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Contact FMSO at:
usarmy.leavenworth.tradoc.mbx.fmso-web@mail.mil

ON THE COVER: Turkish President Erdoğan in front of the Kocatepe Mosque in Ankara, and Russian President Putin in front of Saint Basil's Cathedral in Moscow.
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Regional Analysts and Expert Contributors

Middle East	Karen Kaya Michael Rubin Lucas Winter
Africa	Jacob Zenn
Latin America	Geoff Demarest Brenda Fiegel
Asia-Pacific	Cindy Hurst Steven Galluzzi Tim Thomas
Central Asia, Caucasus	Matthew Stein
Russia, Ukraine	Chuck Bartles Ray Finch Tyler Gartner Les Grau Joseph McConnell Tim Thomas

Editor-in-Chief	**Tom Wilhelm**
Editor	Karen Kaya
Design Editor	Keith French

Baghdadi Threatens Turkey, Saudi Arabia and Libya

OE Watch Commentary: On 3 November, the ISIS-affiliated al-Furqan media released a recording by the group's leader Abu Bakr al-Baghdadi. The recording, which appears to be recent (due to references to the recent death of a senior ISIS leader and the on-going Mosul operation), contains important messages for Turkey, Saudi Arabia and Libya. The accompanying passages from Turkish sources discuss these messages and their implications.

As the passages discuss, Baghdadi threatens attacks in Turkey and Saudi Arabia, and encourages militants who cannot go to Iraq and Syria, to go to Libya. He is reported to tell his fighters to "unleash the fire of their hate" on Turkish troops fighting them in Syria, and to take the battle into Turkey; and that "Turkey is now within your target range, and a target of your jihad … invade it and spread fear where there is safety." As for Saudi Arabia, he is reported as telling his followers to launch attacks targeting security forces, government officials, members of the ruling al-Saud family and media outlets, for "standing with the infidel elements in the war against Sunnis and Islam in Iraq and Syria".

ISIS has attacked Turkey many times, however in the past, it would not claim responsibility for its attacks there. (For more information, see Special Essay: "Attack on Istanbul Airport: ISIS's Evolving Strategy and Implications," *OE Watch*, August 2016.) As discussed in the second passage, this points to a new chapter in ISIS strategy towards Turkey, where the group will now start claiming responsibility for attacks. Indeed, the next day, the group claimed responsibility for an attack in the southeastern town of Diyarbakir in Turkey, which killed eight people and injured 100.

ISIS is currently being squeezed in Syria and Iraq. It is well known that the group resorts to terrorist attacks outside its own territories when it feels squeezed, in order to show that it is still strong. As the Mosul and Raqqa operations against ISIS strongholds unfold, it is highly likely that the group will carry the fight once more into one of its closest targets-Turkey, as the first passage claims. Baghdadi's call for fighters to head to Libya is also an extension of this. The third passage is by a Turkish military expert, who suggested a year ago that, as the group gets cornered in its own territory, it would try to expand and diversify its fronts globally, by spreading out into Libya (and other regions like Yemen, the Sinai Peninsula and Afghanistan). **End OE Watch Commentary (Kaya)**

"...[I]t is widely accepted that ISIS will want to carry the fight to other regions and one of these regions will be its neighbor, Turkey. This will be Turkey's inevitable destiny."

Source: Gülener Kirnali, "Bağdadi: 'Türkiye'yi işgal edin ve güvenli yuvalarına korku salın' (Baghdadi: 'Invade Turkey and spread fear in their safe homes')," *Medyaskope.tv*, 3 November 2016, http://medyascope.tv/2016/11/03/bagdadi-turkiyeyi-isgal-edin-guvenli-yuvalarina-korku-salin/

"... [The] Baghdadi recording published by the ISIS-affiliated Al Furqan media organ, is Baghdadi's first message since December 2015. It is unclear when the message was recorded, but references to al Adnani— ISIS's number two, who was killed in August— suggests that it is recent. In his message, Baghdadi calls for attacks on Turkey and Saudi Arabia.

Baghdadi tells his militants that the Turkish soldiers fighting them in Syria are "equal to dogs" and says, "You can now unleash the fire of your hate towards Turkish soldiers. Turkey is now within your target range, and a target of your jihad. Invade it and spread fear where there is safety."

As for Saudi Arabia, whom Baghdadi says "stands with the infidel elements in the war against Sunnis and Islam in Iraq and Syria," he calls on his militants to target security forces, government officials, the Saud family members and media organizations. In addition, Baghdadi calls on those militants who cannot go to Syria and Iraq, to head to Libya and for all ISIS fighters to stick together."

"One of the strategies that ISIS implements ... is to spread and diversify its fronts in the Sunni geography. It is trying to spread into regions like Yemen, Libya, the Sinai Peninsula and Afghanistan..."

Source: Ruşen Çakır, "Bağdadi'nin Turkiye'ye Tehdidi [Video] (Baghdadi's Threat to Turkey [Video])," *Periscope.com*, 3 November 2016. http://rusencakir.com/Periscope/Bagdadinin-Turkiyeye-Tehdidi/1535

"Baghdadi encourages militants who cannot go to Iraq and Syria, to go to Libya. There are also sections that directly affect Turkey. He points to Turkey as a target, along with Saudi Arabia.

...

This signals a new era because ISIS will likely start claiming responsibility for its attacks on Turkey.... If [the group] loses Mosul, and with the upcoming Raqqa operation, it is widely accepted that ISIS will want to carry the fight to other regions and one of these regions will be its neighbor, Turkey. This will be Turkey's inevitable destiny. Turkey is the number one country what will be affected by ISIS spreading the war."

Source: Metin Gürcan, "IŞİD'le yaklaşan savaşı anlama kılavuzu (A guide to understanding the imminent war with ISIS)," *t24.com*, 13 November 2015, http://t24.com.tr/yazarlar/metin-gurcan/isidle-yaklasan-savasi-anlama-kilavuzu,13214

"One of the strategies that ISIS implements in order to not be caged in Syria, is to spread and diversify its fronts in the Sunni geography. It is trying to spread into regions like Yemen, Libya, the Sinai Peninsula and Afghanistan, in an effort to be a big force that would not be defeated by global powers such as the U.S. and Russia."

ISIS Trauma Will Affect Generations

OE Watch Commentary: As the battle to re-take Mosul from ISIS continues, there is an inconvenient issue that is not being discussed. It is the fact that Mosul society has been under ISIS rule for over two years, during which time ISIS schools and training camps have been widespread. As the accompanying passages discuss, up to one million children have been indoctrinated with ISIS propaganda; where the group trained children on how to make bombs and how to kill. There is a generation who will need an army of psychiatrists to undo what ISIS did, given this "education", and the post-traumatic symptoms of living under ISIS's brutal rule. The accompanying pieces discuss the effects of ISIS rule on future generations; and the potential threat it may pose for the West.

The first passage, by a Syrian news agency notes that Iraqi children have suffered horribly under ISIS rule. It points out that ISIS prohibited education for girls, and taught a jihadi curriculum to boys which emphasized militarism. Similarly, the second passage notes that up to a million children have been subject to an "extremist curriculum that teaches how to make bombs and cut off heads." These children have regularly been forced to watch gory propaganda videos on killing and making bombs.

The third passage by a Kurdish news source notes that doctors claim many who have fled Mosul will remain "psychologically scarred for life." The passage quotes a psychologist with Doctors Without Borders who says that, "It is not only the current generation who will be affected by that trauma but the coming generation as well. It's not affecting that person alone. It goes genetically to the other generations."

The final piece discusses a Europol report which claims that children raised under the group's rule are of "particular concern." The report notes that ISIS trains minors to become the next generation of foreign terrorist fighters, which may pose a future security threat to European Union member states. The piece also quotes a researcher as saying that these children pose an immediate and long-term threat because their educational indoctrination breeds hatred against the West. **End OE Watch Commentary (Kaya)**

"Approximately one million children living under ISIS in Iraq have been forced to learn from an extremist curriculum that teaches how to make bombs and cut off heads... Children living under ISIS' rule are regularly forced to watch gory propaganda videos and guides on killing and making bombs..."

Source: "Children of Mosul speak of ISIS atrocities, want to return to school," *Aranews.net*, 23 October 2016, http://aranews.net/2016/10/children-mosul-speak-isis-atrocities/

"Iraqi children have suffered horribly under the Islamic State's (ISIS) theocratic rule... Wherever ISIS exerted control, it prohibited education for girls and restricted it for boys. When schools were open, they were forced to teach a jihadi curriculum which emphasized militarism and their Islamic Tafsir, a limited exegesis."

Source: Bethan McKernan, "ISIS 'teaching Mosul's children how to kill and make bombs in school', say Iraqi parents," *Independent.co.uk*, 7 November 2016, http://www.independent.co.uk/news/world/middle-east/isis-children-extremist-propaganda-mosul-offensive-latest-a7402986.html

"Approximately one million children living under ISIS in Iraq have been forced to learn from an extremist curriculum that teaches how to make bombs and cut off heads...

Children living under ISIS' rule are regularly forced to watch gory propaganda videos and guides on killing and making bombs, father of five Hamid said."

Source: Glenn Field, "Trauma of ISIS war will affect generations, say doctors," *Rudaw.net*, 31 October 2016, http://rudaw.net/english/kurdistan/301020163

"Those living at the Dibaga camp in the Kurdistan Region are grateful for having survived the brutalities that ISIS has committed in Iraq over the last two years. Although the worst may be over for tens of thousands in the facility, doctors fear that many will remain psychologically scarred for life.

"There is a shock through generations," Dr. Abdul Halim, a psychologist from Doctors Without Borders (MSF, Médecins sans frontières) at Dibaga camp for internally displaced persons (IDPs), told Rudaw.

"It is not only the current generation who will be affected by that trauma but the coming generation as well. It's not affecting that person alone. It goes genetically to the other generations."

Source: Lizzie Dearden, "ISIS training children of foreign fighters to become 'next generation' of terrorists," *Independent.co.uk*, 29 July 2016, http://www.independent.co.uk/news/world/middle-east/isis-training-children-of-foreign-fighters-to-become-next-generation-of-terrorists-a7162911.html

"In its annual report on terrorism in the European Union, Europol said children raised under the group's rule are of "particular concern". In their propaganda, Isis has often shown that they train these minors to become the next generation of foreign terrorist fighters, which may pose a future security threat to member states," the Europol report said. "Some returnees will perpetuate the terrorist threat to the European Union via facilitation, fundraising recruitment and radicalisation activities. They may also serve as role models for future would-be violent jihadists."

"They are an immediate threat and will become a much longer-term one," said [a senior researcher from the Quilliam Foundation]. "Their educational indoctrination breeds hatred against the West and calls all other states illegitimate – these children will have no access to or memory of any other ideas."

The Battle for Raqqa: A Kurdish Perspective

OE Watch Commentary: On 6 November, Operation 'Wrath of the Euphrates' was launched to liberate the ISIS stronghold of Raqqa in Syria. The operation was initiated by the Kurdish-led Syrian Democratic Forces (SDF). The excerpted article from an interview with a Kurdish commander provides the Kurdish perspective on the battle. The commander discusses the planned stages of the operation and has important messages about his group's goals.

The Kurdish Commander interviewed is Sipan Hemo, a commander with the Kurdish People's Protection Units (YPG). Hemo notes that preparations have been going on for two months. He discusses that in the first phase, Raqqa will be encircled from the north, east and west. He notes their plans that, once they reach the Euphrates River in the first phase, then a second phase will be planned against the Raqqa town center. He says, "From the experience gained at Manbij, where the operation lasted 73 days, we know the liberation of Raqqa's center will take time."

Hemo discusses that the liberation and administration of Raqqa will be similar to the process followed in Manbij. He notes the role of local forces will be more pronounced at Raqqa. Thus, the policy of assisting in the liberation of Arab-dominated areas and then handing over control to a local assembly won't change. Hemo says, "The Raqqa Military Council is made up of exclusively of people from Raqqa. The Kurds have no goal of remaining in Raqqa... There is no intention of having Raqqa join the Rojava [Syrian Kurdistan] Northern Syria Democratic Federation. The people of Raqqa will decide their future themselves."

When asked if they expect an offensive move from Turkey and what the Kurdish reaction would be if this happened, Hemo says: "We don't want to be seen provoking Turkey. We are at war against [ISIS] in our own country. This is not an anti-Turkey operation." This is an important message to Turkey, whose leaders have repeatedly said (as noted in the third passage) that they would not tolerate a large Kurdish role in the attack on Raqqa over fears that this would expand Kurdish-controlled areas in Syria. It is also an important message to the locals of Raqqa.

Raqqa has been under ISIS control since 2014. The long-term plan for seizing, holding and governing Raqqa is still unclear. Raqqa is a predominantly Arab and Sunni city and a Kurdish assault on Raqqa would be unpopular inside Raqqa. As Hemo notes, this is not something the Kurds intend either. **End OE Watch Commentary (Kaya)**.

> *"In the first phase, Raqqa will be encircled from the north, east and west... Once we reach the Euphrates River in the first phase, then a second phase will be planned against the town center. From the experience gained at Manbij, where the operation lasted 73 days, we know the liberation of Raqqa's center will take time."* — *YPG General Commander*

Source: Fehim Tastekin, "Kürt perspektifinden Fırat'ın Gazabı (The Wrath of the Euphrates from a Kurdish perspective)," *Al Monitor.com*, 8 November 2016, http://www.al-monitor.com/pulse/tr/originals/2016/11/turkey-syria-euphrates-from-kurdish-perspective.html

"What are the conditions for the Kurds to participate in the Raqqa operation? What kind of an operation is planned? Who will govern Raqqa once the dust settles?

Al-Monitor asked these fundamental questions to the YPG General Commander Sipan Hemo. According to Hemo, Kurds are cooperating with the coalition in the Raqqa operation. He said, "Preparations have been going on for two months... In the first phase, Raqqa will be encircled from the north, east and west. This operation should not take long. Once we reach the Euphrates River in the first phase, then a second phase will be planned against the town center. From the experience gained at Manbij, where the operation lasted 73 days, we know the liberation of Raqqa's center will take time."

Hemo added, "The plan for the liberation and then administration of Raqqa will not be different from Manbij. Actually, the role of local forces will be more pronounced at Raqqa. The policy of assisting in the liberation of Arab-dominated areas and then handing over control to a local assembly won't change. The Raqqa Military Council is made up of exclusively of people from Raqqa. The Kurds have no goal of remaining in Raqqa. The Kurds will not come from Qamishli, Kobani and Hasakah to run Raqqa. There is no intention of having Raqqa join the Rojava Northern Syria Democratic Federation. The people of Raqqa will decide their future themselves."

...

When asked if they expect an offensive move from Turkey and what the Kurdish reaction would be if this happened, Hemo said: "We don't want to be seen provoking Turkey. We are at war against [IS] in our own country. This is not an anti-Turkey operation."

Source: "YPG withdraws forces from Manbij and heads for Raqqa," *Rudaw.net*, 16 November 2016, http://rudaw.net/english/middleeast/syria/16112016

The Kurdish People's Protection Units (YPG) announced on Wednesday that they have withdrawn their forces from the northern Syrian city of Manbij after enabling local forces to protect the city, adding that the withdrawn units will join the US-backed Syrian Democratic Forces (SDF) in the operation to retake the ISIS stronghold of Raqqa.

"We announce the withdrawal of our forces to east of the Euphrates to take part in the "the Wrath of the Euphrates" to liberate Raqqa." the YPG General Command said in a statement.

Source: Amberin Zaman, "US promises Turkey role in Raqqa in surprise Ankara meeting," *Al Monitor.com*, 7 November 2016, http://www.al-monitor.com/pulse/originals/2016/11/us-turkey-appease-kurdish-forces-sdf-raqqa-islamic-state.html#ixzz4QBSRwpzx

"Turkey continues to voice its opposition to the alliance because of the very close links between the SDF's Kurdish component, known as the People's Protection Units (YPG), and the Kurdistan Workers Party, the Kurdish rebel group that is fighting for Kurdish autonomy inside Turkey."

Iran to Take Police Training on the Road?

