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Turkey's Border Porosity Problem with PKK

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The porosity of the border between Turkey and Iraq has been a pressing issue in combating PKK terrorism. The fact that the PKK has moved considerable material and personnel support through that border is undisputed, as is the fact that absent such support, the PKK would pose a far less menacing threat to the safety of the Turkish people. Since it took arms in the 1970s, the PKK has used the mountainous border area between the two countries to establish bases of operations from which it has launched attacks. It is estimated that the loss of lives within the Turkish army is higher than 6.000 in fighting with the terrorist group, PKK. In order to decrease casualties and build an effective system of border monitoring - utilization of UAVs is a must. While employing UAVs has several limitations as well as disadvantages, their advantages outweigh its drawbacks.

Border porosity could be broadly defined as the high permeability of a land, sea or maritime border to illegal trespassing or hauling of personnel or material as a result of inadequate or inefficient border security and monitoring. UAVs are defined as a powered aerial vehicle that does not carry a human operator, uses aerodynamic forces to provide lift, can fly autonomously or be piloted remotely, can be expendable or recoverable, and can carry lethal or nonlethal payloads[i].

In combating PKK terrorism, border porosity should receive increased attention chiefly because the PKK keeps the bulk of its forces and resources in hideouts in Qandil Mountains, which lie further south of the border. The choice of Qandil Mountains is no coincidence, as it is relatively more secure for the PKK than the immediate vicinity of the border, and because the rugged terrain rarely provides a ground for operations for the Turkish military. In addition, Turkey faces several political challenges both at home and abroad while conducting cross-border military operations against the PKK, and in this regard, the fact that the Qandil Mountains lie south of the border provides the PKK practical as well as tactical advantages. Before we can eliminate the PKK completely, we should first deny the organization's access to Turkish territory through the border. Once that is accomplished, the raids on Turkish military outposts along the border will dramatically decrease in number, and the majority of the PKK's resources will be confined to the Kurdish-controlled Northern Iraq.

The porosity of the border between Turkey and Iraq permits the PKK to stage cross-border attacks on Turkish military outposts, and to bring explosives into Turkey for use in attacks in major metropolitan areas. There are several reasons for this porosity, of which the major one is the unyielding terrain. The border region is not only mountainous, but also subject to a harsh terrestrial climate, which undermines both effective land-based monitoring and surgical operations in winter. The terrain also results in the military outposts being physically loosely

connected, if not completely isolated from each other, which in turn results in the need to provide supplies through the air, by helicopters. The current state of border monitoring is, in effect, comprised of individual outposts with a less than ideal, and rarely overlapping area under control. Their expensive upkeep adds to the problem, especially when the PKK can still stage cross-border attacks on these outposts, inflicting several casualties. The PKK also capitalizes on the presence of pores on the border in its narco-trafficking, and in so doing sustains its finances to access more weapons in Iraq and elsewhere. The border porosity is a problem also because Turkey's retaliatory actions against the PKK usually take the form of elaborately planned, cross-border military operations rather than hot pursuit, and this is rarely met with compliments by other countries. In failing to eliminate border porosity, Turkey hampers its chances of retaliation as well.

Probably the major method of eliminating border porosity is the employment of unmanned aerial vehicles (UAVs) in border surveillance. At this stage, a detailed explanation of what is proposed is called for: Turkey should incrementally shift from a land-based border monitoring posture to a UAV-intensive surveillance and cross-border reconnaissance operation. In the project phase, the Cartography Command and volunteering universities should conduct a detailed study of the border's topographic and other relevant geographic features, as the said features would represent a decisive factor in the prospective demand for the number of UAVs. In the meantime, increased support should be given for the Turkish companies who are already working on TIHA (Türk Insansiz Hava Araci – Turkish Unmanned Aerial Vehicle). In the transformation phase, while the prototypes are inspected and operational units deployed, the Turkish military should begin to gradually evacuate and dismantle certain stationery outposts as the deployed UAV units take over the surveillance mission. Eventually, the UAVs will take over more than 80 per cent of the surveillance mission, with the remaining 20 per cent shouldered by critical and contingency military personnel.

A UAV intensive approach to border monitoring has several advantages over a land-based approach. These include long-term financial efficiency, drastic decreases in casualties, increased technical capabilities in surveillance and reconnaissance, and improved target acquisition and strike coordination. These are detailed below.

The current border outposts maintained by the Turkish army have to be supplied and re-manned by air due to the rugged terrain and the elements. These are both expensive and lacking in terms of real-time coordination and visual communication, and their sustenance inflicts heavy financial burdens on the Turkish budget. A nominally comparable budget should be only too welcome by the Turkish general staff, as the opportunity cost of lowering that budget would be incomparably high. Given the longer operational life of the UAV and its low servicing costs, the UAV intensive border monitoring will contribute to the long-term financial efficiency of counterterrorism policies.

