FOUNDATION FOR DEFENSE OF DEMOCRACIES

Evolving Terror

The Development of Jihadist Operations Targeting Western Interests in Africa

Daveed Gartenstein-Ross, Jacob Zenn, Sarah Sheafer, & Sandro Bejdic

February 2018



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Acronyms

AQAP	Al-Qaeda in the Arabian Peninsula
AQIM	Al-Qaeda in the Islamic Maghreb
ISIS	Islamic State in Iraq and al-Sham
MPIED	Man-portable improvised explosive device
MUJWA	Movement for Unity and Jihad in West Africa
TTPs	Tactics, techniques, and procedures
VBIED	Vehicle-borne improvised explosive device
VNSA	Violent non-state actor

Introduction and Executive Summary

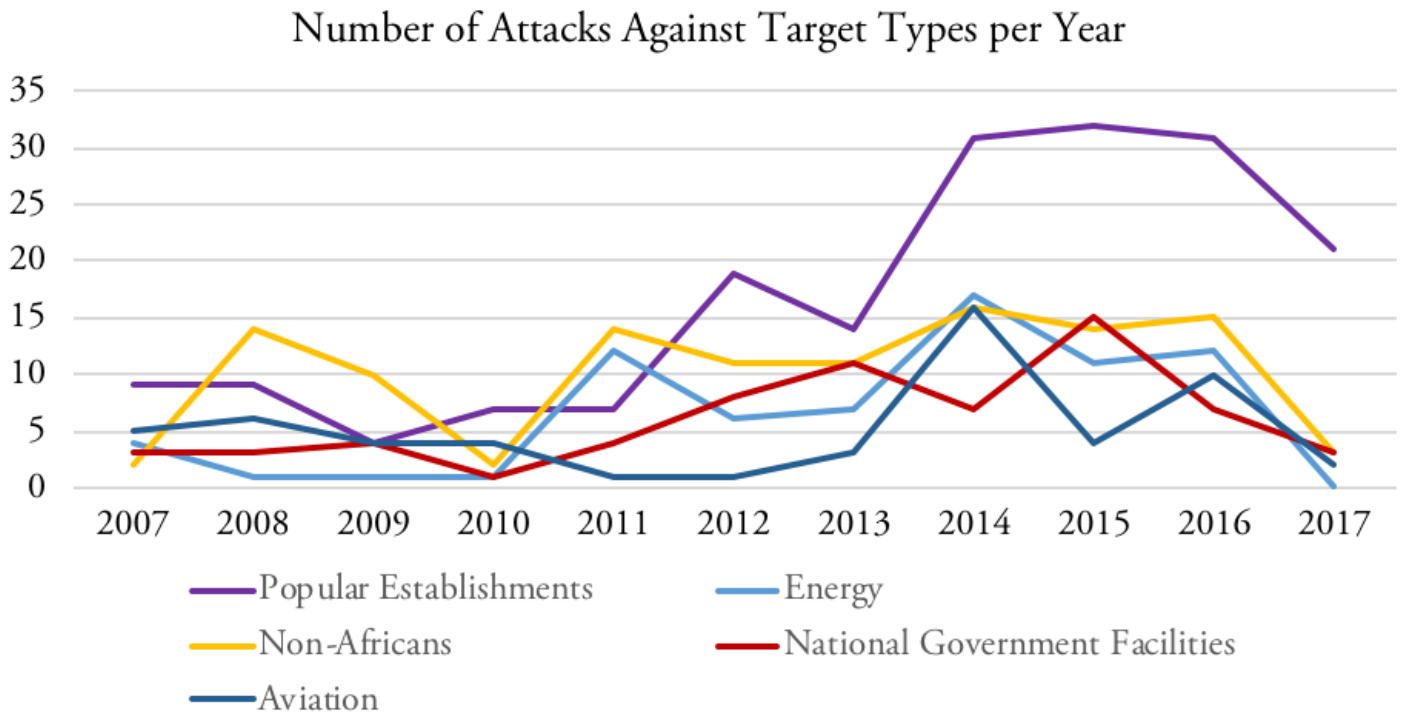
After the Arab Spring, North African countries experienced growing instability, and jihadist groups capitalized on both social unrest and local conflicts.[1] As these groups strengthened, jihadists expanded their operations into the Sahel, and were able to propagate their transnational ideology to new audiences. The threat that jihadist groups in Africa pose to Western interests has grown over the past decade, as groups operating in North Africa, the Sahel, West Africa, and the Horn of Africa have honed their capabilities. This is reflected in the increased frequency and complexity of attacks against Western interests. Between January 2007 and December 2011, jihadists conducted 132 successful, thwarted, or failed attacks against Western interests in Africa. This figure nearly tripled to 358 attacks between January 2012 and October 2017.

While the 490 total attacks against Western interests in Africa recorded in this study have varied in target type and tactics, jihadist operations have generally become more sophisticated. In some cases, jihadist organizations developed new tactics for penetrating well-guarded facilities. For example, the Somali militant group al-Shabaab has increased its use of vehicle-borne improvised explosive devices (VBIEDs), often supplementing such attacks with armed assaults. This adaptation allowed Shabaab to gain entrance to facilities like airports and UN humanitarian compounds, frequently penetrating past guarded gates.

African jihadist groups have also developed innovative ways to thwart the aviation industry's security measures on the continent. For example, a Shabaab suicide bomber detonated a laptop bomb on Daallo Airlines Flight 159 in February 2016. A month later, Shabaab operatives concealed another bomb in a laptop that exploded at Somalia's Beledweyne airport, and authorities defused two other bombs in the same incident, including one hidden in a printer. Not only do these events suggest an escalating threat to African aviation, but they also highlight how African jihadist groups learn and innovate. The ability to learn is critical to any violent non-state actor (VNSA), but particularly so for militant groups, which are pursued by state actors and sometimes also by other VNSAs. These groups need to be able to mount successful attacks against foes who constantly refine their defenses. The learning processes of African jihadist groups are evident in this study's data set, as these groups have engaged in unambiguous adaptations over the course of the past decade. They will continue to engage in organizational learning in an effort to make themselves more effective – and, consequently, more dangerous. But there is also a significant risk that outside jihadist groups are assisting African jihadists' innovations, and watching carefully to bring these tactics to new theaters after seeing how they fare in a "testing ground." We return to the topic of jihadist learning processes in this study's conclusion.

To understand evolving tactics, techniques, and procedures (TTPs), targeting, and jihadist innovation, this report uses empirical and historical analysis to map trends in operations against Western interests over the past decade. The report focuses on five target types: (1) establishments popular among foreigners, such as restaurants and hotels; (2) energy and mineral resources infrastructure and facilities; (3) non-African tourists, expatriates, and NGO workers; (4) national and international government facilities, such as embassies and UN humanitarian compounds;

1. See, for example: Daveed Gartenstein-Ross, "The Arab Spring and Al-Qaeda's Resurgence," *Testimony before the House Armed Services Committee*, February 4, 2014. (http://docs.house.gov/meetings/AS/AS00/20140204/101698/HHRG-113-AS00-Wstate-Gartenstein-RossD-20140204.pdf)



and (5) the aviation industry. This report is based on an extensive list of successful, thwarted, and failed attacks against each target type, and utilizes both quantitative and qualitative analysis to identify trends and draw conclusions about the evolution of targeting preferences and TTPs since 2007.

Summary of Key Findings

- Establishments Popular Among Foreigners. Over the past decade, African jihadist groups attacked establishments popular among foreigners more often than the other four target types. Their TTPs became more complex as they combined multiple tactics and weapon types.

- Energy and Mineral Resources Infrastructure and Facilities. Jihadists primarily attacked poorly defended infrastructure, such as gas pipelines, as opposed to well-guarded energy facilities. While there were fewer attacks on the latter, those that occurred involved more resources on the part of jihadist groups and resulted in a larger number of casualties.

- Non-African Tourists, Expatriates, and NGO Workers. While kidnapping foreigners is not a new tactic in places like Somalia, jihadist groups in the Sahel have recently expanded these operations into atypical areas, such as northern Burkina Faso and Cameroon.

- National and International Government Facilities. Between 2012 and 2017, jihadist operations against embassies, consulates, and UN humanitarian compounds became more complex, as groups like Shabaab developed ways to penetrate well-guarded facilities by combining VBIEDs with armed assaults. These complex attacks were some of the deadliest. But they have

remained comparatively rare, as these groups have primarily employed simple bombings.

- Aviation. In recent years, African jihadist groups have demonstrated a greater interest in conducting sophisticated attacks against aviation targets. Techniques have included measures designed to evade airport security by concealing explosives in electronic devices, and the attackers have relied on complicit airport employees in several cases.

Research Design and Methodology

This project began with the compilation of an extensive list of successful, thwarted, and failed attacks and kidnappings in Africa against the five aforementioned target types from January 2007 to October 2017 by relying on publicly available sources.[2] Information collected about the attacks included target, date, location, suspected or confirmed assailant(s), number of perpetrators, tactics and weapons used, number killed and wounded, number kidnapped, and a brief description of the incident.[3] Attacks were only recorded if they were perpetrated by confirmed or suspected African jihadists. For the purposes of this report, *jihadism* refers to militant Sunni groups that advocate the overthrow of local regimes, seeking to replace them with government ruled by a strict form of *sharia* (Islamic law).[4]

Inclusion Criteria for Target Types

Researchers identified and defined five general target types with implications for Western interests in Africa. They are:[5]

Establishments Popular Among Foreigners includes attacks on hotels, restaurants and cafés, nightclubs and bars, local shops, markets and business areas, shopping centers, and entertainment venues such as cinemas and sports arenas. While some jihadist attacks on hotels are primarily driven by these venues hosting

2. Sources referenced included newspaper articles, government and NGO websites, research institute publications, the Global Terrorism Database (GTD), and African jihadist groups' statements. The likelihood of unreported attacks germane to the five target types is relatively low because international media generally reports attacks against Western interests. While it is certain that attacks on local targets in remote regions sometimes go unreported, attacks on venues like markets were excluded from the dataset anyway if they occurred in remote or insurgent-controlled areas rarely frequented by foreigners, as is discussed in this section's inclusion criteria.

3. Tactic categories included plane hijacking, kidnapping, bombing, assault, launching projectiles (*e.g.*, mortars or RPGs), and throwing explosives or incendiary devices (*e.g.*, grenades, Molotov cocktails). Attacks that involved multiple weapons and tactics (*e.g.*, VBIED combined with armed assault) were also given the description *combination attack*.

4. For definitions of *jihadism* and *salafi jihadism*, see: Daveed Gartenstein-Ross, "Ansar al-Sharia Tunisia's Long Game: *Dawa*, *Hisba*, and *Jihad*," The Hague: International Centre for Counter-Terrorism, May 2013. (https://www.icct.nl/download/file/Gartenstein-Ross-Ansar-al-Sharia-Tunisia's-Long-Game-May-2013.pdf); Monica Marks, "Youth Politics and Tunisian Salafism: Understanding the Jihadi Current," *Mediterranean Politics*, March 6, 2013, page 109. (http://www.tandfonline.com/doi/abs/10.1080/13629395.2013.764657?journalCode=fmed20); Quintan Wiktorowicz, "Anatomy of the Salafi Movement," *Studies in Conflict & Terrorism*, 2006, page 208. (http://archives.cerium.ca/IMG/pdf/WIKTOROWICZ_2006_Anatomy_of_the_Salafi_Movement.pdf)

5. Notably excluded from the following target types are attacks on military targets, and peacekeeping convoys and bases. While African jihadists frequently attack these targets, we excluded such attacks from the dataset because this study focuses on the evolution of *terrorist* TTPs against civilian targets, as opposed to *insurgent* TTPs.

local government meetings and conferences, tourists and expatriates may also be present.[6] While foreigners may not have been the primary target, the attacks were nonetheless included because the report's focus is on TTPs against venues frequented by foreigners. Moreover, foreigners are often secondary targets in these attacks. Conversely, attacks on venues like markets were excluded if they occurred in remote or insurgent-controlled areas rarely frequented by foreigners, as it could not in such cases be said that Western interests were the primary or even secondary focus of the attacks.