OE Watch Commentary: "Export of Revolution" is the raison d'être of the Islamic Republic of Iran according to Iran's constitution and the founding statutes of the Islamic Revolutionary Guard Corps (IRGC). Traditionally, it has been the elite Quds Force which has been the vanguard of revolutionary export. The Quds Force has trained militias and proxies in Lebanon, Iraq, and possibly in Yemen as well. The accompanying passage suggests that there may now be a new component and strategy to this mission.

"We have the necessary expertise to…conduct training [in] the field of police and security."

Law Enforcement Forces parade in the Western Iranian town of Asadabad.
Source: http://www.dana.ir/File/ImageThumb_0_608_458/431843

The Law Enforcement Forces (LEF)—essentially a police force which also takes on some paramilitary functions—is an important but under-discussed component of Iran's internal security. The comments in the excerpted article by the LEF commander Gen. Hossein Ashtari about the readiness of the LEF to train corollary groups "in countries where Iran has defense and security attaches" suggest that Iran is expanding its efforts to rebuild other countries in its own image. Training the police in Lebanon (where the pro-Hezbollah Michel Aoun's rise to the presidency confirms growing Iranian influence), Iraq, or Yemen would help Iran solidify control and influence in its new 'near abroad.'

Ashtari's export of LEF training —if it occurs— would suggest that the Qods Force and its proxies like Hezbollah will be the mechanisms by which Iran expands its influence; while the LEF becomes the strategy by which Iran establishes proxies to consolidate that influence.

In recent years, Iranian authorities have also discussed exporting the paramilitary Basij model to other countries. Should this come to pass, it would create an indoctrination and recruitment mechanism in schools, universities, and workplaces throughout Iranian-influenced countries including Iraq, Syria, and Lebanon. In December 2011, Ali Saidi, Supreme Leader Ali Khamenei's representative to the IRGC, gave religious justification to the push to expand the Basij beyond Iran's borders. "There is a need for 100 million Basijis in the region before the Imam of the Era can emerge," he said. That expansion of the Basij, however, appears to remain more in the realm of regime rhetoric than reality.
End OE Watch Commentary (Rubin)

Source: "Amadegi Iran Baraye Entighal-e Tejarbiyat-e Mamorit-haye Amniyati va Polisi beh Sayar Kashvarha (Iran ready to transfer experiences of police and security missions to other countries)," *Tasnim News*, 31 October 2016, www.tasnimnews.com/fa/news/1395/08/10/1227217/آمادگی-ایران-برای-انتقال-تجربیات-مامورت-های-امنیتی-و-پلیسی-به-سایر-کشورها

Iran Ready to Train Police and Security Abroad

Gen. Hossein Ashtari, commander of the Law Enforcement Forces, on the third day of the first joint conference of military attaches, defense representatives, and armed police of the Islamic Republic of Iran, with appreciation for the stakeholders at the conference, said, "This joint meeting is very good and will no doubt bring valuable results. Military attachés, representatives of the Islamic Republic of Iran are in different countries of the world and thank God that today our country is in an excellent position of security, and these dear ones are reflected in the capability and capacity of the country on an international level as well as in the experience and capacities of the countries in which they are present…."

Gen. Ahstari reiterated that "We also announced our readiness for all the countries where we have defense and security attaches to know that we have the necessary expertise to exchange experiences and conduct training [in] the field of police and security." He stated that, on security issues today, the Islamic Republic of Iran has the best possible conditions, and said, "These privileged positions have been achieved due to the blood of the martyrs, the policies of the supreme commander, and the jihadi spirit of our armed forces."

Iran: Use of Drones to Secure Mehran Border

OE Watch Commentary: Iran continues to press indigenous unmanned aerial vehicles (UAVs) into action. In the article excerpted here, a colonel in a provincial Islamic Revolutionary Guard Corps (IRGC) unit describes how they have used UAVs to secure Iran's Mehran border with Iraq during a yearly pilgrimage in which millions of Shi'ite Muslims travel to the city of Karbala in Iraq.

The Arba'in commemorations are a Shi'ite holiday marking the 40th day anniversary of Ashura, which is a commemoration of the death of the Prophet Mohammad's grandson Imam Hussein at Karbala in 680 AD. Pilgrim traffic has increased exponentially since the fall of Saddam Hussein's regime in Iraq. That local units now have their own UAVs and operate them routinely for surveillance—including security of large crowds—suggests that they have become well-integrated into the Iranian armed forces at a local level. It suggests that provincial IRGC units have specialized personnel to maintain and fly UAVs, in addition to the real time ability to monitor video feeds and identify threats and/or targets.

At the same time, the need to press UAVs into service for border surveillance is a reflection that Iran continues to worry about instability bleeding across its border from Iraq and the vulnerability of crowds to terrorist threats. **End OE Watch Commentary (Rubin)**

An IRGC UAV operating over Iran's mountainous border region.
Source: Mehr News Agency, https://goo.gl/Q4DeqT

Source: "Istifadeh az Pehpad Towsat Sepah baraye Tamim Amniyat Arba'in dar Morz-e Meran (The Use of Drones by the IRGC in order to Secure Arba'in along the Mehran Border)," *Mehr News Agency*, 3 November 2016, mehrnews.com/news/3814356/استفاده-از-پهپاد-توسط-سپاه-برای-تامین-امنیت-اربعین-در-مرز-مهران

The Use of Drones by the IRGC to Secure the Border

Col. Abdul Sahab Tahmasbi, in a conversation with the Mehr News Agency, said, the Ilam Province Amir al-Mu'minin Islamic Revolutionary Guard Corps (IRGC) unit has complete readiness to serve the pilgrims along the Mehran border and has mobilized all of its resources in the area. He said, the Amir al-Mu'minin IRGC unit of Ilam is ready to serve in different capacities for the security of the movement of 'Ashura pilgrims in the Mehran sector of the border'. Tahmasbi reported about the use of UAVs by the IRGC for the security of Arba'in along the Mehran border, and said they had prepared accommodation for 10,000 pilgrims and there had been a massive gathering along the international border at Mehran.

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HIZBALLAH THREAT TACTICS REPORT COMING SOON!

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Will Iraqi Kurds Fall Victim to Iran-Saudi Proxy War?

OE Watch Commentary: In recent years, the proxy war between Saudi Arabia and Iran has expanded from Syria to Yemen and perhaps Bahrain as well. In Syria, Saudi-backed opposition groups fight the Bashar al-Assad regime which Iran supports via its Islamic Revolutionary Guard Corps (IRGC), Basij 'volunteers,' and Lebanese Hezbollah. In Yemen, Saudi forces are involved in fighting the Houthis, whom the IRGC has trained and Iran has armed. In Bahrain, the government has intercepted alleged IRGC arms shipments to sectarian Shi'ite opposition groups.

Alas, the tension between Iran and Saudi Arabia may soon expand more forcibly into Iraqi Kurdistan according to the excerpted article in the *Islamic Student News Agency*. In a recent speech about events in Iran's neighborhood, General Yahya Safavi noted that Masoud Barzani, de facto president of Iraqi Kurdistan Region, has allowed the Saudi consulate to arm groups intent on operating against the Iranian regime; adding that Iran may cut off help to the Barzanis "if they enter these political games." This may be a reference to the ongoing Kurdish insurgency inside Iran or perhaps the Baluchi insurgency in southeastern Iran which Iranian authorities have long believed Saudi Arabia to be behind.

Alternately, Safavi—who commanded the IRGC for a decade until 2007 and now advises Supreme Leader Ali Khamenei—may simply be seeking to warn Barzani that Iran considers Iraqi Kurdistan to be part of its 'near abroad' and that Tehran will not tolerate the presence of competitors in the region. This could herald further insecurity for Iraqi Kurdistan, the region, and forces present in the region to which Iranian authorities are hostile. **End OE Watch Commentary (Rubin)**

"The Barzanis must know that they are indebted to Iran."

The Haj Omran border crossing between Iran and Iraqi Kurdistan
Source: Iraq Business News, http://goo.gl/4B9KXW

Source: "Ravabati Khubi ba Turkiye Darim Ama dar Mosaeli Siyasi ba Iran Raghabat Mikonad (We Have Good Relations with Turkey although it competes with Iran on political issues)," *Islamic Student News Agency*, 7 November 2016. www.isna.ir/news/95081711682/روابط-خوبی-با-ترکیه-داریم-اما-در-مسائل-سیاسی-با-ایران-رقابت

The senior military advisor to the Supreme Leader said, "The alliance of the Americans has so far failed to control the situation and the Syrian people have made good on their resistance." Gen. Safavi, with reference to the final stages of liberation of Aleppo, emphasized, "Presumably, they will move toward Syria, Iraq, Yemen, and Libya after the liberation of Mosul, and there will be tensions between [Masoud] Barzani and the Turks…."

Safavi noted, "Regarding the fact that [de facto Kurdish President] Masoud Barzani has allowed the Saudi consulate to give arms to anti-revolutionaries, the Barzanis must know that they are indebted to Iran." He added, "The Iraqi Kurds are Aryans and their roots are Iranian… They must know that if they enter these political games, it is unclear if Iran will help them anymore."

Transition in the Armed Forces of Kazakhstan - From Conscripts to Contract Soldiers by Matt Stein

Kazakhstan's Armed Forces have been working to modernize, reform and expand their capabilities since the state became independent in 1991. Much of the attention on this development has been on security cooperation with Russia, the United States and other partners, but there have also been internally driven efforts that could have just as significant an impact. One of these efforts over the past several years has been the increase in the number of professional contract soldiers in the Armed Forces, which is part of a plan to have contract soldiers make up 99 percent of the Armed Forces by the end 2016. While the result has yet to be announced, an examination of Kazakhstan's effort to have its Armed Forces made up of contract soldiers will show how this effort has been progressing and the impact this could have on the capabilities of the country's Armed Forces and on the Central Asian region.

http://fmso.leavenworth.army.mil/documents/Stein%20-%20Transition%20in%20the%20Armed%20Forces%20of%20Kazakhstan%20-%20From%20Conscripts%20to%20Contract%20Soldiers.pdf

Iraq's PMF Leverage Mosul Offensive

OE Watch Commentary: The ongoing Mosul offensive is likely to enhance the military and political influence of the Shi'a Popular Mobilization Forces (PMF) in Iraq. Prevented from entering the ISIS-held city for fears of sectarian backlash from its (predominantly Sunni) residents, the PMF are deployed to Mosul's south and west, purportedly to isolate the city from ISIS-held territory in Syria. Critics fear that the PMFs in fact seek to establish a secure land corridor linking Iran to Syria via Iraq. As the first accompanying article argues, this Iranian strategic goal helps explain the PMF's eagerness to move toward Tel Afar in late October, despite an alleged promise to refrain from doing so.

The PMF's legal status remains murky but appears headed toward greater institutionalization, thanks in part to the Mosul offensive. Several months ago, the Iraqi prime minister's office issued "Office Order 91." According to a PMF official cited in the second excerpt, this decree turns the PMF into a force resembling Iran's Revolutionary Guard, "a military force that is part of the Iraqi state, but not part of the Iraqi army." Office Order 91 has paved the way for a parliamentary bill to formally make the PMF a state entity. The bill was put forth for discussion concurrently with the Mosul offensive.

The PMF would certainly benefit from greater institutionalization, as would their backers in Iran. According to the third accompanying excerpt, strengthening the PMF entails substantial domestic risks including added financial burdens on the Iraqi state, growing warlordism in the political class, and subservience to Iranian foreign policy as the PMF would become "the Iranian regime's parallel army in Iraq." The institutionalization of the PMF would make them the guarantors of the political system enshrined in Iraq's 2005 constitution. This system virtually guarantees Shi'a dominance over the Iraqi state through a system of ethno-sectarian quotas. As the article notes, "Iraq's post-Mosul battles may well revolve around the legitimacy of this political order."
End OE Watch Commentary (Winter)

Above: Popular Mobilization Forces logo.
Source: https://upload.wikimedia.org/wikipedia/commons/0/03/Popular_Mobilization_Forces_Logo_Official_1.jpg
Right: Iraqi map with purported Iranian-controlled route highlighted.
Source: Author, based on http://www.lib.utexas.edu/maps/middle_east_and_asia/iraq_cia_2003.jpg

Source: سليماني يقود 23 ألف مقاتل لممر آمن إلى دمشق
"Suleimani Commands 23,000 Fighters for a Safe Corridor to Damascus," *al-Araby al-Jadid*, 31 October 2016. https://www.alaraby.co.uk/politics/2016/10/31/سليماني-يقود-23-ألف-مقاتل-لممر-آمن-إلى-دمشق

Taking Mosul isn't important to Tehran, quite the opposite in fact, as a delay or failure for the army and the international coalition in liberating Mosul means they will fully vacate Tel Afar... The 389-kilometer road is open and paved and it takes around five hours by car to go from the Iranian border with the city of Kalar in Diyala Province, to the Syria-Iraq border via Tel Afar. This is a shorter route that the former Anbar road which has been closed for three years...

Source: "What are Iraq's Popular Mobilization Units doing in Beirut?" *Al-Monitor*, 18 August 2016. www.al-monitor.com/pulse/originals/2016/08/lebanon-host-secret-meeting-iraq-pmus-western-diplomats.html

"We will be a military force that is part of the Iraqi state, but not part of the Iraqi army. This is due to many reasons that we explained to them, namely the corruption spread within the Iraqi government institutions, and I think they understood our point of view. We made it clear that we will be an alternative army subordinated to the state, just like Iran's [Islamic] Revolutionary Guard Corps."

Source: الحشد الشعبي... نحو مؤسسة رسمية في العراق
"The PMFs… Toward an Official Iraqi Institution," *Rawabet Center*, 11 November 2016. http://rawabetcenter.com/archives/34891

The draft law being proposed by the National Coalition (Shi'a) gives PMF fighters privileges like those granted to members of the Iraqi Ministry of Defense. These include relatively high wages vis-à-vis civilian institutions. The draft requires the government to arm the PMF, secure all of their logistical needs, and task them with liberating the provinces under ISIS control... the PMFs will increase Iraq's economic burden especially given that the Iraqi state has been in a crushing economic crisis for years. This will be accompanied by a security crisis, as the PMF's component units, even if incorporated into Iraqi state institutions, will continue receiving orders from party leaders rather than the government... The PMF will become the Iranian regime's parallel army in Iraq and will be that country's tool to intervene in Arab affairs and shake its stability... The dark tunnel Iraq is entering will not end with the end of ISIS, but rather this will mark the start of new sectarian battles, including related to the PMFs and the confirmation of sectarian quotas in ruling over Iraq.

Mecca and the Yemen-Saudi War's Expanding Scope

OE Watch Commentary: When Saudi Arabia began bombing Yemen in March 2015, many of Yemen's ballistic missile systems had been removed from their bases and scattered in caves and underground shelters in the mountains surrounding the capital Sana'a and in the northern province of Saada. The Yemeni arsenal included Scud-type missiles that were subsequently modified for extended range (800 km) and a heavier warhead (500 kg). In September 2016, Yemeni forces loyal to the Sana'a-based government run by deposed president Ali Abdullah Saleh and the Huthi Movement unveiled these modified missiles, calling them Burkan-1 (Volcano-1) and threatening to launch them toward the Saudi city of Jeddah.

As with the other ballistic missiles in possession of Saleh-Huthi forces, the Burkan-1 does not appear capable of penetrating Saudi Arabia's air defense systems. Nevertheless, even if they are neutralized on the battlefield, these "indigenously produced" (i.e. modified) missiles add great value to the Huthi-Saleh informational campaign, wherein every launch is described as a direct hit causing major damage. Put on the defensive, Saudi Arabian authorities are forced to refute these statements and make the case that every Yemeni missile targeting Saudi soil has in fact been successfully intercepted.

In late October, Huthi-Saleh forces claimed a Burkan-1 launch targeting an airbase near Jeddah. Saudi authorities countered that the missile's target was in fact the holy city of Mecca, around 60 kilometers east of Jeddah. As the first accompanying article notes, the Saudis also claimed that the missile had been launched from a mosque in Saada, where according to a "high level Yemeni source" young students were being trained on "how to storm Mecca's holy sites."

