



UNCLASSIFIED//LAW ENFORCEMENT SENSITIVE



EXTERNAL INTELLIGENCE NOTE

Terrorism Explosive Device Analytical Center
17 November 2015

(U//LES) Suicide Vest and Belt Improvised Explosive Device Tactics in the Middle Eastern, African, and European Regions Show Minimal Signs of Tactic Migration

(U) LAW ENFORCEMENT SENSITIVE: The information marked (U//LES) in this document is the property of FBI and may be distributed within the Federal Government (and its contractors), US intelligence, law enforcement, public safety or protection officials and individuals with a need to know. Distribution beyond these entities without FBI authorization is prohibited. Precautions should be taken to ensure this information is stored and/or destroyed in a manner that precludes unauthorized access. Information bearing the LES caveat may not be used in legal proceedings without first receiving authorization from the originating agency. Recipients are prohibited from subsequently posting the information marked LES on a website or an unclassified network.

(U//LES) The FBI Terrorism Explosive Device Analytical Center (TEDAC) assesses the tactics used to construct suicide vest and belt improvised explosive devices (IEDs) in the Middle Eastern, African, and European regions likely (see Appendix A) have minimal correlation. Use of these tactics allows suicide bombers to discretely move to a desired target location and make real-time decisions to maximize lethality. The suicide belt design allows the wearer to conceal the device and blend in with their surrounding environment, as well as to position themselves in potentially crowded environments while not raising suspicion.¹ This assessment is made with medium confidence (see Appendix B), based upon reliable forensic exploitation and varying degrees of reliability with open source reporting. This external intelligence note is intended to increase the situational awareness of the bomb technician community about the use of suicide vest IEDs (SVIEDs).

UNCLASSIFIED//FOR OFFICIAL USE ONLY

(U) Source Summary Statement

(U//FOUO) Reporting in the external intelligence note was derived from open source reports, the Department of Defense (DoD), and from IED submissions to FBI TEDAC. The research timeframe for this report included incidents from 1 January 2013 through 16 November 2015.

(U) Middle East

(U//LES) The use of suicide belts and vests by terrorist groups in the Middle East, particularly Sunni Salafist jihadi extremists, is a common and effective tactic for causing death and destruction. Common explosive fills of suicide belts and vests observed in the region include triacetone triperoxide (TATP), trinitrotoluene (TNT), Semtex, C4, Research Development Formula X (RDX), and pentaerythritol tetranitrate (PETN). Terrorist groups, including the Islamic State of Iraq and the Levant (ISIL), al-Qa'ida in the Arabian Peninsula (AQAP), and

UNCLASSIFIED//LAW ENFORCEMENT SENSITIVE

Tehrik-e Taliban Pakistan, are known to use the previously listed explosives in their constructed IEDs.^{2, 3, 4}

(U) A strategic study conducted by the Institute of National Security Studies (INSS) of suicide bombings in 2014 across the Middle East region showed an increase in the number of suicide attacks from 2013. Approximately 370 attacks occurred, with approximately 2,750 victims, compared to 163 attacks in 2013, with approximately 1,950 victims. A significant increase was evident in Iraq (271 in 2014 versus 98 in 2013), Yemen (29 versus 10), Lebanon (13 versus 3), and Libya (11 versus 1). The number of suicide bombing attacks carried out in Syria (41) remained the same. In Egypt there were four suicide attacks compared with six the previous year.⁵

- (U) An interview conducted by the German magazine, *SPIEGEL*, in July 2015 with captured ISIL leader Abu Abdullah provided insight into the group's selection of targets and acquisition of explosive material for suicide bombings. According to Abdullah, ISIL selected target locations to hit as many people as possible, especially police officers, soldiers, and Shiites. These locations were limited to Shiite police checkpoints, markets, and mosques.⁶
- (U) According to the interview, ISIL used C4 plastic explosives and explosive fill removed from artillery shells for car bombs. Abdullah drilled open the shells of anti-aircraft guns to construct suicide belts because he believed the effect of the powder was more intense. The belts and vests were then constructed in different sizes. Each device was a custom fit, based on each bomber's measurements.⁷
- (U) Forty-four civilians were killed in two suicide bombings conducted by ISIL in Beirut, Lebanon, in November 2015. The bombings took place in a busy residential and commercial area identified as a predominantly Shiite neighborhood and the stronghold of Hizballah. According to media reports, the bombers used suicide belts similar to a belt recovered by the Lebanese Army (see Figure 2). ISIL targeted the Hizballah stronghold in Lebanon because of

UNCLASSIFIED//FOR OFFICIAL USE ONLY



(U//FOUO) Figure 1: An ISIL fighter at a rally is seen wearing a suicide belt.

(U) Source: Open source reporting.