Energy and Mineral Resources Infrastructure and Facilities includes attacks on oil and gas pipelines and facilities, oil fields and terminals, mines, energy personnel in or near a facility, power grid infrastructure (e.g., power lines, electricity pylons, and transformers), and power plants. These attacks ranged from physical assaults and bombings to kidnappings that took place in proximity to a facility. Attacks near Burkinabe mines were excluded because jihadists targeted security forces in these areas, as opposed to the mines themselves. In some cases, it was unclear whether jihadist groups or non-jihadist Bedouins targeted gas pipelines in the Sinai. Despite this, unclaimed energy attacks in areas where jihadists frequently target Sinai pipelines were included in the dataset because a high enough proportion of them were likely carried out by jihadist groups to warrant examination in this study. But attacks on Sinai pipelines may be somewhat over-counted because some perpetrators may not have been jihadists. While jihadists have attacked energy infrastructure and facilities in Libya, attacks perpetrated by unknown assailants were excluded from the dataset because they may have been tied to the civil war and conflict over resources, rather than attributable to jihadists. Converse to the Sinai dataset, the Libya dataset may thus somewhat under-count the jihadist contribution.

Non-African Tourists, Expatriates, and NGO Workers is distinct from the other categories because it focuses on people as targets, rather than facilities or infrastructure. Attacks against, and kidnappings of, foreigners were only included if they were conducted by, or the victims were sold to, jihadists or suspected jihadists. While some attacks on establishments popular among foreigners involved kidnappings, they were excluded from this category if the main target appeared to be the venue, rather than specific individuals frequenting that venue. Africans were excluded from this target type unless they worked for an international NGO.

National and International Government Facilities includes attacks on diplomatic facilities, such as embassies and consulates. This category also includes UN compounds, but excludes military targets such as peacekeeping convoys, bases, and camps in conflict zones, as well as diplomatic vehicles. This category focuses solely on non-African elements, excluding local or regional diplomatic, peacekeeping, or government facilities (*e.g.*, those operated or owned by the African Union).

Aviation includes surface-to-surface attacks on international airports in Africa, surface-to-air attacks on aircraft, and in-flight attacks. Surface-to-surface attacks on international airports include attacks on airport security checkpoints, baggage areas, terminals or airstrips, regardless of whether the intended target was Western. Surface-to-air attacks involved assailants firing at landing or departing aircraft, regardless of whether the airline was Western. In-flight attacks include bombs placed on board or hijackings. These

6. An exception with respect to tourism is Somalia, which is so insecure that it has no tourist industry. Foreigners rarely frequent hotels in Somalia, and in most cases, Shabaab targeted hotels because local government officials were meeting in them. Nonetheless, attacks on these establishments were included in our dataset for two reasons. First, they provide insight into Shabaab's TTPs against this target type. Second, given the migration of TTPs among various African jihadist groups, which is one mechanism by which organizational learning occurs, styles of attack pioneered in Somalia may make their way to other theaters where Westerners are a more prominent focus.

attacks were limited to aircraft originating in an African country. Attacks on aircraft originating outside of Africa, but headed to the continent, were only included if a suspected African group conducted or planned the attack. Attacks on peacekeeping and military aircraft were included only if they occurred at a civilian airport.

Target Type Profiles

Establishments Popular Among Foreigners

- *After 2011, attacks against establishments popular among foreigners became increasingly complex, as jihadists combined multiple tactics and weapons in multi-phased attacks.*

- *The use of VBIEDs against these targets has steadily grown since 2012. This trend appears to be the most common and enduring threat to establishments popular among foreigners.*

Of the 490 recorded attacks considered for this report, 38 percent (184 attacks)[7] targeted establishments popular among foreigners, such as hotels, restaurants, and shopping centers. This report has seven sub-categories for establishments popular among foreigners: hotels, restaurants, markets, local shops, bars and cafés, entertainment venues, and shopping centers. Target prioritization of these subcategories was regionally distinct: West African groups and Shabaab in the Horn of Africa primarily targeted hotels, while Boko Haram predominantly struck markets in Nigeria and neighboring countries.

Of the total attacks against these establishments, those against hotels accounted for around 32 percent (59 of the 184 attacks), rendering hotels the most significant sub-target preference. Indeed, hotels were the only sub-target against which attacks occurred every year from 2007 to 2017. The second most struck sub-target – restaurants – accounted for half as many attacks (31, or 17 percent).

The strategic calculus behind this trend likely stems from the relative ease with which jihadists can attack hotels. While some hotels employ moderate or substantial security measures, such as reinforced gates and armed guards, these defenses are often surmountable through a combination of VBIEDs and coordinated assaults, and thus do not necessarily deter prospective assailants. Further, even the crudest attacks against hotels can generate significant shock and, for countries dependent on the tourism industry, have an outsized impact on the nation's economy. For example, the June 26, 2015 beach and hotel attack in Sousse, Tunisia had long-term economic ramifications for that country's tourism. In that attack, Saifeddine Rezgui conducted an armed assault against the five-star Riu Imperial Marhaba Hotel and its beach. The 23-year-old Tunisian student went to the beach disguised as a tourist, hiding an assault rifle in his umbrella.[8] According to witnesses, Rezgui walked through the hotel and across the beach, targeting tourists. He reloaded his Kalashnikov assault rifle several times, and threw at least one explosive.[9] Rezgui was shot and killed by Tunisian police officers about 30 minutes after initiating the attack. The Islamic State in Iraq and al-Sham (ISIS) claimed responsibility in a statement posted to social media, boasting that its "soldier" was able to strike the hotel despite its security

7. Of those 184 attacks, 128 (70 percent) were carried out by Shabaab. As such, general observations regarding attacks against establishments popular among foreigners are skewed by Shabaab's pace of activity. Attacks against this target type drop to 15 percent of all recorded incidents (55 out of 359) when excluding Shabaab's attacks against these establishments. Note also that thwarted attacks against establishments popular among foreigners in North Africa (Morocco, Algeria, Tunisia, Libya, and Egypt) were excluded from this dataset due to significant discrepancies that exist in open-source reporting.

8. Jessica Elgot, "Deadly attack on Tunisia tourist hotel in Sousse resort," *The Guardian* (UK), June 26, 2015. (https://www.theguardian.com/world/2015/jun/26/tunisia-tourist-hotel-reportedly-attacked)

9. Tarek Amara, "Gunman kills 39 at Tunisian beachside hotel, Islamic State claims attack," *Reuters*, June 26, 2015. (https://www.reuters.com/article/us-tunisia-security/gunman-kills-39-at-tunisian-beachside-hotel-islamic-state-claims-attack-idUSKBN0P61F020150626)

measures.[10] The mass shooting resulted in 38 deaths excluding the attacker, 30 of whom were British, with an additional 25 British among the 39 injured.[11]

In response, the British Foreign Office, along with other European governments, issued warnings to discourage citizens from traveling to Tunisia.[12] This "tourist embargo" sharply reduced Tunisia's tourism revenue, especially British tourism, which was a substantial part of the Tunisian tourist economy.[13] Taking indirect effects into account, the tourism sector accounted for 15.2 percent of Tunisia's GDP at the time of the attack, and contributed to 13.9 percent of the country's employment.[14] Tunisia's tourism revenue fell by 35 percent in the year following the Sousse attack.[15]

10. See ISIS's statement at http://bit.ly/2ny4vVi.
11. "Tunisia identifies all 38 victims of beach massacre, 30 British," *Agence France-Presse*, July 1, 2015. (https://web.archive.org/web/20150705033605/http://www.channelnewsasia.com/news/world/tunisia-identifies-all-38/1954066.html)
12. The UK Foreign Office's travel advice section as it appeared in September 2015 can be found at https://web.archive.org/web/20150905235439/https://www.gov.uk/foreign-travel-advice/tunisia. It advised against all but essential travel for most areas of the country, contrasting with a green "safe" marking for those areas prior to the attack. See: https://web.archive.org/web/20150417062000/https://www.gov.uk/foreign-travel-advice/tunisia. For contemporaneous press reporting of this advice, see: "ضربة موجعة للسياحة في تونس بفعل موجة تحذيرات أوروبية" (Tunisia's tourism industry suffers severe blow due to European travel warnings)," *Al-Arabiya* (UAE), July 11, 2015. (https://www.alarabiya.net/ar/aswaq/travel-and-tourism/2015/07/11/ضربة-موجعة-للسياحة-في-تونس-بفعل-موجة-تحذيرات-أوروبية.html). As of this writing, the travel advice situation has returned to the status quo before the attack. See: UK Foreign Travel Office, "Foreign Travel Advice: Tunisia," accessed January 26, 2018. (https://www.gov.uk/foreign-travel-advice/tunisia)
13. Ahmed Nadhif, "Two years after Sousse attack, British tourists return to Tunisia," *Al-Monitor*, August 14, 2017. (https://www.al-monitor.com/pulse/originals/2017/08/tunisia-sousse-attack-britain-resume-flights-tourism.html)
14. Daveed Gartenstein-Ross and Bridget Moreng, "Tunisian Jihadism after the Sousse Massacre," *CTC Sentinel*, October 22, 2015. (https://ctc.usma.edu/posts/tunisian-jihadism-after-the-sousse-massacre)
15. Zohra Bensemra, "After Islamist attacks, Tunisia's tourism struggles," *Reuters*, June 25, 2016. (https://www.reuters.com/article/us-tunisia-tourism/after-islamist-attacks-tunisias-tourism-struggles-idUSKCN0ZB0B8)

Between 2007 and 2011, attacks against establishments popular among foreigners were relatively simplistic, generally involving a single assailant or single strike. Since that period, attacks have become more sophisticated, and they now frequently involve multiple assailants, multiple weapon types, and multiple phases of an attack. For example, on January 15, 2016, militants affiliated with al-Qaeda in the Islamic Maghreb (AQIM) and al-Mourabitoun coordinated overnight attacks against the Ybi Hotel, Cappuccino Café, and Splendid Hotel in Ouagadougou, Burkina Faso. An estimated six gunmen besieged these establishments, killing foreigners and Burkinabe citizens alike. Though reports vary on the type of explosives used and the method of their employment, all accounts confirm that this was a complex and coordinated attack.[16] It took a combination of Burkinabe, French, and U.S. forces to end the 15-hour overnight siege.[17] Thirty people were killed, 56 were injured, and 176 hostages were rescued. The dead included around 18 different nationalities, including six Canadians, an American missionary, and multiple European nationals, two of whom were former Swiss members of parliament.[18] This attack highlights how establishments popular among foreigners are often lightly protected, particularly when the geographic area where they can be found is assessed as stable; and

16. Reports alternately claimed that the assailants (a) threw grenades into cars, (b) detonated explosives in their vehicles before storming the Splendid Hotel, or (c) detonated explosive devices inside the hotel. It is also possible that the attackers used explosives for all three purposes.
17. Andrew Lebovich, "The Hotel Attacks and Militant Realignment in the Sahara-Sahel Region," *CTC Sentinel*, January 2016, page 23. (https://ctc.usma.edu/app/uploads/2016/01/CTC-SENTINEL-Vol9Iss12.pdf)
18. Nadia Khomami, "Burkina Faso hotel attack: 18 nationalities among dead," *The Guardian* (UK), January 16, 2016. (https://www.theguardian.com/world/2016/jan/15/security-forces-battle-suspected-jihadists-in-burkina-faso-capital); "Burkina Faso attack: Foreigners killed at luxury hotel," *BBC News* (UK), January 16, 2016. (http://www.bbc.com/news/world-africa-35332792); "French-Moroccan photographer Leila Alaoui dies after Burkina Faso attacks," *BNO News* (The Netherlands), January 18, 2016. (http://bnonews.com/news/index.php/news/id3353)

it further illustrates how these targets attract a large, international assortment of people. In Burkina Faso, the lack of security stemmed from a prior absence of jihadist violence.