The Huthis were quick to brush off the accusation, as the second article shows. Yet for once, the Huthis were on the defensive about a missile launch. As the third excerpt notes, Saudi Arabian allies throughout the Sunni Muslim community were quick to issue condemnations of the attack, in a show of support undoubtedly greeted with pleasure in Riyadh. However, as the fourth accompanying article notes, bringing Mecca into discussions about the Yemen-Saudi war carries its own risks for the Saudi regime. The article's author, a former Yemeni ambassador opposed to the Huthis-Saleh alliance, argues that doing so distracts from the domestic factors fueling the Yemeni conflict. This makes it harder to defeat the Huthis in Yemen while at the same time inadvertently bolstering Iran's argument that a neutral body, rather than the Saudi ruling family, should take custody of Islam's holy sites.
End OE Watch Commentary (Winter)

"... you remove the Huthi rebellion from the narrow context of being a rebellion against the Yemeni people and place it in the broader context of a rebellion against the Islamic World ..."

Source: عسيري: الصاروخ الذي استهدف مكة أطلق من مسجد
"Asiri: The Missile Targeting Mecca Was Launched From a Mosque," *Al-Arabiya*, 29 October 2016. https://goo.gl/1mBLq0

The adviser in the Saudi Defense Ministry said that the ballistic missile that was shot down was launched from a mosque in Saada. Coalition aircraft destroyed the launcher... A high level Yemeni source said that Huthi militia leaders had recently begun to discuss what they called the "Raid of Mecca" in various military bases. Teachers in Huthi-controlled cities were starting to teach students of middle and high school how to storm Mecca's holy sites, while also encouraging students to drop their studies and fight jihad in the Huthi ranks, in order to bring the Kaaba back to Sana'a.

Source: بركان جدة .. العدو السعودي بانتظار الهدف القادم
"Jeddah Volcano… The Saudi Enemy Awaits the Next Target," *Al-Masira*, 31 October 2016. https://goo.gl/CvcS6F

The Saudi enemy cured its confusion with lies which once uncovered are yet another proof of the precision of the military and popular committees in terms of precision in hitting their target (King Abd al-Aziz Airbase). When the Saudi enemy claims that the missile targeted the holy city of Mecca, most of its allies, as well as the Arab League and others sought to disseminate this big lie.

Source: تنديد عربي وإسلامي واسع بإطلاق الحوثيين صاروخاً على مكة
"Broad Arabic and Islamic Condemnation of Huthis Launching Missile Toward Mecca," 28 October 2016. *Al-Arabiya*, https://goo.gl/uKpXAl

The wave of anger grew in the Islamic World after the Huthi militia targeted holy sites in the western part of Saudi Arabia with a ballistic missile that was intercepted by the Arab coalition's defenses and fell some tens of kilometers outside of Mecca. On Friday, the Gulf Cooperation Council and several countries condemned the Huthis missile launch…

Source: الحوثي لم يقصف مكة
"The Huthis did not Bomb Mecca," *Al-Tagheer*. 30 October 2016. http://www.al-tagheer.com/art34757.html

When the Huthis' adversary rushes to show that shooting a missile in the direction of Mecca equals targeting the holy site, you naively remove the war from its limited context and place it in a broader context, bringing out the sectarian and religious elements and characterizing the war as a sectarian religious conflict which requires Pakistan and Indonesia to support Mecca and gives Iran, Iraq's Shia, and Russia the right to support the Shia Huthi… By doing this you remove the Huthi rebellion from the narrow context of being a rebellion against the Yemeni people and place it in the broader context of a rebellion against the Islamic World… you push neutral Islamic countries to adopt a project to make Mecca a neutral Islamic city, administered by an Islamic organization, as is the case with the Vatican and Christians, and as sectarian Iran has called for.

Solar Power Growth in Yemen

OE Watch Commentary: Solar energy has emerged as a major growth industry in war-torn Yemen. As the accompanying articles discuss, solar power in Yemen meets needs created by the war, rather than being a deliberate plan for renewable energy. As such, demand for solar panels is expected to increase in the coming years. The market is driven by small-scale purchases, and lacks government planning and oversight. Defective and low-quality panels abound.

The majority of Yemenis live in villages, and rural electrification is estimated at around 20%. Yemen's largest power plant was subjected to repeated sabotage after opening in 2009. It went out of service in 2015. Since then, the country's city-dwellers have relied on smaller grids and private generators. Solar panels alone cannot meet the energy needs of city life, but they are filling gaps for urban households while also making electrification possible in otherwise dark rural areas.

An affordable solar panel may be of no use beyond providing basic lighting or charging portable electronic devices. Yet as the third accompanying article attests, the ability to reliably charge your phone is a priority for many. Landlines never reached much of rural Yemen, but cellphones are widespread, making the promise of solar energy all the more appealing. The fact that cellphone coverage can be spotty at best in remote areas may soon be rendered irrelevant by the global spread of wireless Internet connections.

Portable electronic devices have become basic tools for modern insurgencies. The ability to indefinitely charge cellphone or quadcopter batteries from dark hideouts, or to cheaply run global media centers from off-grid locations, will doubtless be exploited by future insurgencies. It should come as no surprise that major growth in the use of solar and other renewable forms of energy is also occurring in besieged population centers such as Gaza and rural Damascus. **End OE Watch Commentary (Winter)**

Source: الطاقة الشمسية تنير منازل اليمنيين في الحرب
"Solar Power Lights Yemeni Homes During War," *Al-Jazeera*, 21 February 2016. https://goo.gl/1TPTYB

According to Saddam al-Ahdal, an official at the Solar Power Expo in Sana'a, domestic expenditures in the solar power market totaled around 300 million dollars in 2014 and 2015. This is expected to rise to three billion dollars over the next four years, according to the Saba News Agency based in Sana'a and controlled by the Huthis.

Source: الطاقة المتجددة في اليمن بين الاحتياج والتنظيم
"Renewable Energy in Yemen Between Necessity and Regulation," *Yemen Press*, 17 October 2016. http://yemen-press.com/article12700.html

Usage is still on an individual level and electrical production is very limited. It has not yet reached the level of being a public service with clear mechanisms and specific power plants for distributing electricity. Solar power in Yemen meets needs created by the war, rather than being a deliberate plan based on the utility of renewable energy. The Yemeni market is open to the import of panels and solar energy systems haphazardly and without regulation…

Source: "In Electricity-Starved Yemen, it's Always a Race for Power," *The National*, 12 July 2014. http://www.thenational.ae/opinion/comment/in-electricity-starved-yemen-its-always-a-race-for-power

Securing electricity has become the single greatest concern for locals and the incredible hunger for electricity in Yemen makes you think that life revolves around the search for energy and little else…Before leaving home you have to make sure you have your electronic chargers with you – checking that you have makes you feel like a warrior who checks his weapons and ammunition before going to battle.

"… Solar power in Yemen meets needs created by the war, rather than being a deliberate plan based on the utility of renewable energy…"

Rural Yemen
Source: https://upload.wikimedia.org/wikipedia/commons/2/22/Yemen_landscape_05.jpg

Russia as Mali's New Counter-Terrorism Partner

OE Watch Commentary: Russia's strategy for its near abroad is to maintain its influence and limit any US, NATO or Western military influence.[1] In farther theaters such as West Africa, Russia has not reached out to militaries in the region since the Cold War era. However, that is changing. The excerpted French-language article from a Malian news site discusses a high-level Russian visit to Mali to support Mali's counter-terrorism operations. Mali is currently fighting a variety of militants, including ones aligned with al-Qaeda in the Islamic Maghreb (AQIM), and smaller factions loyal to the Islamic State and Iraq and Syria (ISIS). The country is seeking support from Russia through the provision of arms and training.

Malian interest in Russia is partially due to Mali's frustration over AQIM's continued increase in its areas of operations in the country, including targeting a major international hotel in Bamako last year, despite the ouster of AQIM from positions it occupied in northern Mali in 2013. Moreover, there is now a recognized ISIS faction under Abu Walid al-Sahrawi harassing Malian and Burkinabe border guards along their mutual border. This is all taking place despite a high-level of French and US support to the country, suggesting that Russia may be seen as an alternative ally that could bring different results.

From the Russian perspective, a counter-terrorism partnership with Mali is consistent with its effort to portray itself as a reliable counter-terrorism partner compared to the West. Given this effort, Russian arms deals and counter-terrorism trainings will likely increase in Africa. However, they will not come close to matching the depth of the longer-term relationships that countries like the US and France have built in recent years, anytime soon. **End OE Watch Commentary (Zenn)**

1 See, for example: http://www.e-ir.info/2013/06/17/assessing-russias-policy-toward-its-near-abroad/

"Russia is ready to help Mali fight against terrorism and to ensure its economic development ... We are following very closely all the events happening in Mali and around Mali."

Russian President Vladimir Putin has met with South African leader Jacob Zuma, while other high-level Russian officials have discussed arms deals in other countries, such as Mali.
Source: https://commons.wikimedia.org/wiki/File:Vladimir_Putin_and_Jacob_Zuma,_BRICS_summit_2015_02.jpg

Source: "Russia is ready to supply weapons to Mali to fight against terrorism and train Malian soldiers," *Maliactu.net*, 13 October 2016. http://maliactu.net/la-russie-prete-a-fournir-des-armes-au-mali-et-a-assurer-la-formation-des-militaires-maliens-communique-malien/

Russia is ready to supply weapons to Mali to fight against terrorism and train Malian soldiers. The announcement was made by Mikhail Bogdanov, Deputy Foreign Minister and Special Representative of Russian President Vladimir Putin for the Middle East and Africa, who are visiting Mali.

During a work session, the Malian and Russian parties have shown their willingness to strengthen bilateral cooperation.

Taking this opportunity, Mikhail Bogdanov has also reaffirmed "the commitment of Russia to the unity and territorial integrity of Mali." "Russia is ready to help Mali fight against terrorism and to ensure its economic development ... We are following very closely all the events happening in Mali and around Mali. As a member of the UN Security Council, Russia thinks that African problems must be solved by Africans," he said.

Militarily, Mr. Bogdanov said that for many years his country participates in the training of Malian military and that his visit to Mali will contribute to "the revitalization of the Malian military training."

The Nigerian Army's Morale Boost: A Fallen Soldier Gets Recognition

OE Watch Commentary: In Boko Haram's seven-year long violent conflict with Nigeria, the group has used social media, including Youtube and Twitter, to publicize its leaders and fighters, and extol them as martyrs. In contrast, there have been few publicized heroes among Nigerian soldiers. Most fallen soldiers have perished at the hands of Boko Haram, unnoticed by society or media. However, the excerpted article demonstrates that this may be changing: The Nigerian army, religious and political leaders, and the media are praising a fallen soldier as a hero.

The excerpted article for *Premium Times* discusses the death of Muhammed Abu-Ali, who was recently killed by Boko Haram in a battle in Mallam Fatori along Nigeria's border with Niger. Less than one year before his death, Abu-Ali had been promoted by the Chief of Army Staff for his performance in two battles in which the Nigerian army retook territory from Boko Haram in Baga and Gambarou. These victories served as a turning point for the army.

Abu-Ali comes from a prestigious family in Kogi State, which may be why extra attention has been paid to his death. Nonetheless, photos of his family and him in uniform are being spread on social media, commemorating his life. This is serving as a long overdue respect for not only Abu-Ali but other fallen soldiers. In addition, Abu-Ali's Muslim faith furthers the narrative that the fight against Boko Haram is not a Muslim-Christian one but one of Nigerians together against Boko Haram.

Yet, as the *Premium Times* article also describes, the optimism about military efforts coinciding with the praise of Abu-Ali is premature. Only weeks before Abu-Ali's death, 83 Nigerian soldiers were killed in an attack that the Nigerian military seemed to at first cover up. There are also complaints among soldiers of shortages in supplies. Moreover, there is concern about complacency in the army about recent successes, while Boko Haram is regrouping to reclaim the territories that Abu-Ali and other soldiers took from Boko Haram last year. **End OE Watch Commentary (Zenn)**

"The story of his death and valour has gripped the country, with many on social media directing their thoughts and prayers to his family."

Source: "Tributes pour in for slain Nigerian Army hero," *Premium Times*, 6 November 2016. http://www.premiumtimesng.com/news/top-news/214629-tributes-pour-slain-nigerian-army-hero.html

Tributes are pouring in for the Nigerian Army commander who lost his life in a Boko Haram attack. Muhammed Abu-Ali, a lieutenant colonel, was killed in a sundown ambush by Boko Haram as he was coordinating reinforcements to repel an ongoing gunbattle in Mallam Fatori — an insurgent stronghold on the northernmost tip of Borno State.

The tragedy came barely a year after Mr. Abu-Ali was promoted from a major to a lieutenant colonel by the Chief of Army Staff, Tukur Buratai, for the uncommon gallantry he brought to the battlefield. For several months preceding the recognition, Mr. Abu-Ali had been involved in audacious operations that ended in the liberation of several Northeast settlements previously held by Boko Haram. The story of his death and valour has gripped the country, with many on social media directing their thoughts and prayers to his family.

The military maintained that combat operations are gradually coming to an end and troops are only clearing the sect's remnants across the beleaguered region. But with high-profile attacks —such as the displacement of 83 combatants a fortnight ago and the latest that just claimed its bravest commander—occurring at frequent intervals in recent weeks, some analysts are sounding a note of skepticism.

Nigerian soldiers have succeeded in taking back territory from Boko Haram in recent months, but only recently are fallen soldiers receiving praise publicly.
Source: http://www.voanews.com/a/nigerian-military-some-officers-selling-arms-to-boko-haram/3493038.html

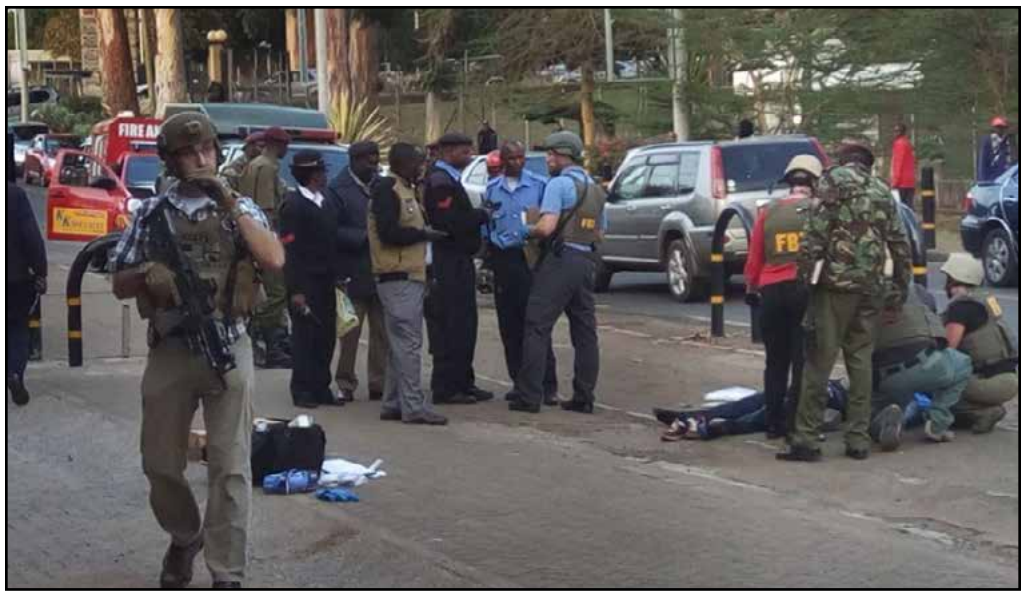
ISIS Stabbing at US Embassy in Kenya Generates Controversy

OE Watch Commentary: On 27 October, a man armed with a knife walked outside the visa section of the US Embassy in Nairobi, Kenya and attempted to stab a Kenyan guard. Immediately, the guard shot the armed man to death. The Islamic State of Iraq and Syria (ISIS) later claimed that the attacker was a "solder of the Islamic State", although ISIS did not provide any evidence of an operational connection to the attacker. Indeed, initial reports suggested the attacker was likely operating alone.

As the excerpted article from *All Africa* discusses, the killing of the attacker has received criticism from Kenyan politicians, including a governor in the largely Somali-Muslim populated northeast of the country, where the attacker is believed to come from. The governor criticized the guard for using lethal force in a situation where he believed there were other methods to subdue the attacker. Moreover, if the attacker remained alive after being subdued, then investigators could have learned about the attacker's motives and connections. The governor may also be subtly pandering to anti-American rhetoric by hinting that details about the incident are not being revealed as if it were a conspiracy.