UNCLASSIFIED//FOR OFFICIAL USE ONLY



(U//FOUO) Figure 2: A suicide belt with ball bearings and detonator was recovered by Lebanon Army personnel near an Army checkpoint in Aarsal, Lebanon.

(U) Source: Open source reporting.

its involvement in the war against ISIL in neighboring Syria. A hospital was the original target, but heavy security presence in the area forced the group to change the target to a densely populated area.^{8,9}

- (U) According to open source reporting, similar suicide belt construction techniques have also been observed in Yemen. A suicide bomber with ties to AQAP was shot and killed in July 2015 by Houthi forces in Sana'a, Yemen, before successfully detonating the IED. The device (see Figure 3) featured dual grenade-pin detonators, a main charge wrapped with sheets of ball bearings, and detonation cord that was placed inside a pouch around the bomber's waist. The conflict between Iranian-backed Shiite Houthi rebels and Sunni extremist group AQAP has seen an increased level of attacks using explosives and devices such as the suicide belt.¹⁰
- (U) On 30 May 2015, Israeli forces stopped a Palestinian wearing an explosive belt. According to open source reporting, the belt consisted of 12 pipe bombs connected with wires (See Figure 4).¹¹
- (U) According to open source reporting, Hamas security officers located a cache of suicide belts in the Gaza Strip in June 2015. The devices consisted of unknown explosives and unknown initiators, enhanced with ball bearings for shrapnel effect (See Figure 5).¹²

UNCLASSIFIED//FOR OFFICIAL USE ONLY



(U//FOUO) Figure 3: A suicide bomber wearing a suicide belt was shot and killed in July 2015 by Houthi forces in Sana'a, Yemen, before detonating the device.

(U) Source: Open source reporting.

UNCLASSIFIED//FOR OFFICIAL USE ONLY



(U//FOUO) Figure 4: Suicide Belt recovered by Israeli forces, May 2015

(U) Source: Open source reporting.

UNCLASSIFIED//FOR OFFICIAL USE ONLY



(U//FOUO) Figure 5: SVIED recovered in the Gaza Strip, June 2015

(U) Source: Open source reporting.

(U) Europe

(U//LES) Known suicide vest and belt IED incidents in the European region from 2013 to 2015 are assessed to have occurred sporadically and have been primarily concentrated in Russia, and Turkey. Explosives known to be used in this area include TNT and C4. The following are examples of the type of SVIED located in the region.



- (U) In October 2013 Russian officials located a large cache of suicide belts and IEDs, according to open source reporting. Although officials did not specify the type of explosive found in this cache, other IED incidents in this region involved the use of TNT (see Figure 6).¹³

- (U) In October 2014 Turkish officials confiscated 150 kg of C4 and 20 explosive belts, according to open source reporting.¹⁴

- (U) A suspected suicide bomber detonated unknown explosives during a rally in Suruc, Turkey, killing approximately 30, according to open source reporting.¹⁵

- (U) According to open source reporting, two suspected suicide bombers detonated unknown explosives at a train station in Ankara, Turkey, killing at least 95.¹⁶

(U) Africa

(U//LES) The suicide vests and belts observed in Africa from 2013 to 2015 featured the use of rocker switches and military-grade fuses. Common explosives include RDX, Ammonium Nitrate, and Urea Nitrate. Incidents were noted in northern and western Africa.

- (U//FOUO) Suicide vest and belts located on the Tunisian and Libyan border included custom dual-tone multi frequency (DTMF) devices, according to FBI reporting (See Figure 7).¹⁷
- (U//FOUO) In December 2014 authorities recovered an improvised explosive belt in Nigeria, which contained seven projectile cartridge cases filled with RDX, laced



UNCLASSIFIED//LAW ENFORCEMENT SENSITIVE

with green-colored detonating cord, and connected to commercial electric detonators. The device connected to a power source and rocker switch for initiation, according to FBI reporting (See Figure 8).¹⁸

- (U//FOUO) From February through July 2015, authorities in Cameroon and Niger recovered improvised explosive belts armed with a rocker switch and GR-66 EG French submunitions, according to DoD reporting (See Figure 9).¹⁹

UNCLASSIFIED//FOR OFFICIAL USE ONLY



(U//FOUO) Figure 8: Suicide Belt recovered in Nigeria, Dec 2014

(U) Source: Open source reporting.



(U//FOUO) Figure 9: Suicide Belt recovered in Cameroon, July 2015

(U) Source: Open source reporting.