The weapons used against this target type have become more sophisticated over time. In 2012, a significant uptick began in attacks involving a combination of weapons and tactics. Often VBIEDs were first used to "soften" the target (e.g., destroy barricaded entrances, strike security personnel, or cause panic), allowing armed assailants to storm the target with firearms, grenades, suicide belts, and other explosive devices.

Consonant with the overarching trend, Shabaab's use of VBIEDs against these establishments began in 2012, and has steadily risen since.[19] While there was only one Shabaab VBIED attack against this target type in 2012, four occurred the following year, three of which were combined with explosive belts. Shabaab's VBIED attacks doubled in 2014, seven of them isolated VBIEDs, while one attack was coordinated with an explosive belt bombing. The period from 2015 onward has seen numerous isolated VBIED bombings, as well as a rise in VBIED attacks combined with armed assaults, but the tactic of combining a VBIED with explosive belt attacks has since been abandoned. Further underscoring Shabaab's reliance on VBIEDs, of the 93 attacks conducted by Shabaab against this target type since 2012, 50 involved VBIEDs as either isolated bombings or in combination with other tactics. In other words, over half (54 percent) of the group's attacks against establishments popular among foreigners since 2012 involved VBIEDs. We now highlight two attacks that showcase how VBIEDs figure in Shabaab's TTPs.

19. Refer to "Establishments Popular Among Foreigners – Shabaab's Use of VBIEDs" in the Appendix.

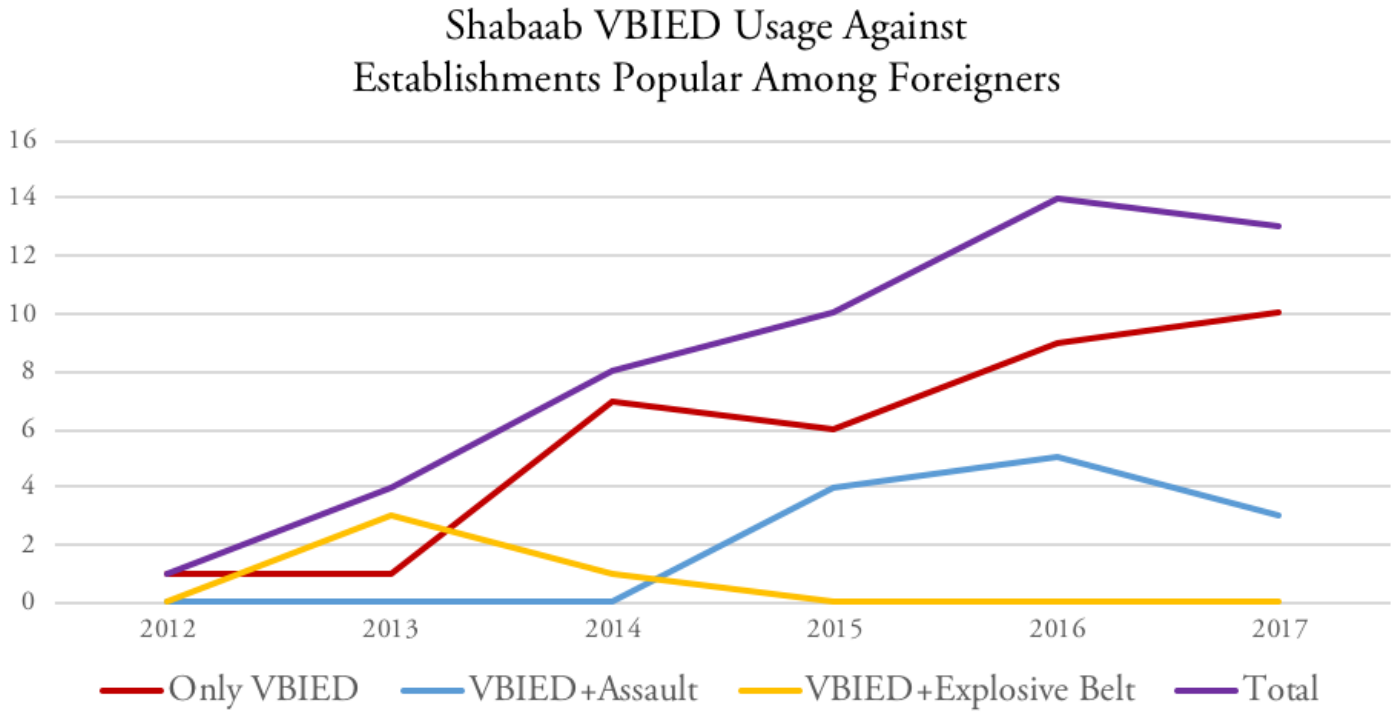


Ambassador Hotel after the VBIED attack and subsequent armed assault on June 1, 2016.

The Nasa Hablod Hotel and Ambassador Hotel. On June 25, 2016, a Shabaab suicide VBIED destroyed the gates to the Nasa Hablod Hotel, located in the vicinity of the Mogadishu airport, an area where foreigners frequently stay relative to other areas of the city. The explosion allowed several gunmen to enter the premises and indiscriminately shoot hotel guests while seizing hostages.[20] Positioning snipers on the roof and exploiting the hotel's own defenses (including sandbags and blast walls) for cover, the gunmen engaged police in a shootout that lasted about five hours.[21]

Not coincidentally, three weeks before this incident, Shabaab operatives attacked the Ambassador Hotel, also located in Mogadishu, and also a frequent destination for foreigners relative to other sites. The Ambassador Hotel attack employed nearly identical TTPs. An initial VBIED explosion gave militants access to the hotel, after which gunmen killed guests and engaged in a 12-hour standoff with authorities.[22]

20. "Terrorist Siege of Mogadishu Hotel Kills 20," *Voice of America*, June 26, 2016. (https://www.voanews.com/a/terrorit-siege-of-mogadishu-hotel-kills-20/3392561.html)
21. "Somali gunmen take hostages after blast rocks Mogadishu hotel," *The Telegraph* (UK), June 25, 2016. (http://www.telegraph.co.uk/news/2016/06/25/suicide-bomber-and-gunmen-attack-mogadishu-hotel/)
22. "Al Shabab kill at least 10 in Somalia hotel," *Agence France-Presse*, June 2, 2016. (https://www.thenational.ae/world/al-shabab-kill-at-least-10-in-somalia-hotel-1.185249)



A representation of Shabaab's rising use of VBIEDs. The use of singular VBIEDs (blue) is presently the only rising trend.

Including these two incidents, Shabaab has conducted twelve similar attacks since 2015 – ten of them against hotels, and two targeting restaurants. Each attack involved the initial use of a VBIED to "soften" the target and allow militants to enter the premises. The militants then carried out their primary mission of killing guests or government officials. As previously noted, Shabaab used a combination of VBIEDs followed by assailants detonating explosive belts prior to 2015, which was a less effective approach. In 2015, Shabaab replaced that combination with VBIEDs and armed assaults – sometimes employing explosive belts to supplement the armed assaults, but not as the primary follow-on to the VBIEDs. This shift in attack combinations achieved greater success.

Shabaab's recent attack on October 28, 2017 highlights how the group incorporates lessons learned to refine its TTPs. Targeting the Nasa Hablod Hotel once again, a Shabaab militant "pretended his vehicle had broken down before he detonated it in front of the hotel's fortified gate."[23] This allowed assailants wearing Somali National Intelligence and Security Agency uniforms and carrying corresponding ID cards to access the main building. They then began shooting, throwing grenades, and making their way through the hotel floor by floor.[24] The assailants engaged the police for around 12 hours, detonating explosive belts once they were injured.[25]

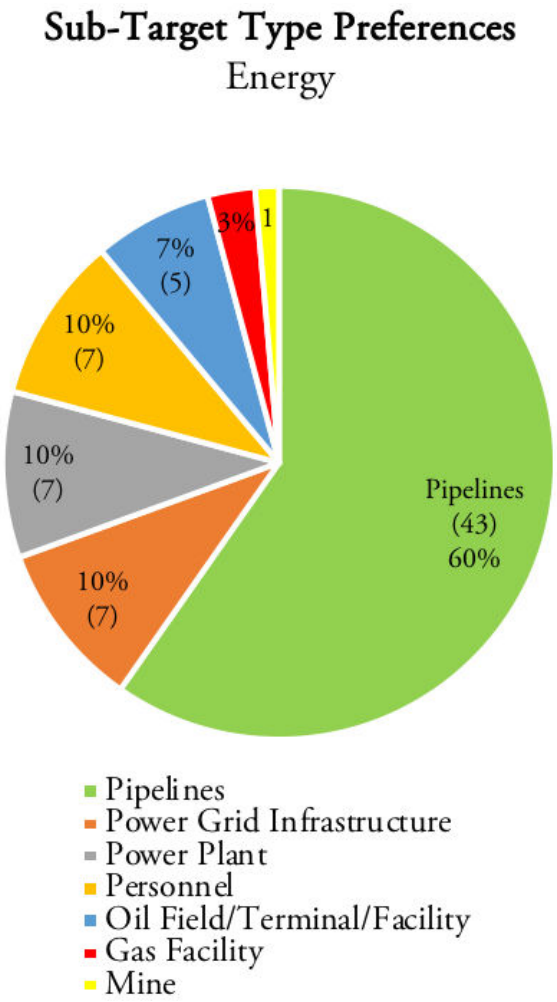
23. Abdi Guled, "Somali Police, Intelligence Chiefs Fired After Deadly Attack," *Associated Press*, October 29, 2017. (https://www.theglobeandmail.com/news/world/somali-police-intelligence-chiefs-fired-after-deadly-attack-at-mogadishu-hotel/article36762369/)
24. Harun Maruf, "Somali Police, Intelligence Chiefs Fired After Deadly Hotel Siege," *Voice of America*, October 29, 2017. (https://www.voanews.com/a/somalia-mogadishu-hotel-attack/4090806.html)
25. "At least 29 dead after Islamist attack on Somali hotel," *Reuters*, October 29, 2017. (https://af.reuters.com/article/africaTech/idAFL8N1N4045)

This attack epitomizes Shabaab's strategic calculus and organizational learning capabilities. The group relied on a combination of past tactics to strike a presumably secure target. While the VBIED demolished the entrance gates and caused panic, the use of deceptive attire allowed the militants to more easily infiltrate the hotel and commence the attack. The assailants succeeded in killing at least 23 people, and injuring at least 30 others.[26]

Energy and Mineral Resources Infrastructure and Facilities

- *There was an uptick in attacks on energy and mineral targets in 2011, which has since receded.*
- *Over the past decade, militants primarily targeted poorly defended energy infrastructure. This was most notable in the Sinai Peninsula, where both Bedouin militants and jihadist groups frequently bombed gas pipelines.*
- *While there were fewer attacks on well-guarded facilities, those that occurred involved an investment of more resources on the jihadists' part, and resulted in a larger number of casualties and greater damage.*