Nonetheless, the attack in Nairobi could indicate a new trend of ISIS-inspired attacks on US interests in sub-Saharan African countries where so-called lone wolves who are inspired by ISIS seek to kill Americans wherever and whenever they can find them. These types of attacks are already becoming commonplace in Europe and Russia. With sub-Saharan Africa being ISIS's third most active region (after the Middle East and Europe), such attacks could also become regularized not only in Kenya but also in West Africa, which has two recognized ISIS affiliates (Boko Haram in Nigeria and Abu Walid al-Sahrawi's al-Murabitun, or Greater Sahara, Brigade in the Mali-Niger-Burkina Faso border region). In addition, as the article points out, perceptions of excessive force used by the US or Kenyan government on militants or suspects can be exploited as a recruiting tool for groups like al-Shabab. **End OE Watch Commentary (Zenn)**

"What kind of knife was it that it scared everyone to the point that they ended up shooting him. It is difficult for us to believe that indeed that boy was a terrorist."



The scene after a US embassy guard in Nairobi killed a man who attempted to stab the guard.
Source: http://www.voanews.com/a/islamic-state-claims-responsibililty-attack-outside-embassy-nairobi/3571393.html

Source: "Ahmed Abdullahi Faults Police for Killing U.S. Embassy Attacker," *All Africa*, 31 October 2016. http://allafrica.com/stories/201611010469.html

Wajir Governor Ahmed Abdullahi has called for investigation over last week's shooting of a terror suspect from his county outside US Embassy in Nairobi. The governor said the man, who allegedly knifed a officer, should have been disarmed and arrested to help with investigations into terrorism instead of being shot dead. "Police and the parties concerned should come clean and show the public what actually happened," he said during a fundraiser at Baraza Park in Wajir Town." What kind of knife was it that it scared everyone to the point that they ended up shooting him. It is difficult for us to believe that indeed that boy was a terrorist," he added.

The Islamic State has since claimed the attack that saw the US embassy remain closed, saying the attacker was following its instructions. Mr Abdullahi said unnecessary killings without investigation were driving more young people to join terror groups, especially the Somalia-based Al-Shabaab.

River Flotillas in Support of Defensive Ground Operations: The Soviet Experience

Lester W. Grau

In the history of warfare, ground and naval forces frequently have to cooperate. There are usually problems putting these two forces together since their missions, equipment, training, communications and mutual unfamiliarity get in the way. These problems are common during transport of ground force equipment and personnel aboard naval vessels, exacerbated during amphibious landings and assaults and very difficult when operating together along major rivers. This article analyzes the Soviet history of defensive river flotilla combat during the first period of the Great Patriotic War (World War II against Germany). It outlines missions, the operational environment, lessons learned, the command and control problems experienced between naval and ground forces and the challenges of conducting such operations.

http://fmso.leavenworth.army.mil/documents/River%20Flotillas%20in%20Support%20of%20Defensive%20Ground%20Operations%20The%20Soviet%20Experience.pdf

Bolivarians Not Losing Everywhere: Nicaragua

OE Watch Commentary: On 7 November, Nicaraguans experienced an 'election' that further solidified Daniel Ortega's hold on the chief executive position. The accompanying *Youtube* reference features the official verbal laydown of the statistical results (in Spanish). Daniel Ortega continues as President, with his wife Rosario Murillo as Vice President. It must be noted however, that Ortega's bolivarian Marxist-Leninist party controls all of the country's institutions including the election commission and the courts, which disqualified the only major opposition party. That move contributed immensely to the smooth functioning of the electoral process. The second accompanying reference is from before the elections, in July. The writer, Mr. Pedro Corzo, had no doubt about what the result would be even then. As the author implies, governing in Nicaragua is still a family affair. It should be noted that this particular family is a member of the region's Bolivarian family of anti-American totalitarian leftists. **End OE Watch Commentary (Demarest)**

"Nepotism in the Sandinista regime is not limited to the matrimony..."

Source: Videos Mundo, "Resultados ELECCIONES NICARAGUA 2016 Primer reporte (Results Nicaraguan Elections 2016 First Report)," Videos Mundo, *Youtube*, 10 November 2016. https://www.youtube.com/watch?v=2uppSbPC_Wc

"...overwhelming victory..."

Source: Pedro Corzo, "Nicaragua: Dos por el voto de uno (Nicaragua: two for one vote)," *Periodismo Sin Fronteras*, 14 July 2016. http://www.periodismosinfronteras.org/nicaragua-dos-por-el-voto-de-uno.html

"Nepotism in the Sandinista regime is not limited to the matrimony. A son, Laureano Ortega is presidential advisor for investments and the principal proponent of the construction of the debated [cross-Isthmian] canal with Chinese capital, another offspring, Rafael Ortega, administers the distribution of petroleum, his wife controls the distributor that manages many gas stations in the country, another son, Juan Carlos and his sister Camila control various communications media..."

Former Colombian President Uribe on FARC Proposal

OE Watch Commentary: Colombia seems to be at a crossroad. Years of power negotiations between the administration of Juan Manuel Santos and the FARC were finally laid bare in a 297-page document, labeled a peace accord, then put to a public up or down vote. The down vote prevailed. A prominent public face and one of the principal spokespersons opposed to the proposal was former President and current Senator Álvaro Uribe Vélez. Vélez had been relatively silent after the public rejection of the proposal, but gave a lengthy interview in early November to Spanish news and political celebrity Cayetana Álvarez de Toledo y Peralta-Ramos, 13TH Marchioness of Casa Fuerte. In that interview, Ms. Álvarez posed numerous incisive questions. The accompanying excerpts highlight a few of those questions and President Uribe's answers. The attitudes expressed in the course of the full interview seem likely to reset the direction of Colombian policy in the mid- if not near-term. **End OE Watch Commentary (Demarest)**

Source: Cayetana Álvarez de Toledo interview of Álvaro Uribe, "Álvaro Uribe: 'Llamaron paz a la democracia sometida' (Alvaro Uribe: 'They call submitted democracy, peace')," *El Mundo*, *Madrid*, 6 November 2016. http://www.elmundo.es/internacional/2016/11/06/581db89ce2704e6a658b4689.html

*"...**Álvarez:** How do you eliminate a war? **Uribe:** In Europe they think that Colombia has passed from the war of Uribe to the peace of Santos. That is false. During my term in office, Colombia gained immensely in security. If you wish, in peace. We did not seek the annihilation of guerrilla groups, but rather their dismantling. The agreement of Santos with the FARC on the other hand, generates impunity, strengthens the marxist-leninist model and does not combat drug trafficking. They are calling subjected democracy, peace....*

***Álvarez:** A democratic State can negotiate with a terrorist organization? **Uribe:** I never denied the possibility of negotiating. At the time they criticized me: 'you call them terrorists but you negotiate with them'. I responded: 'it is a process of dismantling the terrorist [organization]; one negotiates under certain immovable conditions that do not cause damage to democracy'. In my government an atypical submission of terrorism to justice was achieved....*

***Álvarez:** Atypical? **Uribe:** 35,000 paramilitaries were demobilized and 18,000 guerrillas. The foot soldiers did not go to jail. The leaders did, for periods of five to eight years. They were not conceded eligibility to participate in politics and the national agenda was not negotiated with them. It was a demobilization with judicial benefits in accordance with Colombian law....*

***Álvarez:** "To what do you attribute the absence of public support? [for Uribe's position opposed to the proposed accords] **Uribe:** The International community has committed many errors. It abandoned the Cuban people, submitted to six decades of dictatorship. For years no one said anything about the repression of the Venezuelan people. ...*

***Álvarez:** And Spain? It should be the voice of Iberoamerica. It has suffered terrorismo badly. Nevertheless, it accepted the elimination of the FARC from the European Union terrorist organizations list. It even approved of the idea of King Phillip himself attending at Cartagena [for the signing of the accords]. **Uribe:** About Cartagena, you would have to ask those who attended...It is evident that some people accept for others what they would never accept for themselves. I said to Spain: Why do you propose that we give to the FARC what you would never give to the ETA? They criticized me harshly for saying it. But the [logical] effect has come about: ETA has demanded of Spain the same deal that Santos proposes to bestow on the FARC. A bad example propagates. There are no moral borders. Condescension to terrorism in one place on the map strengthens terrorism all over the map...."*

Colombia's President Tries Again

OE Watch Commentary: On 2 October Colombians held a plebiscite in which they could vote YES or NO to a 297-page accord the administration of Colombian President Juan Manuel Santos and leaders of the FARC had signed after years of negotiations. The language of the proposition, the voting procedure and the vast bulk of propaganda all favored approval. Nevertheless, the NO vote won. The accord, supposedly, was dead and was to be re-negotiated completely. Barely a month later, and after 'nine days of intense meetings,' the President signed a new accord, now 310 pages. Some say the new work produced cosmetic changes and kept what the NO voters voted against. Promoters of the pact say it incorporates suggestions made by the NO people. This time, however, President Santos saw to it that there would be no plebiscite, but that the legislature (which his party controls) would decide the agreement's fate instead. As the accompanying passages express, many Colombians are upset. They are quite aware of everything going on in neighboring Venezuela, to include the recent, derisive slap-down of the opposition by the socialist regime there. (see next article, "*Is Venezuela's Resistance Falling Apart?*") A sense of disempowerment and insult may be taking over Colombian public perceptions and attitudes, which may in turn create dangerous volatility. Look for Colombia to erupt if any more of its public opines that their president has moved arrogantly to satisfy the FARC and please the Nobel Prize committee at the expense of the clearly expressed public will. **End OE Watch Commentary (Demarest)**

"...nine days of intense meetings in the Cuban capital..."

Source: Eduardo MacKenzie, "¿Un nuevo acuerdo de paz? (A new peace agreement?)," *CONtextoganadero*, 15 November 2016. http://www.contextoganadero.com/columna/un-nuevo-acuerdo-de-paz

"It is not hard to see that this long dry text is the former pact of 297 pages rejected by the electorate in the plebiscite of 2 October, 2016, with some insignificant additions. The new document conserves the former structure and includes almost the totality of the themes, points and sub-points that were rejected by the Colombians."

Source: Radio RCN and EFE, "Gobierno y Farc firmaron nuevo acuerdo de paz con propuestas de promotores del No (Government and FARC sign new peace accord with suggestions from promoters of the No)," *RCN and EFE*, 13 November 2016. http://www.rcnradio.com/nacional/firman-en-cuba-nuevo-acuerdo-de-paz-con-propuestas-de-promotores-del-no/

"The new document was signed by the chief negotiators of the Administration, Humberto de la Calle, and the guerrilla, Iván Márquez (alias of Luciano Arango), who have headed nine days of intense meetings in the Cuban capital in order to reach a new consensus with the goal of 'reaching a stable and durable peace'. Also, the negotiators invite 'all of Colombia and the international community, always together in the search for reconciliation, to accompany and endorse' the new pact 'and its prompt implementation in order to leave in the past the tragedy of war... peace will wait no longer'."

Is Venezuela's Resistance Falling Apart?

OE Watch Commentary: Organized opposition to the Bolivarian socialist regime of Nicolás Maduro was never homogenous nor did it enjoy a consolidated leadership. Just at the point of a massive demonstration in early November that some thought might be a breaking point, Maduro managed to persuade a group of putative opposition leaders to enter into a dialog. The result of that dialog was a near total capitulation on the part of the opposition representatives. It seemed as if Maduro had taken all the starch and initiative out of the protest movement, at least temporarily. The accompanying passages discuss the population's frustration with the opposition.

The regime made some insignificant concessions while reiterating and emphasizing that the socialist revolution would continue, deepen, and that there would be no elections until December 2018 as normally scheduled — that there would in no case be a recall election. Furthermore, the state of emergency that gave the executive sweeping dictatorial powers was extended. The results from the dialog also seem to have broken popular support for the umbrella organization, the MUD, which had cobbled together a majority in the national legislature. It may be that more active and committed leaders take the reins of the resistance movement, but it is yet to be seen if they will be effective in mounting further demonstrations, or if the Bolivarians will have successfully, terminally repressed the movement. **End OE Watch Commentary (Demarest)**

Source: "Maduradas, ¡PICA Y SE EXTIENDE! Las duras palabras de Fabiola Colmenarez: Es hora de SUPERAR a la MUD ([She] Bites and Then Lays It Open! The tough words of Fabiola Colmenarez: The time has come to move beyond the MUD)," *Maduradas*, 13 November 2016. http://www.maduradas.com/pica-y-se-extiende-las-duras-palabras-de-fabiola-colmenarez-es-hora-de-superar-a-la-mud/

"The leader of the Voluntad Popular [Popular Will] party, Fabiola Colmenarez, expressed herself after the announcement of the accords between the government and opposition, asserting that the time had come to "move past" the Mesa de la Unidad Democrática [Table of Democratic Unity, the legislative umbrella organization of opposing parties], which in her judgement does not represent the feelings of Venezuelans who hope for a change in the leadership of the country."

Source: Javier Antonio Vivas Santana, "El diálogo se ha prostituido: La explosión social será inevitable (The dialog turned prostitute: Social explosión is inevitable)," *Apporea*, 13 November 2016. http://www.aporrea.org/actualidad/a237071.html

"The population is frustrated. No relationship exists between the dialog that the cupola of Maduro supporters and the self-styled Table of Democratic Unity (MUD), with the needs of the people. The recent 'accord' signed by the leadership bastards who monopolize the political discourse of the country is not even close to the demands of a people in the street."

Mexican Military Industry to Produce Rockets and Aircraft

OE Watch Commentary: The Mexican military industry has been producing its own weapons and ammunition since 1916 but also imports some equipment to meet demand. However, according to Mexican Army General Fausto Lozano Espinosa, this may change by 2020. The accompanying passages discuss Mexico's efforts to cut costs, become more self-sufficient in military technology, and potentially even become an exporter of such technology.

As noted in the first piece, Espinosa claims that the Army and Air Force plan to use the domestically produced "FX" line to include the FX-05 which is an assault rifle that is currently used by Mexican Special Forces. This line was originally produced in 2006 to replace the Heckler and Koch G3 and G36 in an effort to modernize Mexico's military and now represents a solution to further cut costs and stimulate the national economy.

In addition to producing their own weapons and ammunition, Mexico is also looking to domestically produce rocket launchers and aircraft which represents a new endeavor. Initially, Mexico plans to build training aircraft for the Air Force Academy, but within the next 20 years, hopes to possess the capacity to build fighter jets. The first prototypes would ideally be available by the end of 2016. When questioned about the possible exportation of new military equipment, General Fausto Lozano Espinosa indicates that he does not see why Mexico would not explore this option given that the country is already involved in exporting weapons and military vehicles. **End OE Watch Commentary (Fiegel)**

"...if we purchase this weapon from external suppliers our total cost would range from 460-960 million Pesos, but by producing domestically we create our own line of firearms and stimulate our own economy all while saving money."

Source: "La industria militar de México se lanza a construir aviones de adiestramiento (Mexican Military Industry to Produce Training Aircraft)," *La Jornada*, 10 October 2016. http://lajornadasanluis.com.mx/ultimas-publicaciones/la-industria-militar-mexico-se-lanza-construir-aviones-adiestramiento/

"The FX assault rifle, which will be used to replace the G3, costs approximately 10,000 Mexican Pesos to produce. Producing this weapon abroad would cost 30,000-40,000 Pesos. Mexican Army General Fausto Lozano Espinosa further indicated that the Mexican military has 230,000 soldiers and stated the following regarding domestic versus foreign production "if we purchase this weapon from external suppliers our total cost would range from 460-960 million Pesos, but by producing domestically we create our own line of firearms and stimulate our own economy all while saving money."

Source: "Industria militar. De hacer balas a construir aviones. (Military Industry. From Ammunition to Aircraft Production.)," *El Universal*, 14 September 2016. http://www.eluniversal.com.mx/articulo/nacion/seguridad/2016/09/14/industria-militar-de-hacer-balas-construir-aviones

"When questioned about the possibility of exporting military equipment, Lozano Espinosa responded: "I believe there is a market and there are no barriers in place that would impede exportation. The military industry has sectors responsible for importing and exporting weapons and vehicles. That means it is a legally viable option and a route we are exploring for the future."

