



## Militancy/Terrorism

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### Special Analysis Report: Threat to aviation posed by proliferation of anti-tank guided missiles highlighted by al-Arish Airport attack case study

#### Executive Summary:

- On December 20, the Islamic State (IS) fired an anti-tank guided missile (ATGM) against a helicopter in Egypt's al-Arish Airport.
- Despite not being primarily designed for this purpose, ATGMs' feature still make them effective against aircraft in certain conditions, which along with their proliferation, low-profile and other factors make them a considerable threat to aviation that is often overlooked.
- **The threat of ATGMs should be considered as a potential factor while conducting risk and vulnerability surveys, particularly in unstable regions.**

#### Case study: December 20 attack on al-Arish Airport

- On December 20, an anti-tank guided missile (ATGM) [targeted a helicopter](#) on the ramp of al-Arish Airport, located in Egypt's North Sinai Governorate. The helicopter carried, among others, the Egyptian interior and defense ministers who disembarked from the aircraft shortly before the attack.
- On December 21, the Islamic State (IS)-linked news agency released a report on the attack, alongside a claim of responsibility by the local IS affiliate Wilayat Sinai, stating that the group had prior knowledge of the arrival of the ministers and dispatched a team of militants to ambush the entourage. It further stated that the attack was conducted with the use of a 9M133 "Kornet" ATGM that targeted an AH-64 Apache attack helicopter that was escorting the VIPs.

# استهداف القائد العام للقوات المصرية ووزير الداخلية في مطار العريش شمال سيناء

**شمال سيناء - وكالة أعماق:** أفاد مصدر عسكري لأعماق أن مقاتلي الدولة الإسلامية قصفوا أمس مطار العريش أثناء تواجد قائد القوات المسلحة المصرية ووزير الداخلية.

وذكر المصدر أن مقاتلي الدولة الإسلامية كانوا على علم بوصول الفريق أول صدقي صبحي القائد العام للقوات المسلحة المصرية واللواء مجدي عبد الغفار وزير الداخلية إلى مطار العريش، خلال قيامهما بجولة تفقدية للقطعات العسكرية في شمال سيناء، ومن ثم تم استهداف إحدى طائرات الأباتشي المرافقة لهم بصاروخ موجه من نوع كورنيت أثناء هبوطها في المطار، مما أدى إلى إعطابها ومقتل ضابطين برتبة عقيد طيار ومقدم وإصابة عنصرين على الأقل.

الإخبارية

20 ديسمبر 2017

### *Initial IS-linked report detailing the al-Arish attack*

- Later that day, the IS-linked news agency released a video showing the attack itself, in which the ministers and their entourage can be seen next to the helicopter with its navigation lights still on, which contrary to initial publications was a UH-60 “Blackhawk”, as it was hit by an ATGM.
- Edition number 111 of IS’s weekly al-Naba newsletter published on December 22 included a more detailed and contradictory account of the attack, stating that militants spotted a helicopter with a “unique shape” and concluded that this would be a high value target.
- This prompted militants to dispatch an ATGM team to a position overlooking the airport with the objective of destroying the “unique aircraft”.
- It is important to mention that the Egyptian Air Force (EAAF) reportedly operated two Blackhawk helicopters prior to the attack, mainly in the role of VIP transport. These aircraft are much more distinct than others that would commonly be seen in Sinai’s airspace, such as Apaches or Mi-17s.

## استهداف وزير الدفاع والداخلية المرتدين في مطار العريش ومقتل ضابطين

مصدر عسكري يوضح لـ (النبأ) تفاصيل الهجوم

النبأ ولاية سيناء - خاص

استهدف جنود الدولة الإسلامية في سيناء الثلاثاء (١٠ ربيع الآخر) وزير الدفاع والداخلية المرتدين في مطار مدينة العريش أثناء نزولهم فيه لتفقد الأوضاع الأمنية، مما أسفر عن مقتل ضابطين وإصابة آخرين.

ووفقاً للمصادر الميدانية، فبعد ورود معلومات أمنية للمجاهدين تفيد بوصول وزير الدفاع والداخلية المرتدين للمنطقة، استعد المجاهدون لاستهدافهم، ليطلقوا بعد وصولهم للمطار صاروخاً موجهاً على طائرة مروحية تابعة للوفد، الأمر الذي أدى إلى مقتل وإصابة عدد من المرتدين بينهم ضابطان برتبة عقيد طيار ومقدم، وقدر الله نجاة الوزيرين هذه المرة، ولله الفضل أولاً وآخرًا. ووفقاً لما بثته وكالة أعماق، فقد أعطيت الطائرة التي استهدفها المجاهدون، ولله الحمد، بينما ذكرت مصادر إعلامية أخرى اسمي الضابطين الهالكين وهما العقيد، الطيار المرتد (محمد رفعت المندوه)، والمقدم المرتد (إسماعيل الهبابي).