Of the 72 attacks on energy and mineral resources facilities and infrastructure over the past decade, 60 percent were on gas and oil pipelines. These attacks significantly increased in 2011.[27] While some pipeline attacks occurred in Algeria and Libya, the majority (77 percent) took place in Egypt, particularly in the Sinai Peninsula.[28]



Pipelines are easy targets, spanning long distances with minimal security over much of their length. Sinai-based jihadists have frequently used bombs to blow up parts of the pipeline that supplies gas to Israel and Jordan. For example, on January 27, 2014, Ansar Bayt al-Maqdis (which later joined ISIS, becoming known as Wilayat Sinai) detonated explosives along the pipeline at night, temporarily halting the flow of gas.[29] Most

26. Hussein Mohamad, "In Mogadishu, Truck Bomb and Gunmen Kill at Least 23 in Hotel Attack," *The New York Times*, October 28, 2017. (https://www.nytimes.com/2017/10/28/world/africa/somalia-mogadishu-truck-bombing.html)
27. Refer to "Energy & Mineral Resources Infrastructure and Facilities – Targeting Preferences" in the Appendix.
28. As previously noted, in some cases it is unclear whether jihadists conducted the 33 Egyptian gas pipeline attacks or if Bedouin militants were to blame. See the discussion of Bedouin militancy in: Lyndall Herman, "Sisi, the Sinai and Salafis: Instability in a Power Vacuum," *Middle East Policy*, Summer 2016, pages 95-107. (http://onlinelibrary.wiley.com/doi/10.1111/mepo.12197/full)
29. David Barnett, "Sinai gas pipeline targeted for 2nd time in 2014," *FDD's Long War Journal*, January 27, 2014. (https://www.longwarjournal.org/archives/2014/01/sinai_gas_pipeline_targeted_fo.php). ISIS actually released a *nasheed* in January 2015 that mentioned attacking gas pipelines. See: Aymenn Jawad Al-Tamimi, "'The Land of Sinai' – New Islamic State [IS] Nasheed from Ajnad Media," *Aymenn Jawad Al-Tamimi's Blog*, January 16, 2015. (http://www.aymennjawad.org/2015/01/the-land-of-sinai-new-islamic-state-is-nasheed)

other attacks on gas pipelines similarly failed to do lasting damage, but necessitated repairs.

African jihadist groups rarely attacked power grid infrastructure (*e.g.*, pylons, power lines, and transmitters), oil fields and terminals, mines, and gas facilities between 2007 and 2017.[30] There was only one attack on a mine, which occurred in May 2013.[31] Minutes after an attack on an army base in Agadez, Niger, militants from the Movement for Unity and Jihad in West Africa (MUJWA) struck a French-run uranium mine in Arlit. Two suicide car bombers injured at least 14 civilians and damaged mining equipment.[32]

African jihadists also rarely attacked gas facilities, as they are better guarded than largely undefended pipelines. Between 2007 and 2017, there were only two attacks on gas facilities, one of which is discussed in further detail subsequently. Both of them took place in Algeria.

The comparatively large number of attacks against pipelines, as opposed to mines and gas facilities, illustrates the relative difficulty of high-profile attacks on well-guarded facilities. While there were fewer attacks on these more secure facilities, those that occurred resulted in a larger number of casualties. Conversely, attacks on less secure energy targets were generally less complex, and entailed investment of fewer resources by the attackers. Though these smaller-scale attacks generate less shock value, they still disrupt the flow of oil, gas, and electricity, and thus have an impact on local and regional economies. These attacks also force an expenditure of time, money and resources to repair the damage, and may potentially necessitate the adoption of costlier security measures. The following case study highlights this strategic tradeoff.

*Tigantourine Gas Facility. O*n January 16, 2013, an al-Qaeda-aligned group known as al-Mulathameen, led by veteran jihadist operative Mokhtar Belmokhtar, attacked the Tigantourine gas facility near In Amenas, Algeria. About 30 militants arrived from Libya just before dawn and overran the site. It is unclear whether the militants inadvertently shut the power off during the assault, or if employees deliberately did so after an alarm sounded. Either way, the attackers were unable to restart the plant, so their initial plan of blowing up the facility fell through.[33]

Adapting to these dashed aspirations, the militants took around 800 hostages.[34] They separated non-Muslims from Muslims, and shot people who tried to escape. Over a period of four days, Algerian security forces tried to free the captives. At one point, the militants strapped explosives to several hostages and forced them into five vehicles. Some sources say the security forces fired at the vehicles with helicopter gunships, while

30. While attacks on Libya's oil sector did occur during this period, many such unclaimed attacks were omitted from the dataset because they seemingly involved civil war factions fighting for territorial and resource control. Included in the dataset, though, were jihadist attacks against, and kidnappings of, foreign oil workers in Libya. For example, ISIS militants kidnapped nine foreign workers from the al-Ghani oil field in March 2015. A month earlier, at least 11 employees were killed at the partially French-owned al-Mabruk oil field, which is 100 km south of Sirte. During the raid, ISIS militants stole vehicles and supplies.

31. There was one other mine-related incident, but it was classified as an attack against energy and mineral resources personnel. In December 2014, Shabaab militants carried out a later-night raid at the quarry in Kormey, which is near Mandera, Kenya. They rounded up workers who had been sleeping in their tents, separated non-Muslims from their Muslim counterparts, and killed 36 non-Muslims.

32. Abdoulaye Massalatchi, "Islamists kill 20 in suicide attacks in Niger," *Reuters*, May 23, 2013. (https://www.reuters.com/article/us-niger-attacks/islamists-kill-20-in-suicide-attacks-in-niger-idUSBRE94M09N20130523)

33. Adam Nossiter and Nicholas Kulish, "Militants' Goal in Algeria Gas Plant Siege: Giant Fireball," *The New York Times*, February 2, 2013. (http://www.nytimes.com/2013/02/03/world/africa/hostage-accounts-detail-events-at-saharan-gas-plant.html); Lydia Polgreen and Scott Sayare, "Hiding, Praying, Tied to Bombs: Captives Detail Algerian Ordeal," *The New York Times*, January 18, 2013. (http://www.nytimes.com/2013/01/19/world/africa/scenes-of-terror-at-oil-field-hostages-bound-to-explosives.html?mtrref=www.nytimes.com)

34. "Algeria hostage crisis: Japan confirms two more deaths," *BBC News* (UK), January 23, 2013. (http://www.bbc.com/news/world-asia-21169174)

others claim that the militants detonated the explosives. On the final day of the rescue operation, the Algerian army took control of the complex, killing many of the militants with sniper fire.[35] Thirty-nine foreigners reportedly died in the attack.[36]

Investigations into the Tigantourine attack revealed that some employees may have been complicit, as suggested by a map of the facility used by the militants, and the revelation that one of the assailants was a former plant employee. Despite this, the assailants lacked the technical expertise to blow up the plant after it lost power.[37] Investigations also revealed significant security weaknesses at the complex. The plant rarely conducted security drills, and no armed guards were stationed at the compound's living quarters. Further, "the front gates were said to have been frequently left open."[38] Following the attack, the facility significantly upgraded its security. Other oil and gas companies operating in Algeria similarly reacted to the Tigantourine attack by withdrawing non-essential employees and increasing their own security measures.[39]

35. Adam Nossiter and Nicholas Kulish, "Militants' Goal in Algeria Gas Plant Siege: Giant Fireball," *The New York Times*, February 2, 2013. (http://www.nytimes.com/2013/02/03/world/africa/hostage-accounts-detail-events-at-saharan-gas-plant.html); Lydia Polgreen and Scott Sayare, "Hiding, Praying, Tied to Bombs: Captives Detail Algerian Ordeal," *The New York Times*, January 18, 2013. (http://www.nytimes.com/2013/01/19/world/africa/scenes-of-terror-at-oil-field-hostages-bound-to-explosives.html?mtrref=www.nytimes.com)
36. "Algeria hostage crisis: Japan confirms two more deaths," *BBC News* (UK), January 23, 2013. (http://www.bbc.com/news/world-asia-21169174)
37. Adam Nossiter and Nicholas Kulish, "Militants' Goal in Algeria Gas Plant Siege: Giant Fireball," *The New York Times*, February 2, 2013. (http://www.nytimes.com/2013/02/03/world/africa/hostage-accounts-detail-events-at-saharan-gas-plant.html)
38. Owen Bowcott, "In Amenas murders: coroner points to security flaws at Algerian gas plant," *The Guardian* (UK), February 26, 2015. (https://www.theguardian.com/world/2015/feb/26/in-amenas-murders-coroner-finds-algerian-gas-plant-had-security-flaws)
39. Clifford Krauss, "At Algerian Oil and Gas Fields Once Thought Safe, New Fears and Precautions," *The New York Times*, January 17, 2013. (http://www.nytimes.com/2013/01/18/world/africa/at-algerian-oil-and-gas-fields-new-fears-and-precautions.html)

The Tigantourine saga highlights the potential benefits and accompanying risks for militants of high-profile attacks against well-guarded energy facilities. Operations against these targets have become more difficult because of the security measures adopted following the Tigantourine attack. Indeed, the second attack against a gas facility in Algeria, which occurred three years later, was less sophisticated and had a minimal impact. On March 18, 2016, AQIM militants launched a homemade rocket at a southern Algerian gas plant, causing little or no damage.[40] No other attack akin to Tigantourine has occurred in Africa.

Non-African Tourists, Expatriates, and NGO Workers

- *A change in the location of attacks against, and kidnappings of, foreigners in Mali after 2011, as well as the emergence of such incidents in Burkina Faso, indicate an operational shift southward for jihadist groups operating in North Africa and the Sahel.*
- *The collaboration between criminal groups and jihadists against this target type in the Sahel highlights the nexus between crime and terrorism in this region, as well as the way groups like AQIM leverage these ties to facilitate their geographic expansion.*
- *Kidnapping for ransom has become a major revenue source for AQIM, helping the group to maintain and expand its operations.*

Attacks against, and kidnappings of, non-African tourists, expatriates, and NGO workers in the regions that this report examines have consistently occurred over the past decade.[41] Of the 112 incidents, around

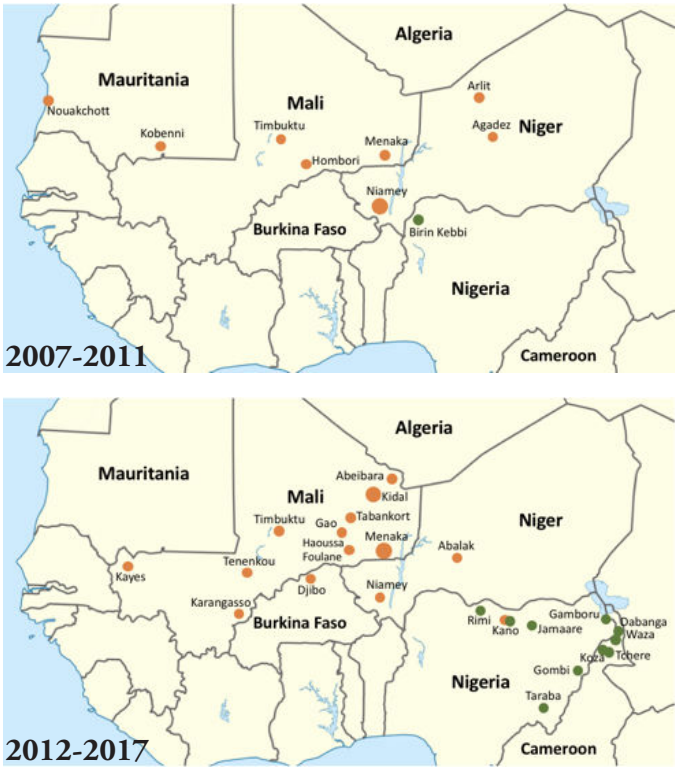
40. Benoit Faucon, "Al Qaeda Claims Algeria Gas-Plant Attack," *The Wall Street Journal*, March 19, 2016. (https://www.wsj.com/articles/al-qaeda-claims-algeria-gas-plant-attack-1458388632); Caleb Weiss, "AQIM claims attack on Algerian gas plant," *FDD's Long War Journal*, March 19, 2016. (https://www.longwarjournal.org/archives/2016/03/aqim-claims-attack-on-algerian-gas-plant.php)
41. Refer to "Non-African Tourists, Expatriates and NGO Workers" in the Appendix for an explanation of how these attacks were coded.