FX-05 assault rifle..
Source: https://upload.wikimedia.org/wikipedia/commons/3/34/FX-05_Cutaway.jpg

More than Half of the Mexican Military Devoted to War on Drugs

OE Watch Commentary: Mexican deployment of troops to fight organized crime in national territory is a contentious topic in Mexico and abroad. Soldiers have been accused of multiple human rights abuses including excessive use of force, extrajudicial killings, torture, and disappearances. The accompanying passages discuss the controversial use of the armed forces for internal security risks.

The first passages points out that even top Mexican military commanders argue that the war on drugs should have never been left to soldiers. It quotes the National Defense Secretary as saying that "sending soldiers prepared for war to confront criminals with no military training has caused serious problems." Ironically and despite widespread arguments regarding this activity in Mexico, there are more soldiers on the streets than ever. Why?

Mexico initially began using soldiers to fight the war on drugs during the Felipe Calderon administration in 2006 for at least two separate reasons. First, the country saw drug cartels as a challenge to the authority of state because these organizations were capable of infiltrating state and local governments, intimidating officials, and even creating their own shadow governments in certain areas of Mexico. Second, Mexican law enforcement agencies were incapable of fighting organized crime groups and in 2006, the military was seen as the best alternative to get the country back under control while police forces were vetted for corruption and re-trained. For these reasons, troops became the front line defense against organized crime during the Calderon administration, as the second passage points out.

Moving forward to the Enrique Pena Nieto administration in 2012, there were grand hopes that troop involvement in domestic issues would come to an end with the creation of a national gendarmerie but this organization is still not ready to stand on its own. This means that the military is still conducting police activities and at present, as the second source notes, more than 50% of Mexico's armed forces are fighting the war on drugs. In an attempt to curb military involvement in what should be police duties, Mexican senators have proposed an initiative to regulate deployment of Armed Forces in country. The third pieces discusses this initiative. Although it is still a work in progress, it indicates Mexico's desire to get troops off the streets and back to focusing on external security threats. **End OE Watch Commentary (Fiegel)**

Mexican troops operating at a random checkpoint.
Source: https://commons.wikimedia.org/wiki/File:Mexican_troops_operating_at_a_random_checkpoint_2009.jpg

Source: "General Cienfuegos: El Ejercito debe salir de las calles; fue un error entrar en esa Guerra (General Cienfueges: It Was a Mistake to Use Military in Drug War." *Sin Embargo*, 16 March 2016. http://www.sinembargo.mx/16-03-2016/1636596

Mexico's National Defense Secretariat (Sedena), General Salvador Cienfuegos Zepeda, said it was wrong for the Mexican military to "enter fully into combat against drug traffickers," which, he said, left the military with "a problem that is not ours." Cienfuegos said that sending "soldiers prepared for war" to confront criminals with no military training has caused "serious problems," and admitted that tactics such as day time raids have left the civilian population at risk. The general added he believes the army should not be deployed in the streets for the purpose of combatting crime as they are not prepared for the role.

Source: "Contra narco, 50% de milicia; actuaron más de 133 mil activos entre 2015 y 2016 (Half of Mexican Army Devoted to War on Drugs)." *Excelsior*, 17 September 2016 http://www.excelsior.com.mx/nacional/2016/09/17/1117381

Accountability Reports released by SEDENA indicate 45,085 soldiers participated in the fight against drug trafficking during 2007. In 2008, it was reduced to 45,000, in 2009, it rose to 48,750, and in 2010 it rose to 70,864. Finally, in 2011, the last year recorded in the report, the number reached 96,261, so from 2006 to 2016, the participation of soldiers in the fight against organized crime has increased to 77,382 (36.8 percent).

Data from SEDENA indicates the military has 213,477 active members. Of these, 52,194 members (24.44 percent) on average, are permanently positioned and perform internal security duties. During the period from September 2015 to July 2016, 122,046 soldiers (which represents 57.3% of the force) performed activities that included actions against drug trafficking.

Source: "PAN propone iniciative para regular uso de fuerzas armadas en el pais (Mexican Senators Propose Bill to Regulate Depolyment of Armed Forces vs. Crime)." *El Politico*, 20 October 2016. http://www.politico.mx/minuta-politica/item/18163-pan-propone-iniciativa-para-regular-uso-de-fuerzas-armadas-en-el-pais

The proposal aims to regulate the power of the federal executive branch to deploy armed forces for internal security tasks. It also proposes the construction of a collegial body that would be responsible for establishing programs, strategies, and lines of action for the deployment of federal armed forces.

Brazilian Air Force Commander Announces Eventual Personnel Cuts, Larger Investment in Technology

OE Watch Commentary: In late September, the Brazilian Air Force announced a plan to reduce staffing by 25 percent over the next 20 years in response to the government's severe fiscal crisis. The accompanying passages discuss the Brazilian Air Force's plans to streamline and modernize itself.

In the first passage discusses, Brazilian Air-Lt. Brig. Nivaldo Luiz Rossato says that the initiative has been developed over the course of several years with an eye toward modernization and optimization. Under the current budget, the Air Force receives the equivalent of 0.41 percent of Brazil's gross domestic product and roughly 70 percent of those resources go toward personnel costs which according to Rossato, limits the scope for investment.

Initial plans to cut personnel involve replacing retiring service members with contractors who will be offered eight-year contracts. With money saved from these cuts, Rossato indicates that the Air Force hopes to revive Brazil's space program and expedite production of the KC 390 military cargo plane; both of which seem realistic. In fact, Brazil is in a great position to expand its space program for at least two separate reasons. First, because the National Institute for Space Research runs a world-class satellite-testing facility in São José dos Campos which is located 62 miles from São Paulo. Second, because Brazil's Alcântara spaceport in the northeastern state of Maranhão is considered to be one of the best spots in the world to launch satellites into orbit as it sits on the equator and takes full advantage of Earth's spin.

As the second passage notes, Brazil is behind on payments to Embraer for the KC 390, but hopes that personnel cuts will free up funds to continue production. These aircraft were initially due to be ready in 2016 but as of now, this date has been pushed to 2018 because of current budget constraints.
End OE Watch Commentary (Fiegel)

"If you spend more on technology and focus on modernization and optimization, you can have fewer people" and still be able "to ensure the fulfillment" of the air force's mission..."

Source: "Força Aérea Brasileira irá reduzir pessoal devido a cortes no orçamento (Brazil's Air Force to Downsize amid Budget Woes)," *Info Defensa*, 5 August 2016, http://www.infodefensa.com/latam/2016/08/05/noticia-cortes-orcamentarios-deixam-forca-aerea-brasileira.html

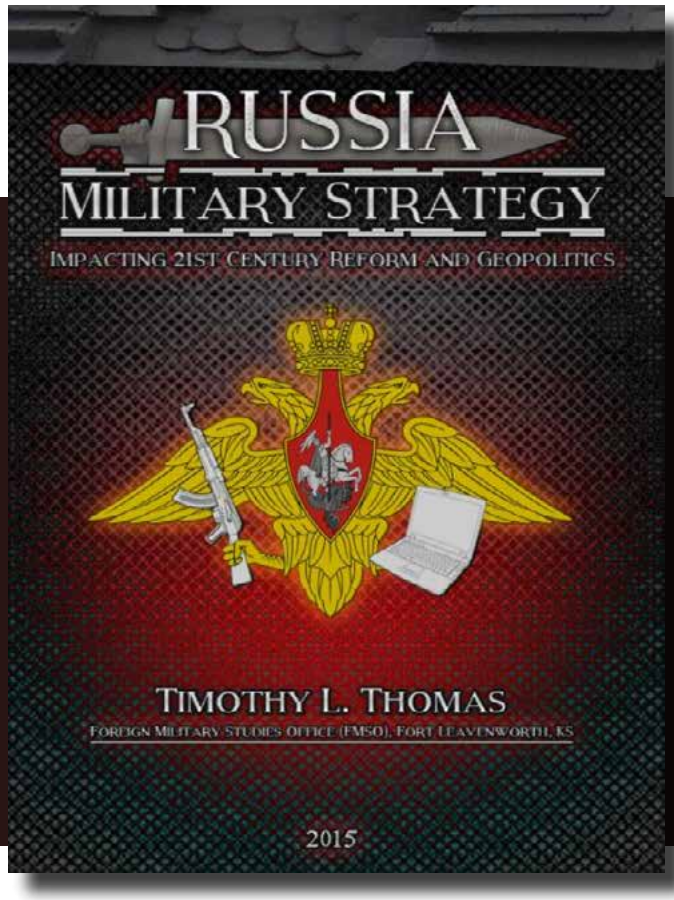
"If you spend more on technology and focus on modernization and optimization, you can have fewer people" and still be able "to ensure the fulfillment" of the air force's mission to monitor the airspace over the giant South American nation and its territorial waters, according to Brazilian Air-Lt. Brig. Nivaldo Luiz Rossato."

Source: "Brazil's Embraer Delays Cargo Jet, Loses Revenue on Defense Cuts." *Reuters*, 30 July 2015. http://www.reuters.com/article/embraer-results-guidance-idUSL1N10A0R320150730

"Brazilian planemaker Embraer SA said it will delay development of a military cargo jet and forgo $300 million of revenue this year due to Brazil's weaker currency and defense spending cuts, triggering the biggest drop in its shares in nearly four years. Embraer now plans to deliver its first KC-390 cargo aircraft to the Brazilian Air Force in the first half of 2018 rather than the end of 2016, the company said in its quarterly earnings report."

For the past ten years, as Prime Minister and President, Vladimir Putin has led an extensive reorganization and reequipping of his country's armed forces. Further, he has taken several opportunities to reclaim Russian territory that was taken, from his perspective, illegally. This book describes Putin and the military's use of various strategic concepts, the Defense Ministry's new equipment and reform initiatives, and Putin's geopolitical quest for influence in the Arctic and Ukraine. Included in the discussion are some of the unintended consequences of his actions (negative world opinion, sanctions, NATO responses, etc.).

http://fmso.leavenworth.army.mil/E-Pubs/Epubs/Thomas_Russian%20Military%20Strategy_Final_(2%20May%202016).pdf



Experts Warn of Guns for Food Trade with Venezuela

OE Watch Commentary: Venezuelans and Trinidadians are bartering on the high seas, selling and/or exchanging arms and ammunition for food, and basic commodities. These trades are also being reported to take place at some of Trinidad and Tobago's remote coastal ports. This is significant because it is being fueled by Venezuela's food shortage which has no end in sight. Thus, authorities fear that continued shortages will exacerbate illegal weapon bartering. As the accompanying passage discusses, these fears appear to be warranted.

As the piece discusses, police are reporting significant seizure increases in both illegal weapons and ammunition. Weapons are most commonly sold to Trinidadians by soldiers and military commanders who have access to Venezuela's ample supply of Chinese AK-47s, Russian AK-103s and Dragunov sniper rifles. Once in Trinidad and Tobago, they are used by criminal groups dedicated to drug trafficking and other criminal activities. In some cases, weapons are traded for items as basic as a roll of toilet paper and a few loaves of bread. The piece also notes comments by firearms weapons specialist Paul-Daniel Nahous, who compares the current situation in Venezuela to that of the Soviet Union when it dissolved and former states such as Ukraine broke away in 1991; in the sense that many government issued weapons were sold on the black market by military personnel there too. **End OE Watch Commentary (Fiegel)**

"... guns and ammunition smuggled into Trinidad and Tobago from the South Western peninsula is not a recent phenomenon, but there is fear that Venezuela's grave food shortage could further perpetuate this type of activity."

Source: "Experts warn of guns for food trade with Venezuela," *The Guardian (Trinidad and Tobago)*, 29 May 2016. http://www.guardian.co.tt/news/2016-05-29/experts-warn-guns-food-trade-venezuela

"According to security experts, guns and ammunition smuggled into Trinidad and Tobago from the South Western peninsula is not a recent phenomenon, but there is fear that Venezuela's grave food shortage could further perpetuate this type of activity. Seizure statistics support this concern as Trinidadian authorities cited a 32% increase in the seizure of illegal guns and a 153.6% increase in the recovery of illegal ammunition. From January 1 to September this year, 545 illegal guns and 16,671 rounds of illegal ammunition were seized compared to 450 illegal guns and 6,575 rounds of ammunition for the same period last year."

"Certified police sniper and firearms weapon specialist Paul-Daniel Nahous, said what is occurring in Venezuela is similar to what happened to the former Soviet Union when it dissolved and former states such as Ukraine broke away in 1991. Some of the former Soviet Union weapons were sold off legally, but many slipped through the cracks and onto the black market. Some military commanders sold off entire military installations and poorly paid soldiers "lost" their weapons selling them also."

China's cyber policy has become partly visible to foreign nations through observation, tracking, and inference. The policy appears to have three vectors. These three aspects—peace activist, espionage activist, and attack planner—dominate China's cyber policy. Some are always hidden from view while others are demonstrated daily. Three Faces of the Cyber Dragon is divided into sections that coincide with these vectors.

http://fmso.leavenworth.army.mil/E-Pubs/Epubs/3Faces%20of%20the%20Dragon.pdf

China's Challenges in the Defense Trade Industry

OE Watch Commentary: The recent biennial Airshow China expo in Zhuhai, which kicked off on 1 November, attracted the attention of the international media. The primary focus of interest has been on the first public demonstration of China's new Stealth J-20 aircraft, designed by the Aviation Industry Corporation of China. Despite this attention, China still faces a number of hurdles in the defense trade industry. The accompanying passage discusses the challenges that China faces in gaining an advantage in international weapons sales, due to quality issues and competition.

The world has been taking note as China continues its economic growth (albeit that growth has somewhat slowed) and the rapid modernization of its military. However, as the passage notes, the global perception of the Chinese defense industry is less than adequate. Some of the perceptions are due to malfunctioning systems or defective weapon designs. Additionally, China lacks extra services, such as training and the maintenance of equipment and arms. Some countries also lack political trust in China.

Chinese scholars and analysts are quick to defend the country's reputation by pointing out that human factors and weather play a key role during operations as to whether or not a target is hit. The article cites a number of examples demonstrating other countries' past system failures.

Trade is a key element of China's growing economic might. Should China be able to improve the reliability of its military technologies, it will increase the capabilities and prestige of its defense economy. The biennial Airshow at Zhuhai is an ideal way to help in its "marketing" efforts. **End OE Watch Commentary (Hurst)**

"... Chinese manufacturers are still struggling to build brands in an international market dominated by competitors from the United States and Russia."

Source: Minnie Chan, "China Battles Fierce Competition and Quality Issues in Fight for Weapons Sales," *South China Morning Post*, 31 October 2016, http://www.scmp.com/news/china/diplomacy-defence/article/2039880/china-battles-fierce-competition-and-quality-issues

More than 900 Chinese weapons will be on display, according to the organizer of the six-day show, which will feature more than 700 exhibitors from more than 42 countries and regions – with more than 400 exhibitors from China alone.

... Chinese manufacturers are still struggling to build brands in an international market dominated by competitors from the United States and Russia.

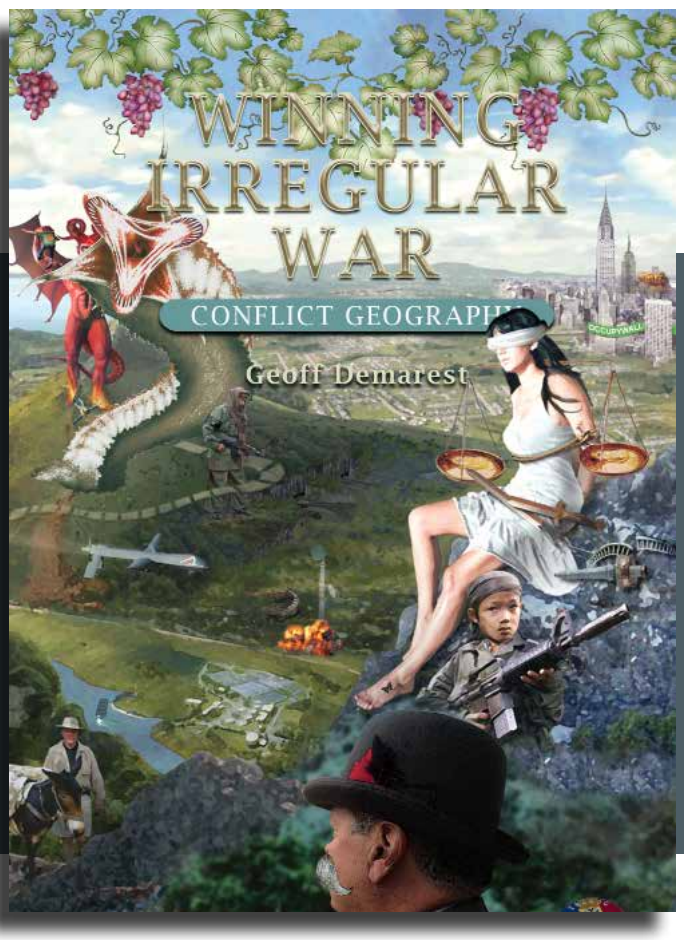
At September's Africa Aerospace and Defence air show in Pretoria, South Africa, Chinese exhibitors struggled to find buyers even though Beijing tried hard to secure sales of its L-15 Falcon trainer and JF-17 fighter, Andrei Chang, the founder of military magazine Kanwa Asian Defence, told the South China Morning Post.