### مصدر عسكري في سيناء يشرح أسباب العملية وتفاصيلها

وأفاد مصدر عسكري خاص لـ (النبأ) بأن جنود الخلافة حرصوا على ضرب أهداف تخص مجال الطيران، مواءمة للمسلمين وانتقاماً من الكافرين، رداً على



طائرة الوزيرين لحضة استهدافها بالصاروخ الموجه

ما يحدث في العراق والشام من حملات جوية وقصف لرعايا أمير المؤمنين، وامثالاً لأوامر الأمراء باستهداف المرتدين المتعاونين مع الصليبيين في حرب المسلمين. وذكر المصدر العسكري أن استهداف رؤوس الحكومة المصرية وخصوصاً وزير الدفاع المصري أولوية من أولوياتهم نظراً لدوره في قصف المسلمين في العراق والشام وليبيا بالطائرات التي تخرج من مطاراتهم المختلفة.

عمدوا إلى استخدام القصف بالمسيرات، وتمهيط المنطقة الملاصقة للمطار، نسأل الله أن يرد كيدهم في نحركم. ولغت المصدر العسكري إلى أن هذا الاستهداف لم يكن الأول من نوعه، إذ سبق لجنود الدولة الإسلامية أن استهدفوا المطار قبل ذلك أكثر من مرة بالصواريخ، أثناء تواجد بعض القيادات للجهيز للحملات، وهو مطار لا تتواجد فيه طائرات بشكل دائم، بل هو لاستقبال المروحيات الناقلة للمرتدين من القيادات وغيرهم.

### تدمير جرافة للجيش المصري

وعلى صعيد آخر، فجر جنود الخلافة السبت (٢٨ ربيع الأول) عبوة ناسفة على جرافة للجيش المصري المرتد أثناء محاولتهم توسيع المنطقة العازلة في حي الزهور بمدينة رفح، الأمر الذي أدى إلى تدمير الجرافة، ولله الحمد. ومن جانب آخر، استهدفت مفارز القنص - هذا الأسبوع - عناصر الجيش المصري في حواجز له غرب وجنوب مدينة الشيخ زويد وشرق العريش وفي مدينة رفح، مما أسفر عن مقتل ٥ منهم، بفضل الله.

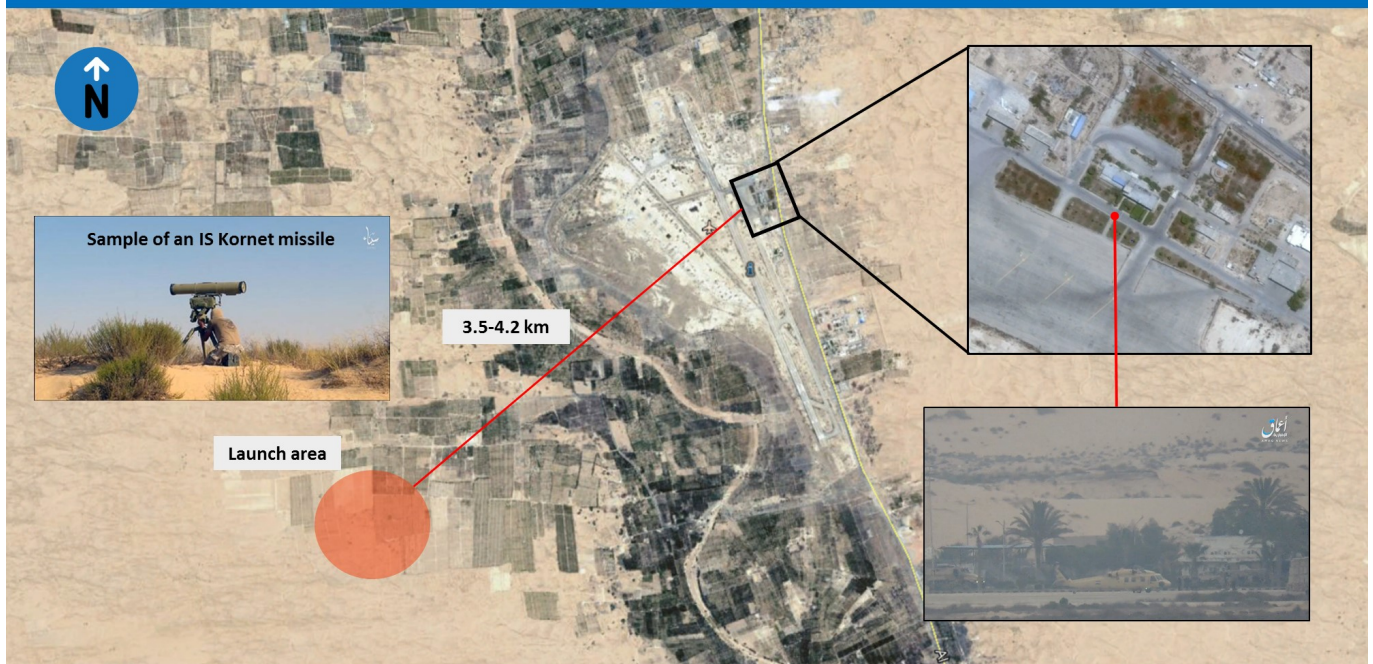
ووفقاً للمصادر الميدانية، فقد قُتل ٢ من عناصر الجيش المصري قنصاً في حاجزي (الخروية والمهوي) شرق مدينة العريش يومي السبت والأحد (٢٨-٢٩ ربيع الأول)، فيما قُتل العنصر الثالث في حاجز الإسعاف غرب (الشيخ زويد) -الأحد- بفضل الله تعالى. ولقي عنصران آخران من الجيش المصري المرتد حتقهما الثلاثاء (١٠ ربيع الآخر) قنصاً في حي الزهور بمدينة رفح، وفي حاجز (أبو عطية) جنوب مدينة الشيخ زويد، ولله الحمد.