40 percent were conducted by Shabaab, 13 percent by AQIM, and 15 percent by unknown assailants suspected of being jihadists. While the comparatively large number of kidnappings conducted by Shabaab is notable, a close examination of kidnappings linked to AQIM reveals a possible expansion of the jihadist group's activity southward.

Between 2007 and 2011, there were 11 kidnapping incidents in the Sahel. This number nearly doubled in the latter half of the past decade. Since 2011, Mali has experienced a slew of kidnappings, with incidents occurring farther south, close to the border with Burkina Faso. This trend has escalated in the past couple of years. For example, in February 2017, jihadists kidnapped Sister Gloria Cecilia Narváez Argoti, a Colombian nun, from her parish in Karangasso, Mali. Though her whereabouts remain unknown, Colombian and Malian authorities suspect that the kidnappers either moved her to a wooded area in Mali or across the border into Burkina Faso.[42]

Sister Gloria's kidnapping highlights both the expansion of jihadist activities southward and also the porous Burkina Faso-Mali border. While 12 attacks against, and kidnappings of, foreigners took place in Mali since 2011, 2016 was the first time jihadist groups kidnapped a foreigner in Burkina Faso. Jihadists linked to AQIM took an elderly Australian couple from their home in January 2016. Ken and Jocelyn Elliott had moved to Burkina Faso in 1972, and lived in the northern town of Djibo for decades.[43] While the assailants released Jocelyn Elliott

Attacks and Kidnappings of Foreigners in the Sahel



Orange: AQIM, MUJWA, Ansar Dine, JNIM
Green: Boko Haram, Ansaru

a month after she was taken captive, Ken Elliott has yet to be freed. AQIM published a video in July 2017 showing that he is still alive. Five other foreigner captives were shown in the video, one of whom was the aforementioned Colombian nun, Sister Gloria.[44] AQIM apparently hoped to exchange the foreigners for their captured fighters.[45]

42. Elsa Buchanan, "Sister Gloria abduction: Colombian investigators sent to Mali to find kidnapped nun," *International Business Times*, March 16, 2017. (http://www.ibtimes.co.uk/sister-gloria-abduction-colombian-investigators-sent-mali-find-kidnapped-nun-1611982)
43. "Australian couple abducted in Burkina Faso," *The Australian*, January 17, 2016. (http://www.theaustralian.com.au/national-affairs/foreign-affairs/australian-couple-abducted-in-burkina-faso/news-story/895537b36cd2a3323c3980e229968a93)
44. "Ken Elliott in hostage video: al-Qaeda prove Australian surgeon, 82, is still alive," *news.com.au* (Australia), July 3, 2017. (http://www.news.com.au/world/africa/ken-elliott-in-hostage-video-alqaeda-prove-australian-surgeon-82-is-still-alive/news-story/bd542cf13f4e3b0f36878c93e0feba42)
45. "Australian woman freed from al-Qaeda in Burkina Faso," *Al-Jazeera* (Qatar), February 7, 2016. (http://www.aljazeera.com/news/2016/02/al-qaeda-claims-kidnap-australians-burkina-faso-160206103700312.html)

In other cases, criminals collaborated with jihadists by kidnapping foreigners and selling them to groups like AQIM.[46] This highlights the nexus between terrorism and crime in the Sahel. For example, Nigerien authorities suspect a criminal gang kidnapped American aid worker Jeffery Woodke from his home in Abalak, Niger in October 2016, and handed him over to jihadists.[47] Reports indicate that AQIM has offered to pay up to $100,000 for captured non-American Westerners (they are looking for non-Americans due to the U.S.'s non-concession/no-ransoms policy), hoping to receive even more money in ransom payments.[48]

The nexus between terrorism and crime has also likely facilitated AQIM's geographic expansion, as its relationship with the region's smugglers and criminals has helped the group integrate into local communities. Careful not to target locals and their interests, AQIM "generate[s] income and job opportunities" through its illegal activities, such as kidnappings for ransom.[49] Thus, although many local leaders are wary of AQIM, economic hardships compel some to collaborate with the group.

In addition to AQIM's ties to criminal groups, kidnapping ransom revenue has also funded its operations and geographic expansion.[50] According to October 2012 remarks by former U.S. Undersecretary of the Treasury for Terrorism and Financial Intelligence David Cohen, "The U.S. government estimates that terrorist organizations have collected approximately $120 million in ransom payments over the past eight years. AQIM, the al-Qa'ida affiliate that has likely profited most from kidnapping for ransom, has collected tens of millions of dollars through KFR [kidnapping for ransom] operations since 2008."[51] AQIM militants have seemingly been able to determine which governments will meet their demands – a possibility suggested by AQIM's preference for kidnapping French nationals.[52]

National and International Government Facilities

- *Over the past decade, African jihadist groups primarily targeted national and international government facilities with bombs, as opposed to launching projectiles or staging armed assaults.*
- *Since these facilities are well guarded and often include an outer defense perimeter, jihadists frequently resorted to VBIEDs, which can offer greater structural damage and loss of life.*

46. See, for example: "Kidnapper of Spanish hostages says it was just business," *Expatica*, August 24, 2010. (https://www.expatica.com/es/news/country-news/Kidnapper-of-Spanish-hostages-says-it-was-just-business_202065.html)
47. Boureima Balima, "U.S. aid worker kidnapped in Niger, taken toward Mali," *Reuters*, October 15, 2016. (http://www.reuters.com/article/us-niger-us-kidnapping/u-s-aid-worker-kidnapped-in-niger-taken-toward-mali-idUSKBN12F04T)
48. David Lewis and Adama Diarra, "Special Report: In the land of 'gangster-jihadists,'" *Reuters*, October 25, 2012. (http://www.reuters.com/article/us-mali-crisis-crime/special-report-in-the-land-of-gangster-jihadists-idUSBRE89O07Y20121025)
49. Modibo Goïta, "West Africa's Growing Terrorist Threat: Confronting AQIM's Sahelian Strategy," *Africa Security Brief*, February 2011. (https://africacenter.org/wp-content/uploads/2016/06/ASB11EN-West-Africa%E2%80%99s-Growing-Terrorist-Threat-Confronting-AQIM%E2%80%99s-Sahelian-Strategy.pdf)
50. While kidnapping ransom revenue has done a great deal to fund AQIM's operations and geographic expansion, trafficking in illicit goods may have eclipsed ransoms as a source of the group's income. But it is likely that AQIM will continue kidnapping Westerners when possible, as ransoms seemingly remain a significant revenue source. See discussion in: Yaya J. Fanusie and Alex Entz, "Al-Qaeda in the Islamic Maghreb: Financial Assessment," *Foundation for Defense of Democracies*, December 2017. (http://www.defenddemocracy.org/content/uploads/documents/CSIF_TFBB_AQIM.pdf)
51. U.S. Department of the Treasury, Press Release, "Remarks of Under Secretary David Cohen at Chatham House on 'Kidnapping for Ransom: The Growing Terrorist Financing Challenge,'" October 5, 2012. (https://www.treasury.gov/press-center/press-releases/Pages/tg1726.aspx)
52. Rukmini Callimachi, "Paying Ransoms, Europe Bankrolls Qaeda Terror," *The New York Times*, July 29, 2014. (https://www.nytimes.com/2014/07/30/world/africa/ransoming-citizens-europe-becomes-al-qaedas-patron.html)

- *While attacks involving a combination of tactics and weapons were rare, those that involved a combination were among the deadliest.*

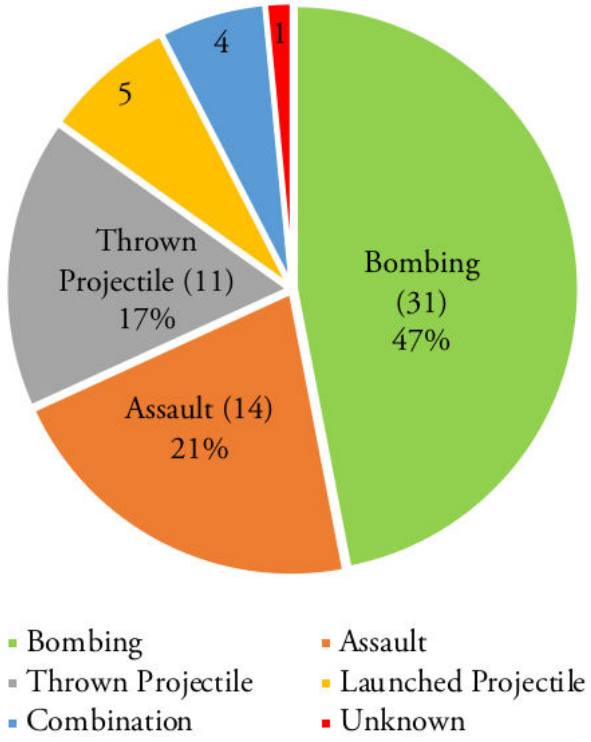
Of the five target types, national and international government facilities were the fourth most attacked category, representing 13.5 percent of total attacks. Few of these attacks occurred from 2007 to 2011, but 2012 witnessed an uptick, which continued through at least 2015. This increase is largely attributable to the deterioration in Libya's security. The withdrawal of diplomatic missions from Libya explains the slight decrease in these attacks in 2016 and 2017: Attacks on national and international government facilities declined not because the facilities had become safer, but because the situation was judged so dangerous that some governments decided to cut their losses.

Excluding those that took place in Libya, attacks against national and international government facilities were rare, constituting about 8 percent of the total number of attacks. There may be fewer attacks on these facilities than on the other major categories because they are typically well protected, thus requiring higher levels of investment than attacks on less secure targets.

It is unsurprising that bombing was the most common tactic employed against national and international government facilities, as their security measures make it difficult to infiltrate outer defenses. Jihadist groups employed bombing in around 47 percent of all attacks on these facilities. The second most used tactic was armed assault (21 percent), followed by throwing explosive or incendiary devices (17 percent).

Within the category of bombings, assailants primarily used VBIEDs against this target type, as opposed to vests or other man-portable improvised explosive devices (MPIEDs), such as explosives concealed in backpacks. While shrapnel from a MPIED often injures victims, a VBIED (which generally provides a higher payload) is

Tactical Preferences
National and International Government Facilities



deadlier if detonated close to a facility. Also, the vehicle itself provides extra shrapnel, and its fuel serves as an incendiary mechanism.[53]

VBIEDs are most effective when driven into a building or parked next to it, with the greatest damage occurring when a VBIED strikes structural building foundations.[54] For example, on August 26, 2011, a Boko Haram suicide bomber drove an explosive-laden vehicle through the UN headquarters gates in Abuja,

53. See: New York City Police Department, "The Threat to Buildings from Explosive Devices," *Engineering Security: Protective Design for High Risk Buildings*, 2009, pages 11-18. (http://www.nyc.gov/html/nypd/downloads/pdf/counterterrorism/engineeringsecurity_010_threat_to_buildings_from_exp_dev.pdf)
54. Ibid., p. 12.