IHS Jane's reported that two C-705 missiles failed to hit their targets after being fired from two of the Indonesian navy's KCR-40-class missile attack craft during the large-scale Armada Jaya 2016 exercise in the Java Sea on September 14.

"When a missile is fired, human factors play the key role during the intermediate operations to decide whether it will hit its designated target, including a series of reference data such as what altitude it needs to ascend to in the first stage and when it needs to turn."

Zhou said the capabilities of the C-705 missile and the shorter-range C-701 and C-704 models had been proven in recent attacks by Iranian-backed Houthi rebels in Yemen on United Arab Emirates vessels that were part of a Saudi Arabian-backed coalition supporting the Yemeni government.

"I do not think that China has built its brand in the field of global weapon exports ... but in recent years, China has been paying a lot of attention on research and innovation," he said.



Geoff Demarest's *Winning Irregular War* is about a broader set of conflicts than just 'insurgency.' In its 144 sections, Geoff Demarest raises new and overlooked concepts related to modern conflict in a provocative manner designed to stir up debate and critical thinking. As Geoff Demarest puts it: "I hope that some of the ideas in it will be contagious."

http://fmso.leavenworth.army.mil/E-Pubs/Epubs/WIrW_2015.pdf

Thai Military Bearing Down on Social Media

OE Watch Commentary: The Thai military has been clamping down on social media in the country since the death of King Bhumibol Adulyadej on 13 October. The accompanying passages discuss restrictions to the freedom of speech and expression in the country, through increased monitoring of social media content.

According to the first article, on 1 November, nearly three weeks after the death of the king, General Chalermchai Sitthisart, the army chief, announced the opening of a newly updated cyber center, under the command of Major General Ritthee Intrawuth, to monitor social media for "Lèse Majesté" (insulting the monarch) content and to protect itself from cyber-attacks. Through its transition, Thailand's Military Technology Center was renamed Army Cyber Centre. Along with maintaining a vigilant eye for cyber-attacks and cracking down on "Lèse Majesté" content, the cyber center is also expected to play a bigger role in disseminating information of its own to prevent further "disinformation" from being spread.

The second article describes another example of clamping down on communications. According to the article, the country's telecoms regulator, National Broadcasting and Telecommunications Commission, is now encouraging citizens to report any "inappropriate comments." An example of a violation, according to the article, could be as trivial as someone simply writing "Yes" in response to a Facebook post that criticized the monarchy. In particular, comments posted to Facebook, YouTube, and Line, which is a global messenger application should be reported. The article argues that the new effort is likely related to Thailand's strict "Lèse Majesté" laws. As the passage notes, this refers specifically to article 112 of the Thai Criminal Code, which makes it illegal for anyone to express negative views about the country's royal family. **End OE Watch Commentary (Hurst)**

"People needed to be trained to show more discretion before forwarding messages on social media… These included messages with content that may be deemed "Lèse Majesté" in violation of Section 112 of the Criminal Code… Therefore, the Army Cyber Centre would monitor for the dissemination of "Lèse Majesté" content on the social media and take action against those responsible…"

Various social media brands.
Source: https://commons.wikimedia.org/wiki/File:Socialmedia-pm.png

Source: "Army Tightens Monitoring of Social Media," *Bangkok Post*, 1 November 2016, http://www.bangkokpost.com/news/security/1124460/army-tightens-monitoring-of-social-media.

Gen Chalermchai [Sitthisart] said the army attaches importance to boosting security against cyber-attack. The establishment of the Army Cyber Centre was part of the modernization of the army and other military commands.

The cyber centre will also play an important role in information dissemination, he added.

Cyber attacks were now a threat to national security, particularly the dissemination of misinformation through modern technologies that were being continually improved upon.

People needed to be trained to show more discretion before forwarding messages on social media… These included messages with content that may be deemed "Lèse Majesté" in violation of Section 112 of the Criminal Code… Therefore, the Army Cyber Centre would monitor for the dissemination of "Lèse Majesté" content on the social media and take action against those responsible…

Source: Michael Tegos, "Thailand's Telecom Regulator Encourages Facebook Users to Spy Each Another," *Chiangrai Times*, 7 November, 2016, http://www.chiangraitimes.com/thailands-telecom-regulator-encourages-facebook-users-to-spy-each-another.html

Thailand's National Broadcasting and Telecommunications Commission (NBTC), the country's telecoms regulator is …asking for people to "collaborate to suppress inappropriate messages," without really defining what these are. It includes instructions on how to report them using each platform's tools and then contact the NBTC.

While not explicitly mentioned, it's likely this is related to Thailand's strict "lèse majesté" laws. Specifically, article 112 of the Thai Criminal Code makes it illegal for anyone to express negative views about the country's royal family. If you're wondering how extensive this is, in August a woman was charged under article 112 for replying "yes" to a Facebook post that criticized the monarchy.

Indonesia Expected to Focus on Nuclear Power to Achieve Energy Security

OE Watch Commentary: Concerned about its future energy security, Indonesia is focusing on nuclear power to supplement its current energy portfolio. These efforts include turning to China, Russia, and France for nuclear development technology. China has the fastest growing nuclear power program; Russia leads the world in nuclear reactor exports; and France gets about three-quarters of its power from nuclear power. The following two excerpted articles offer a good overview of the country's energy challenge and how the government is trying to secure its future energy security.

According to the articles, Indonesia's energy portfolio consists of only five to seven percent new and renewable energy sources. It must increase that amount to 23 percent in order to achieve its stated goal of reducing greenhouse gas emissions 30 percent by 2025, and nuclear energy is considered a way to achieve that goal.

One potential hurdle for Indonesia is its current government regulations, which consider nuclear energy to be the country's last option for renewable energy because the country reportedly is believed to already have some 74,000 tons (probably referring to reserves). Officials are therefore seeking to change the law to allow more nuclear powered reactors to come online in the future. Also worth noting is that Indonesia is projecting that it must develop 115-gigawatt power plants by 2025 in order to meet its power demands. Currently, however, it can only fulfill about 52-53 gigawatts. **End OE Watch Commentary (Hurst)**

"Indonesia needs new and renewable energy sources to meet long-term demands."

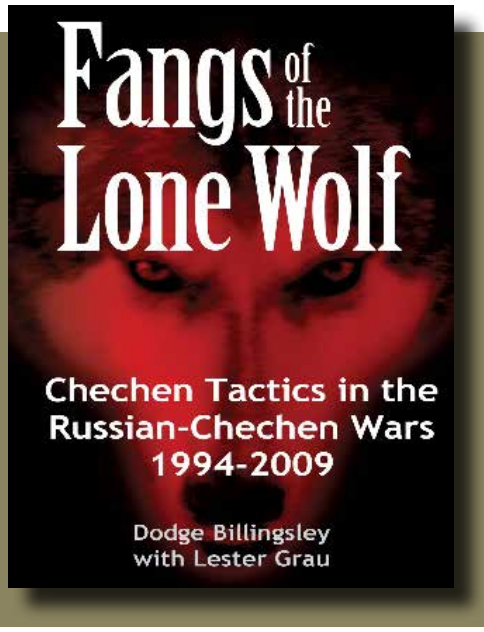
Source: Indriyani Astuti, "Nuklir Energi Terbarukan Untuk Reduksi Gas Rumah Kaca, (Nuclear Energy to Reduce Greenhouse Gases)," *Media Indonesia*, 11 October 2016. http://mediaindonesia.com/news/read/71521/nuklir-energi-terbarukan-untuk-reduksi-gas-rumah-kaca/2016-10-11

[Arnold Soetrisnanto, chairman of the Technical and Energy Commission of the National Research Council] said, "Without making a decision to develop a [thermal nuclear power plant] PLTN, it will be very difficult for the government to reach its capacity target for new power plants and the National Energy Policy (KEN), under which it is has been decided that renewable energy must reach 23 percent in terms of the mix of energy by 2025." However, a revision of the national energy policy is needed because in Government Regulation (PP) No. 74 in 2014 on Energy and Mineral Resources (ESDM) nuclear energy is considered as the last option for renewable energy utilization.

Source: Dian Erika, "Djarot Sulistio Wisnubroto, Kepala Badan Tenaga Nuklir Nasional (Batan): Kalau Besok Diminta Bangun PLTN, Kami Siap (Djarot Sulistio Wisnubroto: If Tomorrow There is a Request to Develop a Thermal Nuclear Power Plant, We Are Ready)," *Republika*, 12 October 2016. http://www.republika.co.id/berita/koran/pro-kontra/16/10/12/oexfo13-djarot-sulistio-wisnubroto-kepala-badan-tenaga-nuklir-nasional-batan-kalau-besok-diminta-bangun-pltn-kami-siap

Currently, the number of Indonesian people has reached almost a quarter of a billion. On the other hand, our mineral energy supply (oil, natural gas and coal) is depleting. Indonesia needs new and renewable energy sources to meet long-term demands. ... Meanwhile, if we look at it from a demand for power point of view, by 2025, Indonesia must be able to develop 115-gigawatt power plants. Currently, we can only fulfill about 52-53 gigawatts.

Based on the presidential decree on 22 June 2016, Indonesia must formulate the roadmap for a nuclear power plant (PLTN). We translate such a decision by calculating the number of power sources that we have such as oil or gas as well as other resources. Then, we calculate whether this nuclear energy is included, whether it will be an alternative or a last option. We also communicate often with other nations; for example, France, Japan, Russia and China. Every month they even come to Indonesia to offer nuclear development technology.



Books on guerrilla war are seldom written from the tactical perspective and from the guerrilla's perspective. Fangs of the Lone Wolf: is an exception. These are the stories of low-level guerrilla combat as told by the survivors. They cover fighting from the cities of Grozny and Argun to the villages of Bamut and Serzhen-yurt, and finally the hills, river valleys and mountains that make up so much of Chechnya. Dodge Billingsley, the primary author was embedded with Chechen guerrilla forces after the first war, so he knows the country, the culture, the key actors and the conflict. Yet, as a Western outsider, he is able to maintain perspective and objectivity. Fangs of the Lone Wolf provides a unique insight into what is becoming modern and future war.

http://fmso.leavenworth.army.mil/E-Pubs/Epubs/Fangs-of-the-Lone-Wolf.pdf

Resentment Toward the Governor of Jakarta: A Sign of Problems to Come?

OE Watch Commentary: In 2014, Indonesia drew some, although limited, attention when President Joko Widodo appointed Basuki Tjahaja Purnama, known by his Chinese name Ahok, as governor of the Indonesian capital, Jakarta. Not only is Ahok Ethnic Chinese, but he is also Christian, something that does not bode well with radical Muslims in Indonesia, which has the highest population of Muslims in the world.

As the accompanying article discusses, Ahok, who is known for being outspoken, had said that the interpretation of a Qur'anic verse by Muslim theologians was erroneous. The verse in question was that a Muslim should only elect a Muslim leader. This prompted a group, the Islamic Defenders Front (FPI – *Front Pembela Islam*), to accuse the governor, who is coming up for reelection in February 2017, of blasphemy. Following the accusations, tens of thousands of Islamists conducted a peaceful protest, which escalated into violent clashes between the participants and police/soldiers.

While Ahok is very popular and much appreciated for being able to effectively manage the city of 10 million inhabitants, there seems to be growing discontent among Islamic fundamentalists, who want to keep him from being reelected. It is a situation worth watching. **End OE Watch Commentary (Hurst)**

Jakarta Governor Basuki Tjahaja Purnama.
Source: https://upload.wikimedia.org/wikipedia/commons/c/c0/Wakil_Gubernur_DKI_Basuki_TP.jpg

Source: "Une Manifestation d' Dégénère à Jakarta (A Demonstration Deteriorates in Jakarta)," *Le Point*, 4 November 2016, http://www.lepoint.fr/monde/indonesie-une-manifestation-d-islamistes-degenere-a-jakarta-04-11-2016-2080790_24.php

"According to the governor [Basuki Tjahaja Purnama], an interpretation that had been made by some Ulemas (Muslim theologians), who interpreted a verse in the Qur'an as saying that a Muslim should only elect a Muslim leader, was erroneous."

The governor, who is known for being outspoken, is being accused of blasphemy against Islam after a statement he had made at the end of September. According to the governor, an interpretation that had been made by some Ulemas (Muslim theologians), who interpreted a verse in the Qur'an as saying that a Muslim should only elect a Muslim leader, was erroneous. With the extent of the polemic that was fueled by Muslim fundamentalists, the governor, who is known [by his Chinese name] Ahok, made a public apology. However, the anger of certain radical groups, such as the FPI, a radical Islamic group that has many followers in Indonesia, the country with the highest population of Muslims in the world, has not subsided. There has already been an earlier demonstration, on 14 October, against the governor, who is a candidate for reelection in February.

A Small Box That's a Big Deal: How Latin American Countries Are Using CubeSATs and Why it Matters

by Kevin Freese

The Army is the Defense Department's largest space user and the space domain is an essential part of the current and future operational environment. A relatively new satellite technology – the CubeSAT – is now making it easier for countries such as Costa Rica, Ecuador, Peru, and Uruguay to launch their space programs. By facilitating traditionally non-spacefaring nations to develop space programs, CubeSATs will give such nations a greater voice in international space policies and laws. For the United States, this will mean increased necessity to take the interests of other nations into consideration when operating in space.

http://fmso.leavenworth.army.mil/documents/SWJ_A%20Small%20Box%20That's%20a%20Big%20Deal_%20How%20Latin%20American%20Countries%20Are%20Using%20CubeSATs%20and%20Why%20it%20Matters.pdf

DPRK Press Comments on Nukes

OE Watch Commentary: The Democratic People's Republic of Korea (DPRK) claims that the continued development of both nuclear weapons and ballistic missiles is the strategic cornerstone that protects its national sovereignty from US interests in the region. As the accompanying passage from a North Korean newspaper demonstrates, the DPRK portrays itself as a socialist beacon of independence that has blazed against decades of what it describes as selfish, imperialist US interests. The passage discusses the DPRK's resolve to withstand sanctions imposed by the US and the international community.

The piece characterizes the international community's continuation of decades of ineffective sanctions as both hypocritical and unrealistic, arguing that the value of possessing nuclear weapons far exceeds the effects of sanctions; as no nuclear power has ever suffered acts of military aggression. Since the failure of the 1994 Agreed Framework to denuclearize, the DPRK has refused to halt nuclear weapon development despite several attempts at negotiations by foreign powers. The DPRK contends that becoming a nuclear power will place them on a level political playing field with other world powers and ultimately lead to economic prosperity through peace and stability.

Sixty years of juch'e, the DPRK's ideology of economic and political self-reliance, likely accounts for a large part of their ability to withstand what a DPRK state reporter characterizes as the most heinous sanctions in history in terms of duration and breadth of content. **End OE Watch Commentary (Galluzzi)**

"We have set out on the path of nuclear possession to defend the country's sovereignty and the people's right to existence against the United States' increasing nuclear threat and blackmail and vicious blockade."

Source: Pae, K.-h. "North Korean 'Commentary' Call Nuclear Force People's Power, Future of National Prosperity," *Rodong Sinmun*, 3 October 2016.

In terms of content, intensity, and implementation period, mankind has never seen such a brutal, ruthless, deep-rooted, and atrocious precedent as the United States' sanction maneuvers against our republic.

...

