to increase its export of military products, raising the profits of Turkey's defense industry. For instance, the total turnover of Turkish defense industry has gone up from 1.8 billion dollars in 2006 to US 5 billion dollars in 2013. Despite this remarkable progress being made, the military expert Metin Gürcan does specify that until recently the Turkish defense sector has mostly focused on low-value assembly rather than high-value R&D.[7] However, this reality should not pave the way for an underestimation of the pace of the progress that has so far been achieved by TAI.

The real incentive or inspiration that has brought about the recent successes enjoyed by the Turkish defense companies seems to emanate predominantly from the highly international competi-

5 *Ibid.*

6 UMTAS long-range anti-tank missile was orginally designed as anti-tank missile for Turkish T-129 attack helikopter. Roketsan is also developing Smart Micro Munition at a weight of 22.5 kg which would be suitable for operation on a range of tactical drones.

7 Tuncay Karaoğlu, "Turkish Defense Sector Pushing Drone Technology", *Anadolu Agency*, 18.03. 2015, http://aa.com.tr/en/turkey/turkish-defense-sector-pushing-drone-technology/65944,last visted 1 May 2016

tive market. First it was the radically changed or changing security environment around Turkey that put an obligation upon the Ankara government to boost its local and/or national defense project. This was a real necessity especially in the times when Ankara had difficulty in the procurement of certain weaponry either from its allies or other countries. This drive and determination of Ankara has certainly made the country proud and successful in the development of local defense projects like the production of tanks, drones, helicopters, communication satellites, homegrown rifles, and such. Ankara surely remembers the times when, in 2008, the US Congress turned down Turkey's requests for US-made MQ-1 Predator and MQ-9 Reaper drones and therefore now feels the security of relying on the development of its own national/local UAVs. Secondly, during 2006 and 2013 Turkey spent 135 million dollars on its defense budget.[8] Unquestionably this situation has also helped the local defense industry to make headway in the mentioned time span. Thirdly, ''according to Pieter Weizeman, a military researcher at SIPRI, Turkey has managed, very successfully, to integrate foreign-sourced technology into its own weapon systems. Hence, Weizeman argues that it was this hybridization that really enabled Turkish defense companies to reach international markets''.[9] Fourth, ''according to a think tank in Istanbul Atilla Sandıklı, who is a Professor of IR at Halic University and the president of BİLGESAM, it was the Turkish government's decisiveness to give support for the Turkish defense industry and its insistence on the focus in the co-production and technology transfer in defense tenders that really played a major role and acted as a game changer within the sector''.[10]

The global military UAV market in 2015 reached 6.4 billion dollars and this figure is expected to reach 10 billion dollars in 2024, and, what is more interesting is that UAVs have become the most demanded items across the Middle East. Moreover, Ankara is closely monitoring this globally flourishing armed drone market in the Middle East. Hence, Turkey is now in an attempt to enter and have a say in the armed UAV technology that is widely used in the region by US, Russia, China, Israel and elsewhere. The recent performance displayed by Ankara was quite visible in the Middle East market, so much so that Ankara has become the second largest defense weapons seller country after Israel.[11]

Where Does Turkey Stand on having its own Air Defense (SAM) System?

Turkey has very recently scrapped a two-year-old program for the construction of the country's first long-range air and anti-missile system, which was a tender competition between Chinese, US and European contenders. Such a decision first came into being out of Ankara's intention to render co-production and technology transfers as an essential means in order for the Turkish defense industry to upgrade. Clearly the evaluation being carried out by the Turkish military's top brass of the current security environment around Turkey's threatened borders, where

8 ''Turkey-Military Spending'', http://www.globalsecurity.org/military/world/europe/tu-budget.htm, last visited 2 May 2016.

9 *Ibid*.

10 *Ibid.*

11 ''Turkey's Defense Industry Now by-passes Israel'', *YeniSafak*, 10 November 2015, http://www.yenisafak.com/en/technology/turkeys-defense-industry-now-by-passes-israel-2339166, last visited 1 May 2016.

the threat to conventional security increasingly continues, has been a significant element in the search for alternatives. According to Turkish military assessments, the requirement of a long-range air to anti-missile system is more urgent under the current insecure conditions than any reliable system a local partnership could provide. The cancellation of three-way foreign completion program does not necessarily mean that Turkey has now relinquished missile technology. On the contrary, the current government has decided to immediately take the two Turkish defense companies, namely Aselsan and Roketsan, into a partnership in which they are tasked with working on the already planned long-range air defense capabilities.[12]

The development of indigenous long-range air and anti-missile capabilities is challenging and multifaceted work and surely will take several years to be completed. However, Turkey has so far managed to develop several important missiles ready to be launched from air-to-ground both in short and medium range SAM projects-which are moving smoothly. Of these, the short-range air defense missile (SHORAD) Hisar-A has already been developed AND had its first test successfully in 2013. Moreover, a similar successful test in early 2014 was carried out on the medium range Hisar-O, too. Turkey's HisarA/O experiences are showing that Turkey already possess at least some of the underlying technological, research and development infrastructure required to develop a long-range SAM. In this nexus, there is therefore much to hope that Ankara could start developing its T-LORAMIDs as an operational indigenous program.[13]

To the belief strongly held by military strategists, the immanent reality of having or developing an air defense program has gained considerable importance and prominence for Turkey since the downing of the Russian SU-24 jet. The international community has observed how the Russians visibly strengthened their military deployments most notably in Syria, the Caspian Sea and neighboring Armenia.[14] Moscow with their newly stationed A2/AD (Anti-access and Anti-Areal) capacities-like with the newly stationed Russian S-400 batteries existence in Syria- have now become a main obstacle and a real problem not only for Turkey's jets but also for the likely NATO's operations in the Southern flank.

12 Burak Bekdil, "Turkey Mulls Three Missile Technology Programs", *Hurriyet Daily News*, 30 March 2016

13 Bilal Khan, "Turkey's New Long-Range Air Defence System to be Indegenous?", *Quwa*, 29 November 2015.

14 Burak Bekdil, "Confusion Over Turkey's Air Defense System", *Hurriyet Daily News*, 1 March 2016.

About BILGESAM

Established in 2008, the Wise Men Center for Strategic Studies (BILGESAM) is one of the leading think tanks in Turkey. As a non-profit, non-partisan organization BILGESAM operates under the guidance of a group of well-respected academics from different disciplines, retired military generals and diplomats; and aims to contribute regional and global peace and prosperity. Closely following the domestic and international developments, BILGESAM conducts research on Turkey's domestic problems, foreign policy and security strategies, and the developments in the neighbouring regions to provide the Turkish decision-makers with practical policy recommendations and policy options.

About Author

Nurşin Ateşoğlu Güney is professor of international relations and head of international relations department at Yildiz Technical University in Istanbul, Turkey. Prof. Güney is also vice president and security and nuclear energy fellow at the Wise Men Center for Strategic Studies (BILGESAM). She contributes to BİLGESAM every month by writing one analysis on security related matters. She has extensively published on Middle East, security studies, American foreign and security policies, EU, NATO and arms control and disarmament issues as well as on energy issues. She is the member of IISS and a member of Board of Directors of International Geostrategic Maritime Observatory. She is commentator to national and international TV stations.