## **Analysis of the missile launch:**

- While there has been no corroboration as to the type of missile used by IS in the attack at the time of writing, Wilayat Sinai have employed Kornets several times in the past, most notably in July 2015 when the group used the missile to attack an Egyptian naval vessel off the coast of North Sinai's Rafah.
- If the missile used was in fact a Kornet as IS claims, given that the missile was in flight for 14 seconds from launch until it hit its target and given that the speed of a standard Kornet missile is between 250 and 300 meters a second, it would place the launcher between 3.5 and 4.2 km from the target, well within the Kornet's effective daytime range.
- By comparing the video and imagery analysis of Al-Arish Airport, we concluded that the missile was launched from an elevated structure or a dirt berm southwest of the helicopter's position, as can be see in the following map:



## Analysis of the missile attack against helicopter in al-Arish Airport



## Threat posed to aviation from proliferation of ATGMs:

1. The attack does not represent a precedent, but rather serves as an opportunity to highlight the threat posed to aviation from the proliferation of ATGMs in the hands of numerous militant groups in multiple countries. Several accounts of ATGMs being fired against aircraft were recorded in recent years, including successfully targeting aircraft in flight, with the most prominent example being the downing of an Israeli Air Force (IAF) helicopter by Hezbollah in Lebanon on August 12, 2006. This is especially important as this threat is often overlooked in comparison to the more well known threat posed by man-portable air defense systems (MANPADS).
2. While MANPADS pose a more prominent threat to aircraft, as they were designed with the specific goal of targeting aircraft, they have several shortcomings compared to ATGMs. These mainly include being more delicate, having parts with short shelf lives, requiring greater expertise and training to successfully operate, and being more rare. ATGMs still require expertise and training, although less than MANPADS, and are generally more durable and can be sustained for operations over longer time and in harsher conditions. Most importantly however, ATGMs are significantly more common than MANPADS, and with the destabilization of countries such as Libya, Syria, Iraq, and Yemen, thousands of these systems, of different generations and capabilities, were taken away from military storage and ended in the hands of militant groups across the world. This is in addition to illegal purchases through stable countries that do not adhere to international norms, such as Belarus and North Korea.
3. As noted, ATGMs were not designed primarily to hit aircraft and therefore do not excel in it, however, the features for which they were designed, namely attacking a comparatively slow moving target, still make them effective weapons against aircraft. This is mostly relevant during the takeoff and landing stages of both rotary and fixed-wing aircraft, when these are most vulnerable due to their low speed and altitude. In addition, while there are several options of countermeasures against MANPADS that can be used by civil aircraft, countermeasures against ATGMs are fewer, and often involve explosives, making them currently non-optional for civil aircraft.
4. An additional weakness exposed in the recent attack is the dependency on local security forces and their protocols, which can often be low in standard. The attack occurred in a region currently undergoing prolonged and high intensity militant activity, in a city that was hit by the most attacks in the region in recent months. Despite this fact, the VIPs were flown in a distinct helicopter that draws attention, the airport lacks even basic and cheap means in place that may disrupt or prevent a missile attack, such as walls that would block line of sight into the airport, or metal nets that would negate the missile's shaped charge mechanism. All of these expose the weaknesses of local security protocols, which were a direct factor in the attack.

## Recommendations:

1. The threat of ATGMs should be considered as a potential factor while conducting risk and vulnerability surveys, particularly in unstable regions.
2. Prior to conducting aerial activity in countries with known militant activity, contact us at [intel@max-security.com](mailto:intel@max-security.com) to consult on the possible threat posed by relevant militant groups' weapons and capabilities and ways to mitigate these.
3. Contact us at [Operations@max-security.com](mailto:Operations@max-security.com) or +44 20-3540-0434 for security surveys of airports.