The hostile forces are threatening and blackmailing us by saying that we cannot achieve economic development without giving up nuclear weapons… This is indeed the height of hypocrisy.

US imperialism, the ringleader of imperialism, shamelessly lives by sucking other nations' blood and sweat, and is the villain of the human world with a habit of deceiving, trampling on, and harming others. Without deceiving others, this hideous thing cannot hide its ugly appearance or live on, and it is trying to conquer the world with the robber's theory that all assets on earth must be monopolized by the United States and everyone must obey it.

...

We definitely have not become a nuclear state to possess nuclear weapons of tyranny to harm mankind, as did the United States. Neither have we possessed nuclear weapons to enter the ranks of several powers that control the international political current. We have set out on the path of nuclear possession to defend the country's sovereignty and the people's right to existence against the United States' increasing nuclear threat and blackmail and vicious blockade.

...

Our people's demand is that not just nuclear tests, but something even greater must be done for self-defense even if it means that they have to tighten their belts 10 and 100 more times and spend a huge amount of money and all of the country's assets.

The rash acts of the people crazily running about who still try to put [North] Korea's nuclear [weapons] on the negotiation table and take them as a political bargain or economic deal are mere crudity of a group of insane modern-day Don Quixotes.

...

During the 70-odd years after the emergence of nuclear weapons in the world, there were the intense East-West Cold War and numerous small and big wars, but the countries that possess nuclear weapons — whether they were small or large — never suffered military aggression.

When a River Runs Through It: Riverine Operations in Contemporary Conflict

By LTC (R) Lester Grau, LTC (R) Leroy Denniston

Waterways and population centers will be factors in future war. Frequently they will be collocated and will become operational key terrain. Riverine operations will be a part of future military actions and will be an Army problem. The best way to prepare for a future problem is through study, training, and equipment design and development.

http://fmso.leavenworth.army.mil/documents/20150609_Grau_RiverineOpsInContempConflict.pdf

China Sites Training Deficiencies

"Services should mainly give on-the-spot guidance to the construction of the joint foundation and the joint specialties in combination with individual training... so as to promote the comprehensive implementation of the joint training plans and to guarantee training quality and effectiveness."

OE Watch Commentary: As China attempts to develop its military establishment, specific deficiencies continue to appear. There are reports that the services still act on their own and implement independent standards, procedures and rules as to how they are organized. This inhibits unified operations. Further, it has been noted that there are too few standards for teaching and training, resulting in the low quality and effectiveness of the force. As the accompanying passage from a Chinese source shows, this has resulted in calls to immediately settle these problems and make improvements that perfect the mechanisms required to develop a unified and professional force. The piece suggests that China understands the importance of creating forces that are able to work jointly, and that the development of a better unified control mechanism is clearly an important and required step in the process. **End OE Watch Commentary (Thomas)**

Source: Han Guangming, "Take Aim at Missions and Tasks. Push Forward Joint Training," *Jiefangjun Bao Online*, 1 November 2016.

"Focus on solving the issues of how to conduct joint training, how to arrange tests and provide support for joint training through further improving the guiding regulations and rules. For the contents of training, in addition to the study of basic theories related to joint operations and skill training specified by the current outline, it is necessary to add the study of theoretical subjects related to joint operations command, action, support to joint basic training, so as to lay a solid foundation for joint training. For joint specialized training, in addition to the contents specified by the current outline, it is necessary to add coordinated training for the cyber warfare element, the survey, mapping and navigation element, and the electromagnetic spectrum element. Commanders at all levels should be enabled to implement the principles for using the new-type combat forces and to determine the appropriate timing for using these forces and the form of collaborative actions.

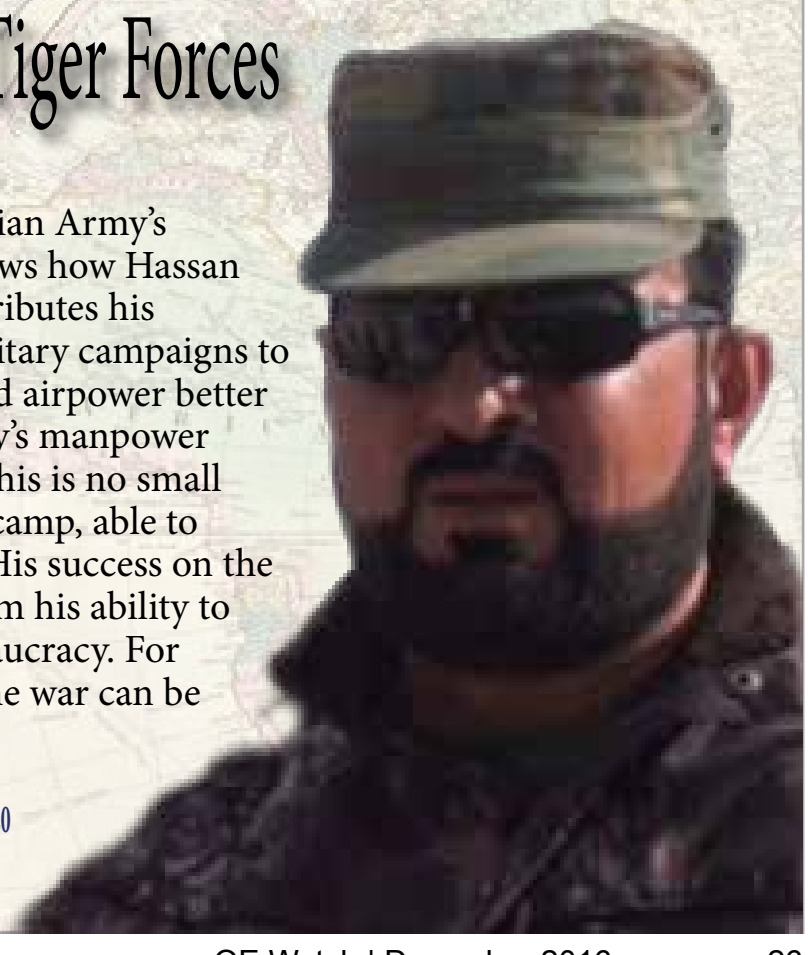
The forces involved should jointly practice command, jointly practice collaboration, jointly practice action, make sure that they train together in peacetime and fight together in wartime. Set up conditions similar to battlefield environments. That is, in the selection of timing and location for a joint exercise, it is necessary to select an area similar to the task area with terrain, weather, hydrographic, and transport conditions similar to the battlefield environment, so as to enhance the targeted attribute of joint training and improve the effectiveness of joint training.

Services should mainly give on-the-spot guidance to the construction of the joint foundation and the joint specialties in combination with individual training. Theater commands should mainly give circuit guidance to joint command drills and joint exercises with live force in combination with element-specific drills, command post exercises, and live force exercises, so as to promote the comprehensive implementation of the joint training plans and to guarantee training quality and effectiveness."

Suheil al-Hassan and the Syrian Army's Tiger Forces

By Lucas Winter

This paper looks at the genesis, evolution and growth of the Syrian Army's "Tiger Forces" and their leader Suheil al-Hassan. The paper shows how Hassan has played an important role since conflict began in 2011. It attributes his transformation from special forces commander to leader of military campaigns to an ability to harness the Syrian Army's full infantry, artillery and airpower better than any other loyalist field commander. Given the Syrian Army's manpower shortages, rampant corruption and rivalry-laden bureaucracy, this is no small feat. Al-Hassan has become a key symbol in the Syrian loyalist camp, able to project more combined arms power than anyone else in Syria. His success on the battlefield comes less from tactical or strategic insights than from his ability to thrive within the loyalist camp's opaque and rivalry-laden bureaucracy. For this he has become a symbol to regime supporters, proof that the war can be won by working within the system.



http://fmso.leavenworth.army.mil/documents/Small%20Wars%20Journal%20-%20Suheil%20al-Hassan%20and%20the%20Syrian%20Army%E2%80%99s%20Tiger%20Forces%20-%202016-07-22.pdf

Afghanistan's Membership in the Shanghai Cooperation Organization

OE Watch Commentary: The accompanying excerpted article reports on the government of Afghanistan's interest in joining the Shanghai Cooperation Organization (SCO); amid the on-going process for India and Pakistan to obtain membership. The piece includes important points by Afghan Chief Executive Abdullah Abdullah, about what Afghanistan's membership in the SCO could mean.

First, Abdullah notes that Afghanistan views the SCO as a good platform for dealing with security issues and expresses his hopes that current members support Afghanistan's joining the organization. The SCO's security focus is on dealing with the threats of terrorism, separatism, and religious extremism. One area of security cooperation in the SCO is the Regional Anti-Terrorism Structure (RATS) headquartered in Tashkent, Uzbekistan. RATS is reported to have a shared database on regional threats, but it is not known for taking an active role in combating them. SCO members carry out periodic joint exercises with military and security forces and Afghan forces could benefit from this. However, the organization does not get involved in the internal issues of a member state or negotiate a dispute between states. There is also no collective defense article within the SCO to jointly deploy forces in response to a conflict involving a member state.

Abdullah also mentions the Afghan government's efforts to negotiate with the Taliban and getting Pakistan to assist in peace treaty negotiations. While he does not express any expectation that the SCO would get involved in these negotiations, he may expect that membership would help resolve the ongoing conflict. The piece article also points out that the SCO decided to admit India and Pakistan in 2015 and that it took a year for both to put together a full membership application. While both are likely to become members, this will not take place until sometime in 2017. Given this timeline, even if Afghanistan received support for SCO membership and signed the memorandum of obligations within the next several months, the example of India and Pakistan shows that it could take up to two years to achieve membership and any assistance the organization might provide. **End OE Watch Commentary (Stein)**

"India and Pakistan signed the memorandum of obligations on 24 June 2016, thereby starting the formal process of joining the SCO as full members. The acceptance process will take some months but they are expected to become full members in 2017."

The presidents of the member states of the Shanghai Cooperation Organization (SCO) meet during a summit in Ufa, Russia in 2015. A major component of the SCO is security, but the organization does not get involved in the internal issues of a member state.
Source: https://commons.wikimedia.org/wiki/File:2015_Summit_of_the_Shanghai_Cooperation_Organization_04.jpg

Source: Kathy Whitehead, "Abdullah Urges Full Membership For Afghanistan At SCO Summit," *Tolo News*, 3 November 2016. http://www.tolonews.com/en/afghanistan/28146-abdullah-urges-full-membership-for-afghanistan-at-sco-summit

"Delivering a speech at the 15th prime minister's summit of the Shanghai Cooperation Organization, Afghan CEO Abdullah Abdullah... requested Afghanistan be made a full member of the SCO and that its members support the move. He said Afghanistan attaches great importance to the SCO as a regional platform for addressing international terrorism, violent extremism, separatism and narcotics through confidence-building and enhanced economic and security cooperation…The 15th prime minister's summit was held Thursday in Bishkek in Kyrgyzstan…Abdullah said…"Our sincere endeavors to engage the Taliban and nudge Pakistan to assist the peace process have thus far yielded almost no concrete results…

…The Shanghai Cooperation Organization, or Shanghai Pact, is a Eurasian political, economic, and military organization which was founded in 2001 in Shanghai by the leaders of the People's Republic of China, Kazakhstan, Kyrgyz Republic, Russian Federation, Tajikistan, and Uzbekistan. These countries, except for Uzbekistan had been members of the Shanghai Five, founded in 1996; after the inclusion of Uzbekistan in 2001, the members renamed the organization. On July 10, 2015, the SCO decided to admit India and Pakistan as full members.

India and Pakistan signed the memorandum of obligations on 24 June 2016, thereby starting the formal process of joining the SCO as full members. The acceptance process will take some months but they are expected to become full members in 2017. Afghanistan, Iran, Mongolia and Belarus are the SCO observer-countries, while Turkey, Azerbaijan, Sri Lanka, Armenia, Cambodia and Nepal are dialogue partners."

A Potential Driving Force Behind Georgia's Armed Force Reforms

OE Watch Commentary: Reforms in Georgia's Ministry of Defense (MoD) have been taking place for several years. A number of these have been connected to the capabilities of the Georgian Armed Forces to deal with a scenario similar to the Georgian-Russian War in August 2008. The accompanying excerpted articles report on an important development that may impact these reforms.

The first accompanying article discusses the details of the Russian-Abkhazian treaty to create a combined force. The article notes that the Russian contingent would be made up of units already deployed in Abkhazia, which are estimated to be made up of three to four thousand personnel. The combined force will reportedly be under a joint Russian-Abkhazian command, but in the event of a conflict, the force would come under control of the Russian Ministry of Defense.

The second article from *Georgia Today* reports on a recent policy change in the country's MoD that will cancel the previous defense minister's decision to abolish conscription. Contract soldiers make up the majority of personnel in Georgia's Armed Forces and conscripts are often placed in non-combat positions or are used as a reserve force. The announcement of maintaining conscription came just after the treaty ratification, and follows earlier opposition to the previous defense minister's decision to abolish it. The Russian-Abkhazian joint force could influence the ongoing reforms in the Georgian MoD. **End OE Watch Commentary (Stein)**

Georgian Minister of Defense Levan Izoria.
Source: http://www.rfe.org

Source: "Tbilisi Protests as Abkhaz Troops Get Combined with Russian Forces," *Civil*, 3 November 2016. http://civil.ge/eng/article.php?id=29594

"The Georgian Foreign Ministry condemned Russia's ratification of the treaty with Georgia's breakaway region of Abkhazia on establishing a Combined Group of Forces... Russia's State Duma ratified the treaty on November 2 with 410 votes; the breakaway region's parliament ratified the same treaty in December 2015, a month after its signing. Russia and breakaway Abkhazia signed the treaty in November 2015, to define the ways for putting in practice the provisions of the Framework Agreement on "Alliance and Strategic Partnership,"...The group will be led by the Russian military base deployed in Abkhazia.

...The creation of the so-called Combined Group of Forces in Abkhazia, against the backdrop of continued military build-up and constant military drills in the occupied territories, further aggravates the already difficult security situation on the ground and significantly threatens the stability of the entire region," the (Georgian Foreign Ministry) statement reads..."

Source: Thea Morrison, "Georgia's Defense Ministry Reinstates Compulsory Military Service," *Georgia Today*, 7 November 2016. http://georgiatoday.ge/news/5093/Georgia%E2%80%99s-Defense-Ministry-Reinstates-Compulsory-Military-Service

"Georgian Defense Minister Levan Izoria said Monday that compulsory military conscription would be reinstated only months after his predecessor Tina Khidasheli abolished the practice just before she left office in August. Izoria said he ordered compulsory military service to be reinstated because Georgia's small population can not provide enough professional contract soldiers to deal with the country's numerous security threats...

Izoria's predecessor, Khidasheli - Georgia's first female defense minister, abolished compulsory military conscription on June 27. Her decision, however, never took full effect as two other ministries retained the right to continue drafting young people into their service. About 25 per cent of all eligible conscripts typically serves in the Defense Ministry, while the remainder are placed under the authority of the Interior Ministry..."

"Georgian Defense Minister Levan Izoria said Monday that compulsory military conscription would be reinstated only months after his predecessor Tina Khidasheli abolished the practice just before she left office in August."

The Investigation of the Bombing at the Chinese Embassy in Bishkek Continues

OE Watch Commentary: The government of Kyrgyzstan continues to investigate the suicide bombing that took place at the Chinese Embassy in Bishkek on 30 August. The accompanying excerpted articles report on the most recent developments; particularly a significant problem that was recently uncovered. Apparently, members of Kyrgyzstan's Armed Forces and Border Guards service had been selling weapons and explosives out of their armories for two years.

The article from *Zanoza* reports on this significant discovery. This is not the first time that a service member with access to an armory has been caught selling weapons (Please see, "Small Arms in Kyrgyzstan" *OE Watch*, March 2016), but this is an instance that involved a large number of personnel. In addition to the 26 officers and warrant officers dismissed, there were reportedly over a dozen service members arrested and charged with stealing and selling weapons.