More importantly, the Turkish armed forces will suffer far fewer casualties if the current posture is abandoned in favor of the UAV intensive approach. The mere fact that there would be fewer combatant personnel on the ground suggests a decrease in the number of casualties with a given casualty rate. The number of deployed combatant personnel notwithstanding, the casualty rate itself will fall sharply once the UAVs are operational and thus decrease border porosity to a

larger extent, thereby reducing terrorist trespasses and subsequent attacks. Here we should recall a statement made by former Chief of General Staff Gen. Yasar Buyukanit when he was the commander of the 7th Corps in the southeastern province of Diyarbakir that he could have reduced the size of his corps by almost 40 percent if the TSK had UAVs in its inventory.

Another clear advantage of employing UAVs for the majority of border surveillance missions is the UAV's adaptability that ranges from being a simple unmanned surveillance craft to a multirole equipment. Examples for features include, but are not limited to: regular cameras, higher-definition video cameras, multiple cameras, infrared cameras and motion detection and target lock and pursuit software. Because the UAVs can relay the information they gather to a central command station in real time, the C3I decision makers will have the possibility to send orders sooner and in more detail. In addition, a possible addition of a thermal camera would dramatically increase the intelligence received by headquarters, since it will allow for the detection of terrorists at night and within a much larger zone of surveillance. For instance, Electro-Optical (EO) sensors can identify an object the size of a milk cartoon from an altitude of 60,000 feet.[ii]

Additionally, UAVs are beneficial in terms of their loiter capabilities. The UAV's ability to loiter for prolonged periods of time has important operational advantages over manned aircraft. The longer flight times of UAVs means that sustained coverage over a previously exposed area may improve border security. It is estimated that while UAVs can fly for more than thirty hours without having to refuel, helicopters, like BlackHawks, can only fly 2 hours and 18 minutes maximum[iii].

Should the Turkish Armed Forces choose to carry out a major land-based cross-border operation against PKK hideouts in Northern Iraq, the UAVs would be of critical importance since the advantages mentioned above could also be employed over those hideouts. If incorporated, the UAVs would also contribute to a Turkish air strike by providing real time locations of terrorists, thereby permitting the Air Force to use smart munitions to eliminate those terrorists with a relatively smaller, surgical air strike. In addition, slight upgrades to current UAV technology would provide for their use as unmanned bombers, in which case they would be fitted with a small payload and Joint Attack Direct Munitions (JDAM).

The proposed approach also has some possible drawbacks and could encounter challenges. These include the financial challenges, comprising of the initial project development and unit manufacture costs, auxiliary costs such as the education of the personnel, service and maintenance costs; operational problems such as an inadequate relay of resolution or data to let the decision makers decide, or adverse weather conditions that would force and amendment of the flight plan; and finally, countermeasures that may be adopted by terrorists, such as wearing wet cloaks to escape detection by IR / thermal cameras. These are detailed below, as are suggested methods of their preemption or prevention.

The financial challenges could be dealt with in a more flexible manner, as the primary emphasis would be on domestic production, and the manufacturer companies could be incentivized through the Defense and Finance Ministries. Thus, initial project development and manufacture costs could be lowered to a bearable point. The service and maintenance costs could also be

lowered using this method. It should be kept in mind that most manufacturers are already in business with the Turkish Armed Forces at different levels and with different units. There would very likely be a time, after reaching an optimum design for the TIHA, when spare parts compatibility will cease to be an issue, which will further lower service and maintenance costs. As mentioned before, the opportunity cost of leaving the UAVs out of the budget is measured in the number of casualties, which is hardly the price Turkey or any other country would be willing to pay.

Operational problems would hardly be a pressing problem, provided that the Turkish Armed Forces set out a clearly designated, comprehensive set of requirements to the manufacturer companies. Regardless of how promising the design, the UAV prototypes and initial operational units would be put to harsh tests to determine whether they meet such requirements, and only then will more units of the same stock be sent to the border region. Moreover, the software on the UAVs could be set for compensate for weather conditions, in order to deny terrorists any benefits of using wet cloaks, etc. In addition, this will be a phased shifting of responsibility, and even when the UAV intensive border surveillance project reaches its full extent, there will be land-based combatant units on the ground, as a safety precaution.