(U) Perspective

(U//LES) The variations observed in this broad comparison of suicide vest and belt IEDs across these three regions do not indicate a clear IED tactic migration, but may indicate tactic or construction influences. TEDAC generally assumes the similarities between suicide vests and belts from different regions likely indicate common training or common IED facilitators. These similarities include, but are not limited to, overall IED construction, wiring techniques, common explosives, initiators, switches, electronic diagrams, enhancements, and employment. The types of suicide vests and belt IEDs observed in each region within this report differ broadly in many characteristics, resulting in an inconclusive determination that the suicide vest and belt IEDs prevalent in any one area translate to tactic migration.

(U) Analysis of Alternatives

(U//LES) Alternatively, similarities in IED devices generally, across different regions, may be a product of independent open source research, thus resulting in a false link between devices and subjects.

(U) Outlook

(U//LES) FBI TEDAC assesses it is likely the suicide vest and belt IED tactics observed in Europe, Africa, and the Middle East are likely influenced by individuals who effectively employ these devices. This assessment is made with medium confidence, based on open source, DoD, and FBI reporting. These similarities are likely to be effected by multiple factors, including available materials, training, and local or national counter-IED policies and investigations. FBI TEDAC assesses forensic and technical exploitation of suicide vest and belts will provide the greatest opportunity to identifying key components for device attribution and overall strategic analysis of migration tactics.

(U) Intelligence Requirements

(U//FOUO) This EIN addresses the FBI National Standing Collection Requirements WW-TERR-LD-SR-0207-14.

(U) This external intelligence note was prepared by the FBI TEDAC. Comments and queries may be addressed to the FBI TEDAC Unit Chief by calling (703) 632-8184.

UNCLASSIFIED//LAW ENFORCEMENT SENSITIVE

(U) Appendix A: Expressions of Likelihood (or Probability)

(U) Phrases such as “the FBI judges” and “the FBI assesses,” and terms such as “likely” and “probably” convey analytical judgments and assessments. The chart approximates how expressions of likelihood and probability correlate with percentages of chance.

UNCLASSIFIED

<i>Terms of Likelihood</i>	Almost No Chance	Very Unlikely	Unlikely	Roughly Even Chance	Likely	Very Likely	Almost Certain(ly)
<i>Terms of Probability</i>	Remote	Highly Improbable	Improbable (Improbably)	Roughly Even Odds	Probable (Probably)	Highly Probable	Nearly Certain
	1-5%	5-20%	20-45%	45-55%	55-80%	80-95%	95-99%

(U) Unless otherwise stated, the FBI does not derive judgments via statistical analysis.

(U) Appendix B: Confidence in Sources Supporting Assessments and Judgments

(U) Confidence levels reflect the quality and quantity of the source information supporting judgment. Consequently, the FBI ascribes high, medium, or low levels of confidence to assessments, as follows:

(U) **High confidence** generally indicates the FBI's judgments are based on high-quality information, from multiple sources. High confidence in a judgment does not imply the assessment is a fact or a certainty; such judgments might be wrong. While additional reporting and information sources may change analytical judgments, such changes are most likely to be refinements and not substantial in nature.

(U) **Medium confidence** generally means the information is credibly sourced and plausible but not of sufficient quality or corroborated sufficiently to warrant a higher level of confidence. Additional reporting or information sources have the potential to increase the FBI's confidence levels or substantively change analytical judgments.

(U) **Low confidence** generally means the information's credibility or plausibility is uncertain, the information is too fragmented or poorly corroborated to make solid analytic inferences, or the reliability of the sources is questionable. Absent additional reporting or information sources, analytical judgments should be considered preliminary in nature.