Nigeria, destroying nearly half of the building's floors, killing 23, and wounding 100 people.[55]

Additionally, a VBIED allows an assailant to drive through or detonate at a gate, providing a path for armed men to enter the facility. The first such employment of a VBIED did not occur against this target type until the 2012 attack on the U.S. diplomatic mission in Benghazi.[56] After 2012, there were only three other cases. The low number of these complex attacks is likely linked to the strategic tradeoff between attacks against less secure targets and attacks on well-guarded facilities that require greater investment of resources. Despite higher cost and risk, an attack on a national or international government facility generates more shock value and attention. The following case study provides an example of one such attack.

Mogadishu Humanitarian Compound. On June 19, 2013, a Shabaab suicide bomber detonated his explosives-laden vehicle at the front gates of a UN humanitarian compound near the Mogadishu airport and African Union base – an area generally considered well protected. The blast destroyed the steel gate, and seven men dressed in Somali military uniforms and armed with firearms



Security forces standing next to the entrance gate destroyed by Shabaab militants.

and grenades stormed through the opening.[57] Witnesses heard a series of smaller blasts during a gunfight that lasted over an hour. By the end of the raid, 22 people had died, including all the attackers.[58]

The attack was not without warning. A month prior, a UN security analyst received an intelligence tip that Shabaab planned to attack the humanitarian compound, which houses the United Nations International Children's Emergency Fund (UNICEF), World Health Organization (WHO), and United Nations Development Programme (UNDP). In response, UN security placed a machine gun at a guard tower and additional police outside the compound. Other measures included enhanced guard training and stricter rules on vehicle entry. But the absence of road obstacles and the relatively short distance between outside traffic and the compound's entrance allowed the explosives-laden vehicle to get close enough to

55. Caroline Varin, *Boko Haram and the War on Terror* (Santa Barbara: Praeger Security International, 2016), page 65; Senan Murray and Adam Nossiter, "Suicide Bomber Attacks U.N. Building in Nigeria," *The New York Times*, August 26, 2011. (http://www.nytimes.com/2011/08/27/world/africa/27nigeria.html?mtrref=undefined)

56. The 2012 attack on the U.S. diplomatic mission was categorized as complex because assailants used a combination of weapons and tactics (*e.g.*, armed assault, arson, mortar rounds, etc.). While initial public statements by U.S. officials described the attack as simple and spontaneous, subsequent investigations (as well as admissions from such high-level members of the intelligence community as Michael Morell) revealed that the attack was premeditated, and rioters and looters did not join until after the attack began. See, for example: Michael Morell, *The Great War of Our Time: The CIA's Fight Against Terrorism from al Qa'ida to ISIS* (New York: Twelve, 2015), pages 218-29.

57. Colum Lynch, "'We Knew They Were Coming,'" *Foreign Policy*, October 6, 2013. (http://foreignpolicy.com/2013/10/06/we-knew-they-were-coming/)

58. Abdi Sheikh, "Somali Islamist Rebels Attack U.N. base, 22 Dead," *Reuters*, June 19, 2013. (https://www.reuters.com/article/us-somalia-blast/somali-islamist-rebels-attack-u-n-base-22-dead-idUSBRE95I0AJ20130619)

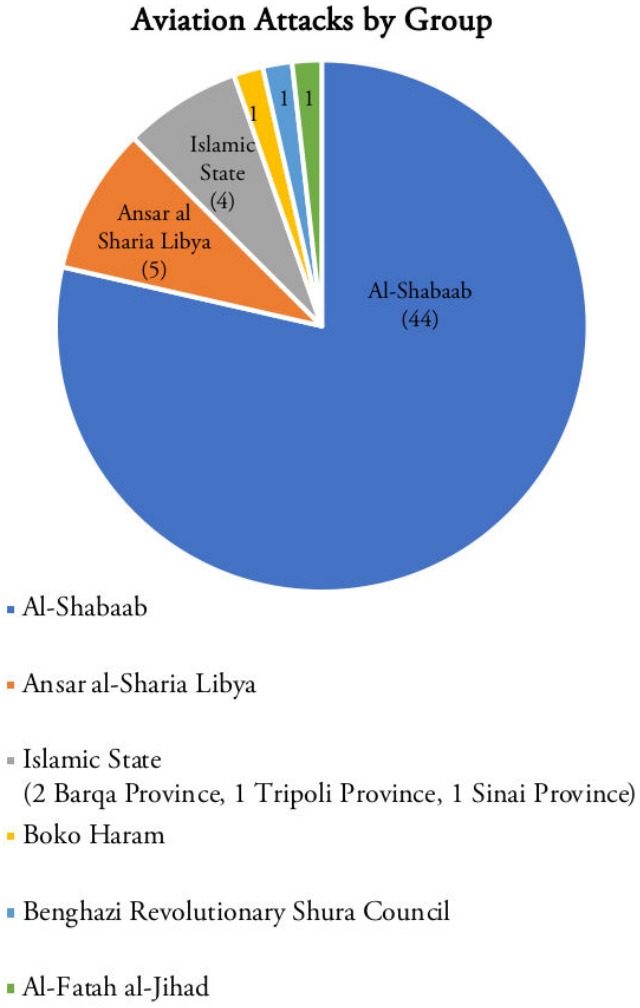
destroy the gate.[59] The additional security measures neither deterred Shabaab from conducting the attack nor adequately protected the facility.

Since its ouster from Mogadishu in October 2011, Shabaab has come to gradually conduct more attacks involving the detonation of a VBIED at a guarded gate followed by the entrance of armed men storming a facility. While the Mogadishu Humanitarian Compound attack occurred four years ago, other recent attacks featuring bombings followed by armed assaults demonstrate Shabaab's continued preference for this attack style, as well as its ability to conduct deadly, complex operations.

Aviation

- *Shabaab conducted most of the attacks against aviation targets in Africa over the past decade. The group initially relied on indirect mortar fire against airports, but has recently developed more sophisticated tactics involving the combination of VBIEDs and armed assaults.*
- *Shabaab has also demonstrated the capacity to acquire specific technical knowledge, as shown by its recent use of bombs concealed in electronic devices.*
- *Details revealed by the investigation into two African in-flight bombings – Metrojet Flight 9268 and Daallo Airlines Flight 159 – raise concerns about complicit airport employees, as well as the transfer of technical knowledge from one jihadist group to another.*

Attacks targeting the aviation industry in Africa constitute 11.5 percent (56) of the attacks observed over the past decade. Shabaab carried out approximately 79 percent (44) of all aviation attacks. Most of these attacks



involved indirect projectiles launched at airports, typically mortars.[60] Thus, the majority of attacks on the aviation industry over the past decade were largely unsophisticated.

In its targeting of aviation, Shabaab has demonstrated organizational learning. Initially, Shabaab was unsuccessful in launching projectiles at the Aden Adde International Airport in Mogadishu, often missing its

59. Abdalle Ahmed, "Somali militants attack UN base in Mogadishu, killing 15," *The Guardian* (UK), June 19, 2013. (https://www.theguardian.com/world/2013/jun/19/somali-militants-attack-un-base-mogadishu); Colum Lynch, "'We Knew They Were Coming,'" *Foreign Policy*, October 6, 2013. (http://foreignpolicy.com/2013/10/06/we-knew-they-were-coming/)

60. African jihadist groups used projectiles against aviation targets in 62.5 percent of all attacks over the past decade. However, the data may be skewed by Shabaab's tactical preference for projectiles. Shabaab conducted 80 percent of all projectile attacks (28 of 35).

intended targets. But the group's aviation attacks have become increasingly sophisticated. The group began to launch coordinated assaults on checkpoints to gain access to airports and landing strips. For example, on September 9, 2010, two Shabaab vehicles approached the Mogadishu airport's main outer perimeter gate. After one VBIED exploded, two militants dressed in Somali military uniforms ran from the second vehicle past the damaged gate and toward the airport, detonating their explosive belts 200 meters from the terminal building.[61]

In recent years, Shabaab has also tried to reach airports by other means. On December 13, 2015, two boats operated by Shabaab militants approached the Mogadishu airport, which is located on the coast. African Union troops exchanged gunfire with the militants and forced them to retreat, thwarting the attack.[62] Less than two months after the boat attack, Shabaab finally reached the Mogadishu airport and even boarded a plane, as shown in the following case study.

Daallo Airlines Flight 159. On February 2, 2016, a Shabaab suicide bomber blasted a hole in Daallo Airlines Flight 159's fuselage 20 minutes after it left the Mogadishu airport. Though the explosion blew the bomber out of the plane, the pilot was able to make a safe emergency landing because the aircraft had yet to reach cruising altitude. Authorities believe that the attacker used a bomb hidden in a laptop with a timer designed to detonate it mid-flight, but that a delay at the airport resulted in an explosion at an earlier stage in the flight than intended. The bomber and most of the other passengers were "scheduled to fly with Turkish Airlines,"



Hole created by a Shabaab suicide bomber onboard Daallo Airlines Flight 159 on February 2, 2016.

but because of bad weather, they were moved to the Daallo flight.[63] Authorities discovered that the bomber likely received help from airport personnel. Video surveillance footage showed that "two airport workers, who became suspects in the plot, put the laptop on an X-ray belt," after which they handed "the device to the suspected bomber in the departure lounge."[64]

The attack on Daallo Airlines Flight 159 highlights how Shabaab has increasingly developed its capabilities and technical knowledge. While the group's ability to infiltrate airports previously hinged on the success of armed assaults, the Daallo bomber's ability to bypass security with the help of complicit airport personnel underscores the insider threat. The Daallo attack represents the first time that Shabaab succeeded in placing a bomb on a plane.

Prior to Daallo, the only other African jihadist in-flight bombing over the past decade was the attack

61. Ibrahim Mohamed and Abdi Guled, "Suicide blasts hit Mogadishu, 2 peacekeepers killed," *Reuters*, September 9, 2010. (http://www.reuters.com/article/us-somalia-conflict/suicide-blasts-hit-mogadishu-2-peacekeepers-killed-idUSTRE6882ZJ20100909)
62. "Somalia: Mogadishu Airport Comes Under Seaborne Fire," *Shabelle Media Network*, December 14, 2015. (http://allafrica.com/stories/201512141362.html)
63. Drazen Jorgic, "Somalia plane bomber was meant to board Turkish flight: airline executive," *Reuters*, February 8, 2016. (https://www.reuters.com/article/us-somalia-blast-turkish-airlines/somalia-plane-bomber-was-meant-to-board-turkish-flight-airline-executive-idUSKCN0VH0QA)
64. Robyn Kriel and Paul Cruickshank, "Source: 'Sophisticated' laptop bomb on Somali plane got through X-ray machine," *CNN*, February 12, 2016. (http://www.cnn.com/2016/02/11/africa/somalia-plane-bomb/index.html)

on Metrojet Flight 9268 from Egypt on October 31, 2015, in which a two-pound bomb placed near the pressure bulkhead exploded, downing the aircraft and killing all 224 passengers and crew members. Three hours after the crash, ISIS's Wilayat Sinai claimed responsibility on Twitter, praising the "fighters of the Islamic State" who downed a plane departing Sharm el-Sheikh International Airport that was "carrying over 220 Russian crusaders." ISIS later boasted of the attack in Dabiq magazine, posting pictures of the soda can bomb that had allegedly downed the plane. Russian investigators suspect a baggage handler aided the jihadist group by placing the bomb in the luggage hold.[65]

Both Metrojet 9268 and Daallo Airlines Flight 159 highlight the danger of complicit airport employees and the challenge of insider threats, as well as the growing sophistication and technical knowledge of African jihadist groups. Indeed, just one month after the Daallo Airlines attack, another laptop bomb exploded at the Beledweyne Airport screening area in Somalia on March 7, 2016. During the same incident, authorities discovered and defused two more bombs. One of them had been hidden in a printer.[66] These bomb designs were reminiscent of those developed by Ibrahim al-Asiri, an al-Qaeda in the Arabian Peninsula (AQAP) member who is one of the most innovative jihadist bomb makers. Asiri previously hid explosives in printer cartridges in a prominent 2010 plot. Given AQAP's proximity and close relationship to Shabaab, it is likely that the two share innovations.