There are also concerns regarding UAVs high accident rate which is currently 100 times higher than that of manned aircraft. We should keep in mind that UAV technology is still evolving and until redundant systems are perfected accident rates are expected to remain high. In addition, if the control system fails in a manned aircraft, a well-trained pilot is likely to find the source of the problem while if a UAV encountered the same problem, the ground control pilot would be in a disadvantageous position since s/he is removed from the event. Still, the comparison of the cost of losing a pilot and a UAV clearly shows that though the crash of a UAV is expensive, it takes months, if not years, to train a pilot. Therefore, although the accident rates are high for UAVs, the crash of a UAV will not result in loss of lives since the mountainous border area is not populated and damage to the technical military equipment is always preferable to having casualties.

In short, in spite of the possibility of a variety of drawbacks in the UAV intensive approach, the fact remains that the TIHA project is still in its infancy, and needs better support both from the government, and from the Turkish Armed Forces and the Turkish manufacturer and heavy industry companies, as well as Turkish software developers. Absent such support, a great opportunity to increase border security and decrease casualties at the same time might be missed.

Turkey recently bought two UAVs, called Herons, from Israel as a part of their contract. Ankara signed a $183 million contract with Israel's UIP consortium in 2005 for the delivery of 10 Heron UAVs. Despite the urgency of the Turkish Armed Forces' (TAF) order, however, the Israeli contractor has postponed the delivery of 10 Herons several times over the past year. Surveillance shortages are speculated to have played a part in the TAF's failure to prevent the PKK attack on Aktutun outpost, which claimed the lives of 17 soldiers on October 3, 2008. In addition, according to an Israeli report, Israel is preparing to suspend the sale of unmanned aircraft Heron to Turkey as a retaliation to Turkey and Syria's joint military exercise across the border. Therefore, it is proven to be inefficient to depend on only one supplier when it comes to acquiring UAVs as well as other technical equipment. In that sense, Turkey should not limit

itself with one single country and try to find several suppliers. Also, there are some encouraging developments related to TIHA. Turkish Aerospace Industries (TAI) has recently made known on its medium-altitude, long-endurance Unmanned Air Vehicle project TIHA-A and TIHA-B which will be delivered in short time to Turkish Armed Forces. As a one last development, in the past week Turkey and Germany signed an agreement over cooperation in defense equipment related issues and Turkey made clear that it intends to forge cooperation with Germany in the production of strategic UAVs, which can fly at an altitude of over 30,000 feet and have a long range. In sum, Turkey seems to be on the right path with trying to buy more UAVs as well as signing cooperation agreements with several countries, however, given the increased attacks and high casualties in the last weeks, Ankara should give more attention and divert more sources for the employment of UAVs.

On the diplomatic level, it is an undeniable fact that Barzani holds influence over the PKK, as demonstrated by his ability to end PKK violence when it rose in June 2007. Also, he has been under pressure from the Iraqi government in Baghdad to control his area or else the Iraqi army would be deployed there which would greatly reduce the region's autonomy. It can be said that Barzani is trying to be the leader of Kurds in Northern Iraq along with the Kurds living in other regions and to be sure, his agenda disturbs PKK and its aims. If Turkey decides that Barzani is reliable and ready to cooperate on the issue of PKK, there is a great chance that the border porosity between Turkey and Iraq will diminish. However, Barzani could not prevent PKK violence so far on many occasions. Kurdistan Regional Government (KRG) will have to prove that they are not using PKK as a tool. If Barzani can prevent PKK attacks, he will win Turkey's friendship and there will be room for improvement between Turkish-KRG relations. However, it should be noted that the strategic partnership between Ankara and Erbil will most likely to happen in the long run, if at all. Consequently, Turkey should concentrate on the short term solutions like the employment of UAVs to decrease the border porosity.

In sum, Turkey needs to utilize UAVs in border monitoring. The advantages of using UAVs relative to use of a manned aircraft are that the UAVs are less expensive, they can enter environments that are risky for human life and can stay in the air for more than 30 hours performing a geological survey as well as visual or thermal imaging of the region. In the short run, UAVs can be obtained from various countries by strategic cooperation agreements, however it is vital for Turkey to produce its own UAVs since it's less costly. In the long run, cooperation with Barzani will likely to reduce the border porosity but for that Barzani has to prove that he has real control over PKK and should be able to deter their attacks.

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[i] United States, Department of Defense, Dictionary of Military and Associated Terms, Joint Publication 1-02, April 12, 2001. P.557
[ii] Peter Hardin, "Eyes in the Skies", Richmond Times- Dispatch, October 30, 2003, p. F1
[iii] Paul Jackson, Jane's All the World's Aircraft 2003-2004. (Alexandria, VA: Jane's Information Group, 2003), pp. 721-22.