(U) Endnotes

- ¹ (U) Online Publication; *INSS Insight*; “Suicide Attacks in 2014: The Global Picture”; 6 January 2015; <http://www.inss.org.il/?id=4538&articleid=8514>; No. 653; accessed on 16 November 2015; Source is a research organization that focuses on Israeli national security and strategic policy issues.
- ² (U) Online Publication; *Asharq Al-Awsat*; “More than 1.5 tons of explosives, bomb factory uncovered in Bahrain: interior ministry”; 1 October 2015; <http://english.aawsat.com/2015/10/article55345283/more-than-1-5-tons-of-explosives-bomb-factory-uncovered-in-bahrain-interior-ministry>; accessed on 16 November 2015; Source is an open source news article from *Asharq Al-Awsat*, an international pan-Arab daily newspaper.
- ³ (U) Online Publication; CNN; “Heightened Security Checks Coming to U.S. Airports after AQAP Calls for Lone Wolf Plane Bombers”; 14 January 2015; <http://www.cnn.com/2015/01/14/us/airport-security-aqap/>; accessed on 16 November 2015; Source is the online publication of the Cable News Network.
- ⁴ (U) Report; US Department of State; “Chapter 2. Country Reports: Middle East and North Africa Overview”; 2014; <http://www.state.gov/j/ct/rls/crt/2014/239407.htm>; Source is the official US State Department, Bureau of Counterterrorism Country Reports on Terrorism 2014 Web site.
- ⁵ (U) *Op. cit.*, endnote 1.
- ⁶ (U) Online Publication; *SPIEGEL ONLINE*; “An Interview with Islamic State's Architect of Death”; 16 July 2015; <http://www.spiegel.de/international/world/a-conversation-with-an-isis-suicide-bomber-logistician-a-1043485.html>; accessed on 16 November 2015; Source is an open source magazine article from the German magazine, *SPIEGEL*, of an interview with the captured ISIL leader, Abu Abdullah.
- ⁷ (U) *Ibid.*
- ⁸ (U) Online Publication; *Reuters*; “Beirut bombing: Lebanese authorities arrest 11 people, mostly Syrians, over twin bombings”; 15 November 2015; <http://www.abc.net.au/news/2015-11-15/lebanon-arrests-six-people-over-beirut-bombings/6942598>; accessed on 16 November 2015; Source is an international multimedia news agency.
- ⁹ (U) Online Publication; *The New York Times*; “Beirut, Also the Site of Deadly Attacks, Feels Forgotten”; 15 November 2015; http://www.nytimes.com/2015/11/16/world/middleeast/beirut-lebanon-attacks-paris.html?_r=0&mtref=undefined&gwh=06E1A88FCA32E3179A5D4B5F68A70A65&gwt=pay&assetType=nyt_now; accessed on 16 November 2015; Source is a US-based news agency.
- ¹⁰ (U) Online Publication; “Houthi popular committees kill alleged suicide bomber in Hodeida”; 4 July 2015; <http://muhitelyemen.net/en/local/news/1437.html>; accessed on 16 November 2015; Source is a Yemen news media outlet.
- ¹¹ (U) Online News Article; *The Times of Israel*; “Israeli forces catch man wearing explosive belt”; 30 May 2014; <http://www.timesofisrael.com>; accessed on 30 May 2014; *The Times of Israel* is an online news organization.
- ¹² (U) Online News Article; *Mannnews.com*; “Gunman killed in clashes with Hamas security in Gaza City”; 2 June 2015; <http://www.maannews.com/Content.aspx?id=765722>; accessed on 3 June 2015; *Mannnews.com* is an online news organization.
- ¹³ (U) Online News Article; *RT.com*; “Suicide belts, bombs, IEDs: Russia’s security forces eliminate terrorist workshop in Dagestan”; 28 October 2013; <http://rt.com/news/dagestan-security-terrorist-workshop-783/>; accessed on 28 October 2013; *RT.com* is an online news organization.
- ¹⁴ (U) Online News Article; *Vestnikkavkaza.net*; “Turkish police confiscate 150kg of explosives in Gaziantep”; 13 October 2014; <http://vestnikkavkaza.net/news/society/60962.html>; accessed on 13 October 2014; *Vestnikkavkaza.net* is an online news organization.
- ¹⁵ (U) Online News Article; *BBC.com*; “Suruc Massacre: At Least 30 Killed in Turkey Border Blast”; 20 July 2015; <http://www.bbc.com/news/world-europe-33593615>; accessed on 16 November 2015; *BBC News* is an international recognized news organization.
- ¹⁶ (U) Online News Article; *CNN.com*; “Turkey Train Station Bombings Kill Dozens in Ankara”; 10 October 2015; <http://www.cnn.com/2015/10/10/middleeast/turkey-ankara-bomb-blast>; accessed on 16 November 2014; *CNN* is an internationally recognized news organization.
- ¹⁷ (U) FBI; *TEDAC*; 30 March 2015; “(U) RCIED: Six DTMF Decoder Custom Circuits (Q1)”; UNCLASSIFIED//FOR OFFICIAL USE ONLY; UNCLASSIFIED//FOR OFFICIAL USE ONLY; Source is an FBI employee.
- ¹⁸ (U) FBI; *TEDAC*; 16 November 2015; “(U) Kwari Textile Market 10 Dec 2014 PBIED, Kaso, Kano State Nigeria”; UNCLASSIFIED//FOR OFFICIAL USE ONLY; UNCLASSIFIED//FOR OFFICIAL USE ONLY; Search for SVIED originating from Nigeria.

¹⁹ (U) DoD; Storyboard; 30 July 2015; 30 July 2015; “(U) Personnel Borne IED (PBIED) Exploitation Maroua, CMR (30 Jul 15)”; UNCLASSIFIED//FOR OFFICIAL USE ONLY; Source is a DoD employee.

Distribution

FBI Intranet

LEEP

OCA

FBI Field Offices

Field Office SBTs

Field Office ERTs

State, Local, and Tribal Bomb Technicians

ATF

CIA

NSA

DIA

DoD