65. Owen Matthews, "Metrojet Crash: Why the Insider Threat to Airport Security Isn't Just Egypt's Problem," *Newsweek*, May 24, 2016. (http://www.newsweek.com/2016/06/03/egyptair-metrojet-flight-9268-airport-security-462784.html)
66. "Bomb blast strikes Somalia airport," *Al-Jazeera* (Qatar), March 7, 2016. (http://www.aljazeera.com/news/2016/03/bomb-blast-strikes-somalia-airport-160307093343010.html)

Broader Implications and Conclusions

While this report's examination of targeting preferences and TTPs provides insight into the tactical and operational capabilities of African jihadist groups, the attacks highlighted in this report also provide insight into the ability of groups to engage in organizational learning, and to modify their TTPs and targeting preferences in response to shifting political and security dynamics. It is through this lens of organizational learning and innovation that state actors can better anticipate how terrorist threats will evolve, and what policies states should implement in response to the challenge.

Organizational Learning Among African Jihadist Groups. In an important contribution, Louise Kettle and Andrew Mumford define organizational learning for terrorist groups as "the acquisition of knowledge to inform terrorist related activities in the future."[67] For jihadist organizations and other violent non-state actors, the ability to innovate is a necessity rather than a luxury. As preeminent terrorism scholar Bruce Hoffman has noted, terrorist groups have a "fundamental organizational imperative" to learn.[68] Facing an array of internal and external challenges, these groups must adapt quickly and creatively or suffer the consequences. Militant organizations that fail to shore up their vulnerabilities and develop coherent responses to kinetic counterterrorism policies will eventually be degraded to the point of strategic irrelevance. Similarly, organizations that cannot overcome defensive counterterrorism measures – policies aimed at preventing terrorist attacks – may be rendered obsolete.

For some groups examined in this study, organizational learning and adaptation took place in response to state-

67. Louise Kettle and Andrew Mumford, "Terrorist Learning: A New Analytical Framework," *Studies in Conflict & Terrorism*, October 27, 2017, page 530. (http://www.tandfonline.com/doi/abs/10.1080/1057610X.2016.1237224)
68. Bruce Hoffman, *Inside Terrorism* (New York: Columbia University Press, 2006), pages 178-79.

led kinetic counterterrorism and counterinsurgency campaigns. Many of Shabaab's current tactics, for example, were forged following the intervention – first of Ethiopia, and later of the African Union Mission in Somalia (AMISOM) – to dislodge Islamists from southern Somalia that began in December 2006.[69] In other cases, jihadist groups refined existing tactics, modifying their operations to more effectively thwart defensive countermeasures. Indeed, this study's data shows that African militant groups with sufficient resources have been fairly proficient at developing tactical innovations against well-guarded but static targets. For example, as discussed previously, prior to 2015, Shabaab typically used VBIEDs in isolation or a combination of VBIEDs followed by assailants detonating explosive belts. These methods had flaws, including security staff foiling the detonation of the explosive belts in some cases. So to penetrate these targets more effectively, Shabaab adopted VBIED explosions followed by armed assaults. This tactical shift may be understood as an organizational reaction to failures.

Adaptations in response to kinetic counterterrorism actions and those in response to defensive countermeasures are not necessarily mutually exclusive. For example, as security forces became more apt at detecting Boko Haram's suicide bombers, the group started using women and children as bombers.[70] This operational shift allowed Boko Haram to regain the element of surprise, and allowed the group to conserve a key resource – able-bodied men – in light of Nigerian and regional military campaigns. The relative novelty of these "unexpected bombers" further sensationalized the group's attacks, garnering greater media attention and amplifying the sense of insecurity and terror in the region.[71]

Ultimately, militant organizations that face and overcome challenges from state actors are able to identify gaps in their defensive and offensive capabilities, institutionalize best practices, and become more effective innovators. Through these steps, militant groups can reduce their organizational learning curve and improve their chances of success.[72] Three aspects of jihadist organizational learning are worth watching in the African context. The first is learning and innovations produced organically by African jihadist groups. The other two aspects involve learning shared between or

69. For discussion of the intervention and its aftermath, see: Daveed Gartenstein-Ross, "The Strategic Challenge of Somalia's al-Shabaab: Dimensions of Jihad," *Middle East Quarterly*, Fall 2009, pages 25-36. (http://www.meforum.org/2486/somalia-al-shabaab-strategic-challenge). For discussion of how the intervention shaped Shabaab's operations, see: Rob Wise, "Al Shabaab," *Center for Strategic and International Studies*, July 2011. (https://csis-prod.s3.amazonaws.com/s3fs-public/legacy_files/files/publication/110715_Wise_AlShabaab_AQAM%20Futures%20Case%20Study_WEB.pdf)

70. Jason Warner and Hilary Matfess, "Exploding Stereotypes: The Unexpected Operational and Demographic Characteristics of Boko Haram's Suicide Bombers," *Combating Terrorism Center at West Point*, August 2017. (https://ctc.usma.edu/app/uploads/2017/08/Exploding-Stereotypes-1.pdf)

71. A recent report from West Point's Combating Terrorism Center (CTC) mapping the operational and demographic characteristics of Boko Haram's suicide bombers highlights this shift. According to the report, Boko Haram's initial use of suicide bombers (indicated by CTC as dating from April 8, 2011 to May 12, 2013) was limited exclusively to men. As the state developed countermeasures, the group struggled to maintain its operational tempo. In April 2014, the group entered into a new phase of its suicide bombing campaign, shifting from male bombers to women and children – a trend that has escalated over time. See: Jason Warner and Hilary Matfess, "Exploding Stereotypes: The Unexpected Operational and Demographic Characteristics of Boko Haram's Suicide Bombers," Combating Terrorism Center at West Point, August 2017, pages 4, 42. (https://ctc.usma.edu/app/uploads/2017/08/Exploding-Stereotypes-1.pdf)

72. See: George P. Huber, "Organizational Learning: The Contributing Processes and the Literature," *Organization Science*, February 1, 1991, pages 88-115. (https://pubsonline.informs.org/doi/abs/10.1287/orsc.2.1.88?journalCode=orsc). For discussion of organizational learning specifically in the context of terrorism, see: Brian Jackson et al., *Aptitude for Destruction Volume 1: Organizational Learning in Terrorist Groups and Its Implications for Combating Terrorism* (Santa Monica: RAND Corporation, 2005); Louise Kettle and Andrew Mumford, "Terrorist Learning: A New Analytical Framework," *Studies in Conflict & Terrorism*, October 27, 2017, page 530. (http://www.tandfonline.com/doi/abs/10.1080/1057610X.2016.1237224)

among jihadist organizations in disparate regions.[73] On the one hand, organizational learning may be transmitted to African jihadist groups from outside, such as the assistance that AQAP likely provided to Shabaab in the construction of bombs hidden in printers. On the other hand, outside groups like AQAP may also be carefully monitoring the results achieved by innovations employed in Africa, particularly in the aviation realm. Jihadist groups may consider attacks attempted in Africa to be "off the radar" relative to other theaters, so the risk exists that parts of the continent will be used as a kind of terrorism laboratory, with jihadist groups in other regions deriving intricate lessons learned. For all of these reasons, understanding how jihadist organizations learn and adapt is imperative.

Implications for Western Interests in Africa. One specific implication worth highlighting is how the geographic shift in kidnappings and attacks demonstrates West African groups' growing capabilities overall, and increasingly potent reach into areas that previously saw minimal jihadist violence, such as Burkina Faso and Ivory Coast. Jihadist expansion to these areas presents real implications for industries related to these countries' natural resources, particularly mining in northern Burkina Faso. Despite the Arlit case (in which MUJWA militants struck a French-run uranium mine) being the only mine attack, companies have become increasingly wary of recent events near remote Burkinabe mines. While jihadists primarily conducted attacks against security forces in these areas, al-Mourabitoun's recent activities raise concerns, particularly after the kidnapping of a Romanian security guard at a manganese mine in 2015.[74] Despite the deployment of 3,600 Burkinabe troops to areas surrounding northern mines last year, mining companies increasingly see this protection as insufficient.[75]

Further, the ease and relative frequency with which groups like Shabaab have been able to obtain uniforms and other official identification materials, as well as the recurring issue of complicit staff across the studied target types, suggests that insider threats may be a more pervasive issue in Africa. It is unclear whether corruption, economic conditions, or ideologically motivated individuals explain this prevalence. Further, most African states likely have less capability to detect insider threats than do their Western counterparts.

Finally, it is likely that aviation will remain a target for African jihadist groups due to the industry's strategic importance to countries' participation in the global economy, and the logistical difficulty involved in fully securing aviation sites. African groups are well positioned to test TTPs against this target type. Further, innovations tested in Africa may be exported to other theaters. As African jihadist TTPs develop – particularly with respect to aviation, but also across target types – we will likely see similar innovations and attack styles employed outside the continent.

73. It is typical for militant groups engaged in terrorism to share techniques, and thus accelerate one another's organizational learning. Paul Gill notes, for example, that the Provisional Irish Republican Army's weapons innovations "emerged in conflicts within Colombia, Spain (especially with mortar technology), Israel, Lebanon, Iraq, and Afghanistan." Paul Gill, "Tactical Innovation and the Provisional Irish Republican Army," *Studies in Conflict & Terrorism*, October 21, 2016, page 583. (http://www.tandfonline.com/doi/abs/10.1080/1057610X.2016.1237221)

74. Mathieu Bonkoungou, "Gunmen kidnap Romanian from Burkina Faso mine near Mali border," *Reuters*, April 4, 2015. (http://www.reuters.com/article/us-burkina-kidnapping/gunmen-kidnap-romanian-from-burkina-faso-mine-near-mali-border-idUSKBN0MV0IY20150404)

75. Geoffrey York, "Amid Threats, Security Efforts on the Rise at African Mining Sites," *The Globe and Mail* (Canada), August 28, 2016. (https://beta.theglobeandmail.com/report-on-business/international-business/african-and-mideast-business/amid-threats-security-efforts-on-the-rise-at-african-mining-sites/article31588248/?ref=http://www.theglobeandmail.com&)

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Bejdic's passion for literature and languages is reflected in his bachelor's degree in linguistics and Germanic studies from Université Libre de Bruxelles. He conducts research in nine languages.

Appendix

Overall Target Type Preferences

Year	Popular Establish-ments	Energy & Mineral Resources	Non-Africans	National Government Facilities	Aviation	Total
2007	9	4	2	3	5	23
2008	9	1	14	3	6	33
2009	4	1	10	4	4	23
2010	7	1	2	1	4	15
2011	7	12	14	4	1	38
2012	19	6	11	8	1	45
2013	14	7	11	11	3	46
2014	31	17	16	7	16	87
2015	32	11	14	15	4	76
2016	31	12	15	7	10	75
2017	21	0	3	3	2	29
Total	**184 (37.55%)**	**72 (14.69%)**	**112 (22.86%)**	**66 (13.47%)**	**56 (11.43%)**	**490**

Number of Attacks by Group

Year	AS	BH	An-saru	JNIM	AQIM	AM	ASL	ISIS				Total
								Sinai[76]	Libya[77]	Algeria	Somalia	
2007	13	0	0	0	4	0	0	0	0	0	0	17
2008	25[78]	0	0	0	5[79]	0	0	0	0	0	0	30
2009	15[80]	0	0	0	7	0	0	0	0	0	0	22
2010	11	1	0	0	0	0	0	0	0	0	0	12
2011	14	4	1	0	6	1[81]	0	0	0	0	0	26
2012	21	4	1	0	1	2[82]	1	0	0	0	0	30
2013	22	6	2	0	3	2	0	1	0	0	0	36
2014	43	11	0	0	0	1[83]	5	10	2	1	0	73
2015	20	9	0	0	0	5[84]	2	6	19	2	0	63
2016	38	3	0	0	8[85]	1	0	4	10	0	0	64
2017	19	2	0	3	1	0	0	0	0	0	1	26
Total	**241**	**40**	**4**	**3**	**35**	**12**	**8**	**21**	**31**	**3**	**1**	**399**

The above table summarizes the pace of attacks by group. Jihadist organizations that conducted less than four attacks against the five target types over the past decade are excluded, with the exception of JNIM and ISIS's regional affiliates in Algeria and Somalia. The ISIS affiliates in Algeria and Somalia are included to reflect the organization's larger regional presence.

AS *al-Shabaab*

BH *Boko Haram*

JNIM *Jama'at Nusrat al-Islam wal Muslimeen*

AQIM *al-Qaeda in the Islamic Maghreb*

AM *al-Mourabitoun*

MUJWA *Movement for Unity and Jihad in West Africa*

ASL *Ansar al-Sharia Libya*

76. Ansar Bayt al-Maqdis is included in this column because the group later joined ISIS and became known as Wilayat Sinai.
77. This column represents all ISIS Libyan provinces (Tripoli, Barqa, and Fezzan).
78. One of these attacks was conducted by the Islamic Courts Union, a predecessor of Shabaab.
79. One of these attacks was conducted by the Salafist Group for Preaching and Combat (GSPC), a predecessor of AQIM.
80. One of these attacks was conducted by Hizbul Islam, a group that would later merge with Shabaab in 2010.
81. This attack was carried out by MUJWA, a predecessor group of al-Mourabitoun.
82. Both attacks were carried out by MUJWA, a predecessor group of al-Mourabitoun.
83. MUJWA, a part of al-Mourabitoun, claimed responsibility for the attack.
84. One of these attacks was carried out by MUJWA, a predecessor group of al-Mourabitoun.
85. One of these attacks was carried out by Ansar Dine, a group with close ties to AQIM.

Target Preferences by Group

Al-Shabaab Targeting Preferences

Year	Popular Establish-ments	Energy & Mineral Resources	Non-Africans	National Government Facilities	Aviation	Total
2007	6	0	2	0	5	13
2008	7	0	11	1	6	25
2009	2	0	6	3	4	15
2010	6	0	1	0	4	11
2011	3	1	8	1	1	14
2012	15	0	4	1	1	21
2013	12	0	5	3	2	22
2014	23	2	7	2	9	43
2015	14	0	4	0	2	20
2016	24	0	4	2	8	38
2017	16	0	0	1	2	19
Total	**128 (53.11%)**	**3 (1.24%)**	**52 (21.58%)**	**14 (5.81%)**	**44 (18.26%)**	**241**

Boko Haram Targeting Preferences

Year	Popular Establish-ments	Energy & Mineral Resources	Non-Africans	National Government Interests	Aviation	Total
2007	0	0	0	0	0	0
2008	0	0	0	0	0	0
2009	0	0	0	0	0	0
2010	1	0	0	0	0	1
2011	3	0	0	1	0	4
2012	4	0	0	0	0	4
2013	2	0	3	0	1	6
2014	7	1	3	0	0	11
2015	9	0	0	0	0	9
2016	2	0	1	0	0	3
2017	1	0	0	1	0	2
Total	**29 (72.5%)**	**1 (2.5%)**	**7 (17.5%)**	**2 (5%)**	**1 (2.5%)**	**40**

AQIM Targeting Preferences

Year	Popular Establish-ments	Energy & Mineral Resources	Non-Africans	National Government Interests	Aviation	Total
2007	0	3	0	1	0	4
2008	1	1	2	1	0	5
2009	1	1	4	1	0	7
2010	0	0	0	0	0	0
2011	0	0	4	2	0	6
2012	0	0	1	0	0	1
2013	0	1	1	1	0	3
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	3	1	4	0	0	8
2017	0	0	1	0	0	1
Total	**5 (14.29%)**	**7 (20%)**	**17 (48.57%)**	**6 (17.14%)**	**0**	**35**

Establishments Popular Among Foreigners

Establishments Popular Among Foreigners – Sub-Target Type Preferences

Year	Hotel	Restau-rant	Bar/ Café	Market	Enter-tainment	Local Shop	Shopping Center	Combo	Total Attacks
2007	3	0	1	0	4	1	0	0	9
2008	2	1	3	0	3	0	0	0	9
2009	1	0	2	0	1	0	0	0	4
2010	4	0	0	1	1	0	0	1	7
2011	4	0	1	0	1	0	0	1	7
2012	3	2	7	0	2	3	1	1	19
2013	4	3	3	1	0	2	1	0	14
2014	7	8	6	3	2	1	2	2	31
2015	13	3	2	8	2	2	2	0	32
2016	11	11	2	3	0	1	0	3	31
2017	7	3	2	4	0	2	0	3	21
Total	**59 (32.07%)**	**31 (16.85%)**	**29 (15.76%)**	**20 (10.87%)**	**16 (8.70%)**	**12 (6.52%)**	**6 (3.26%)**	**11 (5.98%)**	**184**

Establishments Popular Among Foreigners – Number of Attacks by Group

Year	Shabaab	Boko Haram	ISIS	JNIM/ AQIM/ al-Mourabitoun /MLF	Unknown	Total Attacks
2007	6	0	0	0	3	9
2008	7	0	0	1 (AQIM)	1	9
2009	2	0	0	1 (AQIM)	1	4
2010	6	1	0	0	0	7
2011	3	3	0	0	1	7
2012	15	4	0	0	0	19
2013	12	2	0	0	0	14
2014	23	7	1	0	0	31
2015	14	9	6	3 (2 al-Mourabitoun, 1 All)	0	32
2016	25	2	2	2 (AQIM)	0	31
2017	16	1	1	2 (JNIM)	1	21
Total	**129 (70.11%)**	**29 (15.76%)**	**10 (5.43%)**	**9 (4.89%)**	**7 (3.80%)**	**184**

JNIM *Jama'at Nusrat al-Islam wal Muslimeen*

AQIM *al-Qaeda in the Islamic Maghreb*

MLF *Mecina Liberation Front*

Establishments Popular Among Foreigners – Shabaab's Use of VBIEDs

Year	Only VBIED	VBIED + Assault	VBIED + Explosive Belt	Total
2012	1	0	0	1
2013	1	0	3	4
2014	7	0	1	8
2015	6	4	0	10
2016	9	5	0	14
2017	10	3	0	13
Total	**34 (68%)**	**12 (24%)**	**4 (8%)**	**50**

Energy and Mineral Resources Infrastructure and Facilities

Energy & Mineral Resources Infrastructure and Facilities – Targeting Preferences

Year	Pipe lines	Power Grid Infrastructure*	Power Plant	Personnel	Oil Field/ Terminal/ Facility	Gas Facility	Mine	Total Attacks
2007	3	1	0	0	0	0	0	4
2008	1	0	0	0	0	0	0	1
2009	0	0	0	1	0	0	0	1
2010	1	0	0	0	0	0	0	1
2011	11	1	0	0	0	0	0	12
2012	5	0	1	0	0	0	0	6
2013	4	0	1	0	0	1	1	7
2014	11	0	1	3	2	0	0	17
2015	4	2	2	3	0	0	0	11
2016	3	3	2	0	3	1	0	12
2017	0	0	0	0	0	0	0	0
Total	**43 (59.72%)**	**7 (9.72%)**	**7 (9.72%)**	**7 (9.72%)**	**5 (6.94%)**	**2 (2.78%)**	**1 (1.39%)**	**72**

Power Grid Infrastructure Category: Attacks on this sub-target type include electricity pylons, power lines, and transformers.

Non-African Tourists, Expatriates, and NGO Workers

Non-African Tourists, Expatriates, and NGO Workers – Attacks and Kidnappings by Group

Year	Shabaab	AQIM	ISIS-Libya	Boko Haram	Ansaru	MUJWA	Un-known	Other*	Total
2007	1	0	0	0	0	0	1	0	2
2008	10	2	0	0	0	0	1	0	14
2009	3	4	0	0	0	0	2	1	10
2010	1	0	0	0	0	0	1	0	2
2011	8	4	0	0	1	1	0	0	14
2012	2	1	0	0	1	1	4	2	11
2013	5	1	0	3	2	0	0	0	11
2014	7	0	0	3	0	1	3	2	16
2015	4	0	6	0	0	1	1	2	14
2016	4	3	2	1	0	0	3	2	15
2017	0	0	0	0	0	0	1	2	3
Total	**45 (40.18%)**	**15 (13.39%)**	**8 (7.14%)**	**7 (6.25%)**	**4 (3.57%)**	**4 (3.57%)**	**17 (15.18%)**	**12 (10.71%)**	**112**

Note: In some cases, unknown assailants kidnapped foreigners and sold them to a jihadist group. We coded the group they were sold to, as opposed to unknown assailants, when this occurred. While most events coded were kidnappings, some were killings of foreigners at locations that did not fall under the other four target types.

** Other Category: For the purposes of this chart, groups that conducted fewer than four attacks or kidnappings of foreigners over the past decade fall under this category. These groups included the Islamic Courts Union, Hizbul Islam, Ansar al-Dine, Ansar al-Sharia (Libya), Brigades of Imprisoned Sheikh Omar Abdel-Rahman, Ansar Bayt al-Maqdis (Wilayat Sinai), Jund al-Khilafah (ISIS Algeria Province), and JNIM.*

National and International Government Facilities

National and International Government Facilities – Tactical Preferences

Year	Bombing	Assault	Explosive/ Incendiary Device Thrown	Projectiles	Combination	Total Attacks
2007	3	0	0	0	0	3
2008	2	1	0	0	0	3
2009	1	3	0	0	0	4
2010	0	0	1	0	0	1
2011	2	1	1	0	0	4
2012	2	2	3	0	1	8
2013	5	0	3	1	2	11
2014	1	1	1	4	0	7
2015	9	4	2	0	0	15
2016	4	2	0	0	1	7
2017	2	0	0	0	0	3*
Total	**31 (46.97%)**	**14 (21.21%)**	**11 (16.67%)**	**5 (7.58%)**	**4 (6.06%)**	**66**

**Note: For one of the planned attacks in 2017, the intended tactic was unknown.*

Aviation

Aviation – Tactical Preferences

Year	Projectiles	Bombing	Assault	Hijacking	Explosive Thrown	Combin-ation	Total Attacks
2007	3	2	0	0	0	0	5
2008	6	0	0	0	0	0	6
2009	3	0	0	1	0	0	4
2010	2	0	1	0	0	1	4
2011	1	0	0	0	0	0	1
2012	1	0	0	0	0	0	1
2013	0	1	2	0	0	0	3
2014	13	2	0	0	1	0	16
2015	1	1	2	0	0	0	4
2016	4	4	0	1	0	1	10
2017	1	1	0	0	0	0	2
Total	**35 (62.5%)**	**11 (19.64%)**	**5 (8.93%)**	**2 (3.57%)**	**1 (1.79%)**	**2 (3.57%)**	**56**



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