The Chinese government has reportedly been in contact with Kyrgyz officials involved in the investigation, but there has not been much information on its reaction to the bombing other than condemning it. The article from *China Radio International* also reports on the arrests of Kyrgyz service members demonstrating that the case continues to be followed in China. Finally, the article from *Vecherniy Bishkek* reports that an investigation into an assassination attempt on a senior prosecutor on 29 July in Bishkek helped uncover the sales of the weapons. The prosecutor survived the attempt, which had been carried out with a bomb made with explosives allegedly bought from the same criminal group that supplied the suicide bomber in the embassy attack. The article also mentions that President Atambayev reprimanded the Chief of the General Staff, though it did not note any additional measures taken to cut down on theft from armories. **End OE Watch Commentary (Stein)**

Source: Marat Uraliev, "Со склада ГПС продавали оружие и патроны. 26 офицеров и прапорщиков уволены (Weapons and ammunition were sold from an armory of the State Border Guards service. 26 officers and warrant officers have been dismissed)," *Zanoza*, 12 October 2016. http://zanoza.kg/doc/345724_so_sklada_gps_prodavali_oryjie_i_patrony._26_oficerov_i_praporshikov_yvoleny.html

"...a warrant officer of the General Staff of the Armed Forces of the Kyrgyz Republic was arrested by the security services. He sold Kalashnikov's from the armory of one of the Border Guards units...According to reports, the officers and warrant officers of the Border Guards and General Staff had been selling weapons marked as unfit for service since 2014...At the moment it is known that there are 26 rifles, 14 Makarov pistols and 13 thousand rounds of various calibers still unaccounted for..."

Source: "Kyrgyz officers implicated in Chinese embassy bombing," *China Radio International*, 24 October 2016. http://english.cri.cn/12394/2016/10/24/1461s943275.htm

"...The Russian news agency Interfax, quoting Kyrgyz official sources, said that according to investigators, officers sold weapons to the criminal gangs which conducted the terror attacks on the Chinese embassy in Kyrgyzstan and against a Kyrgyz prosecutor earlier this year...

...According to Russian and Kyrgyz media, police arrested an arms trafficker last month, who was the driver of chairman of the Kyrgyz State Defense Committee, and found several AK series rifles and a large amount of ammunition at his home. The trafficker confessed that one of his suppliers was a border service officer...

The Chinese embassy in Kyrgyzstan was attacked on August 30 by a suicide car bomber, in which the lone assailant was killed and five others were wounded. The compound also suffered damage..."

Source: Bermet Malikova, "Прощай, оружие! (A Farewell to Arms!)," *Vecherniy Bishkek*, 25 October 2016. http://members.vb.kg/2016/10/25/panorama/2.html

"...Details of those involved in the illegal sale of weapons to members of a criminal group appeared during the operational and investigative activities in the case of the assassination of the prosecutor this summer – said the agency...During the investigation of the terrorist attack at the Chinese Embassy in Bishkek it was revealed that the suicide bomber acquired explosives from members of the same (criminal) group. Those arrested testified that the weapons, ammunition, and explosives were sold by members of the Kyrgyz military...President Almazbek Atambayev reprimanded the Chief of the General Staff of the Kyrgyz Armed Forces..."

"According to reports, the officers and warrant officers of the Border Guards and General Staff had been selling weapons marked as unfit for service since 2014."

Bishkek Skyline.
Source: https://c1.staticflickr.com/9/8069/8188974166_9fb5e1f952_b.jpg

Russia Adds 'Technicals' to its Order of Battle

OE Watch Commentary: The accompanying articles from *Izvestiya* discuss Russia's use of light trucks (referred to as 'technicals') as fighting vehicles. Based on its combat experience in Syria, Russia has found that light trucks are advantageous in certain environments; particularly where mobility and maintenance concerns trump the requirements that conventional combat vehicles meet. Russia is now creating special "light" motorized rifle battalions that will be based on the UAZ-3163 Patriot.

This is not Russia's first experiment with the use of 'technicals'. In 2009, the 56th Air Assault Brigade was equipped with UAZ 'Hunter' light trucks. The project was abandoned after space and weight difficulties were encountered with transporting troops and cargos. As the passages discuss, the UAZ-3163 Patriot alleviates these problems due to its capability to accommodate more troops and cargo. If Russia plans on a continued presence in Syria, motorized rifle battalions based on 'technicals' are likely to be part of Russian capability development to support the effort. Note: the accompanying image is of an unmodified UAZ. **End OE Watch Commentary (Bartles)**

"One can call an armed pickup the contemporary embodiment of a technical. These motor vehicles have a number of advantages as compared to a factory-supplied military vehicle. They outstrip army transport vehicles by an order of magnitude based upon speed, expend less fuel, and they are much easier to service, especially in urban conditions,"

— Military Expert Oleg Zheltonozhko

Source: Aleksey Moiseyev, "The Return of 'Technicals' to the Russian Army," *Izvestiya Online*, 14 October 2016, http://izvestia.ru/news/637713

The Russian Army has begun to actively employ in Syria a unique multi-role off-road vehicle, which has been adapted for combat raids and patrolling at long distances and also for engagements under urban conditions. Although these pickups are vulnerable as compared to armored vehicles, thanks to their speed advantage, they can rapidly arrive at the needed point and conduct a strike prior to the enemy moving up the main force.

The army version of the UAZ-3163 Patriot pickup can be equipped with a Kord heavy machinegun and an AGS-17 automatic grenade launcher. The experts think that pickups with machineguns – are an ideal weapon for the maneuvering war in the Middle East.

"The vehicles were airlifted to Syria at the end of the summer. "The Patriots are participating in escorting humanitarian convoys, the patrolling (continued)

The UAZ-3163-103 "Patriot" might replace the UAZ-3151 in the Russian army.
Source: https://topwar.ru/81531-uaz-3163-103-patriot-mozhet-zamenit-uaz-3151-v-rossiyskoy-armii.html

Continued: Russia Adds 'Technicals' to its Order of Battle

of facilities, and are also acting as mobile defensive installations," a Russian military department spokesman, who is familiar with the situation, told Izvestiya. "The vehicles have undergone a special upgrade for employment in the complex conditions of the desert…

Besides the installation of a swiveling gun turret in the truck beds, the UAZ has obtained a large number of other army upgrades – mountings have been installed between the seats in the cabin for two assault rifles and entrenching tools (shovels, pickaxes, and crowbars) and additional electrical outlets for connecting night vision devices. Special repair kits for patching tires that have been punctured by bullets have also become part of the Russian jeeps' equipment kit…

Military Expert Oleg Zheltonozhko told Izvestiya that an armed pickup will not replace an already existing armored vehicle but can be used by light mobile teams.

"One can call an armed pickup the contemporary embodiment of a technical. These motor vehicles have a number of advantages as compared to a factory-supplied military vehicle. They outstrip army transport vehicles by an order of magnitude based upon speed, expend less fuel, and they are much easier to service, especially in urban conditions," Zheltonozhko said. "In the process, those automobiles can be equipped with the most varied weapons – from heavy machineguns to multiple rocket launcher systems. Although these pickups are also vulnerable as compared to factory-supplied military vehicles, they can rapidly arrive at the needed point in a very short period of time thanks to their speed advantage, conduct a strike and withdraw prior to receiving a retaliatory strike. In this they have a significant advantage over conventional army vehicles, the deployment of which is carried out over a much longer period of time"…

"Unique super-light motorized rifle brigades, the soldiers of which will travel and fight with the enemy in UAZ Patriot jeeps-pickup trucks, will appear in the Russian Ground Forces. The new military units, which have been created based upon the experience of the combat operations in Syria, will conduct high-speed raids at hundreds of kilometers in contrast to traditional motorized rifle regiments and divisions in armored transport vehicles and infantry fighting vehicles."

Source: Aleksey Ramm, "The Ministry of Defense Is Forming Super-Light Brigades," *Izvestiya Online*, 21 October 2016, http://izvestia.ru/news/639226

Unique super-light motorized rifle brigades, the soldiers of which will travel and fight with the enemy in UAZ Patriot jeeps-pickup trucks, will appear in the Russian Ground Forces. The new military units, which have been created based upon the experience of the combat operations in Syria, will conduct high-speed raids at hundreds of kilometers in contrast to traditional motorized rifle regiments and divisions in armored transport vehicles and infantry fighting vehicles.

Motorized rifle battalions, which are equipped with UAZ Patriot pickup trucks, will become the new military units' main strike force. Each jeep transports up to seven personnel with their personal weapons, and also various equipment, including additional ammunition, food and supplies of water and fuel. The motorized rifle Patriots will be equipped with 12.7 millimeter Kord machineguns, AGS-30 30-millimeters grenade launchers, and Kornet or Konkurs antitank missile complexes. In the mortar battery, the jeeps will transport Podnos 82-millimeter mortars and a basic load of mortar rounds.

"The formation of the new brigades is already occurring at the present time," a military department spokesman, who is familiar with the situation, told Izvestiya. "One military unit each will appear in Southern and Central military districts in the near future, The new brigades' organizational-staff structure will be different from the traditional organizational-staff structure. There will be fewer personnel and vehicles in them but the 'super-light' brigades themselves will be more maneuverable and mobile".

According to Izvestiya's information, besides the motorized rifle battalions in pickup trucks, there will be traditional motorized rifle battalions, which are equipped with BTR-82, in the new brigades. Artillery subunits, including rocket-propelled artillery, which are equipped with Grad multiple rocket launcher systems, will also appear in the new military units. Anti-tank battalions, which are equipped with antitank missile complexes, which are installed on motor vehicles, will also be in the super-light brigades. The antitank missile personnel will be able to not only halt and destroy enemy tanks but also knock out firing points and fortifications, and also destroy the enemy, who has taken up defense in urban buildings.

"Over the course of a day, an ordinary motorized rifle battalion, which is equipped with armored transport vehicles or armored infantry vehicles, can conduct a march to a distance of no more than 100 kilometers. But a motorized rifle battalion in UAZ Patriot pickup trucks will be able to cover a distance of several hundred kilometers per day. In the process, while operating using small teams, the motorized rifle platoons and companies in pickup trucks will be able to slip between enemy combat formations and conduct rapid strikes. But those battalions are effective only under desert, steppe, and semi-arid terrain conditions. Based upon their combat capabilities, automobile mounted infantry strongly loses to infantry in BMPs and BTRs in forests and forest-steppe terrain…

Russian Artillery Brigades to Get UAVs

OE Watch Commentary: The accompanying passages discuss important developments in Russia's use and production of UAVs. First, Russia plans to use the Orlan-10 UAVs as artillery spotters in artillery brigades, a significant change from how Russian Ground Forces units usually manage UAVs. Second, Russia is transitioning from a UAV importer to an exporter.

For practical reasons, the Russian Ground Forces requires UAVs that do no not need airfields for launching and landing. Due to this limitation, these UAVs are too small to serve as weapons platforms, but instead perform other enabling functions. These functions include general reconnaissance, electronic warfare, communications retransmissions, and artillery spotting missions. The accompanying article from *Izvestiya* discusses Russian plans to field Orlan-10 UAVs as dedicated artillery spotters in artillery brigades, a marked change from how Russian Ground Forces units usually manage UAVs. In general, Russia has had great success with integrating UAVs into artillery spotting roles, and it is of little surprise that dedicated artillery spotter units will now be fielded. Although not mentioned in the article, UAV spotters will also likely be found in Multiple Launch Rocket System (MLRS) Brigades, as their primary mission is counter battery fire.

As the article discusses, Russia is now adding UAV companies to all maneuver brigades. These companies are typically divided into platoons, not based upon function, but upon the size and range of the UAVs they operate. For instance, the "mini-platoon" operates the hand launched Granat-1, while the "short-range platoon" operates the larger Orlan-10, Granat-4, and Eleron airframes. Generally, Russian UAVs are designed to carry different "payloads". Thus the airframe may perform different functions on different missions, in order to best manage the limited number of airframes.

The article from *Interfax* discusses how Russia's domestically produced Orlan-10 airframe will now be manufactured for export as the Orlan-10E. The Orlan-10 has been very successful as an artillery spotter, despite not being digitally integrated into the Russian C4ISR and artillery control systems. In practice, coordinates are relayed by the UAV crews to the artillery fire control centers or forward observers, which the UAV crews are co-located. This effective and low cost system that is easy to integrate will certainly be popular with Russia's customer base. Russia has now transitioned from a UAV importer to UAV exporter. **End OE Watch Commentary (Bartles)**

"Russian artillery brigades and regiments will receive Orlan-10 UAVs, which can locate enemy command posts, communications stations, gun mounts, and multiple-launch missile systems using miniature electronic intelligence stations. However, the latest artillery reconnaissance unmanned system is mainly targeted against enemy counterbattery radars..."

Source: http://izvestia.ru/news/636937

Source: Aleksey Ramm, "Russian Artillery Troops Will Receive UAVs for Use Against Radars," *Izvestiya Online*, 10 October 2016, http://izvestia.ru/news/636937

Orlan-10 UAVs will locate command posts, communications stations, gun mounts, and multiple-launch missile systems.

Russian artillery brigades and regiments will receive Orlan-10 UAVs, which can locate enemy command posts, communications stations, gun mounts, and multiple-launch missile systems using miniature electronic intelligence stations. However, the latest artillery reconnaissance unmanned system is mainly targeted against enemy counterbattery radars, which can locate artillery systems with a precision of several meters.

"The latest set of tests are almost complete," Izvestiya was told by an informed source at the Ministry of Defense. "An organization and establishment structure is currently being drawn up for new artillery reconnaissance subunits, which will be armed with these artillery reconnaissance unmanned systems. During the first stage, reconnaissance UAVs will be part of combined-arms armies' artillery brigades and will later be included in the reconnaissance equipment of motorized rifle and tank divisions' artillery regiments."

An artillery reconnaissance unmanned system is quite a complicated hi-tech product, consisting of several UAVs, an analysis and data processing station, and an automated control system. The core of an artillery reconnaissance unmanned system is formed by several Orlan-10 UAVs, equipped with suspended electronic intelligence containers, which can detect the activity of enemy communications equipment and signals from counterbattery radars.

UAVs transmit collected information to the system's command post, where a processing station analyzes the data and an automated control system adjusts the UAVs' flying direction in such a way as to determine the position of the radar using the triangulation method. Having located the target, one of the UAVs "hangs" over the radar, transmitting its coordinates and video image to help

(continued)

Continued: Russian Artillery Brigades to Get UAVs

artillerymen destroy the target.

"The artillery reconnaissance unmanned system can pinpoint and detect a wide range of targets," Izvestiya was told by an officer familiar with the operation of this unique system. "These are air defense missile systems' radars, radars which provide support during enemy aircraft flights, and even miniature radar stations, which are now commonly used by reconnaissance and infantry subunits for surveillance at a distance of several kilometers."...

"The experience of modern wars and armed conflicts shows that artillery is still the god of war," military analyst Aleksey Leonkov tells Izvestiya. "Even airstrikes cannot replace massed artillery fire. And the most effective way to protect your troops from enemy artillery is to destroy that artillery with the so-called counterbattery fire, when enemy artillery positions are detected and instantly suppressed. This is why the United States and NATO have traditionally been paying close attention to creating counterbattery radars."

The expert noted that the use of artillery reconnaissance unmanned systems will allow Russian artillerymen to not only win the duel with the enemy and dominate the battlefield in terms of firepower, but they will also be able to inflict serious damage on the enemy's command and control systems, air defense systems, and other important assets.

Source: "Russia May Turn From UAV Importer Into UAV Exporter," *Interfax-AVN*, 17 October 2016.

Rosoboronexport has begun promoting Russian unmanned equipment on the foreign market — information about the small-class UAV, Orlan-10E, was presented at the Russian special equipment exporter's stand at the ArmHiTec 2016 exhibition that was held in Yerevan.

"Some people may think that the presence of information about a small-size UAV at a Rosoboronexport's exhibition is an insignificant fact. Nevertheless, this signifies a very important step: Just a few years ago we were importing such systems, and now we have the chance to turn from a buyer into a supplier," Denis Fedutinov, expert in the field of unmanned systems, "a favorable circumstance here is that this is happening against the backdrop of the successful application of these systems in the Syrian campaign."..

It was reported earlier that systems with Orlan-10 UAVs had successfully passed the full range of Russian Ministry of Defense tests and are now being supplied to the Russian Ground and the Airborne Troops. The total of the flying hours clocked by Orlan family UAVs this year is more than several tens of thousands of hours...

The control panel provides the possibility to simultaneously control three devices at a distance of 100 km. The standard mobile configuration of the Orlan-10E system includes two to four UAVs, a ground control terminal with integrated training aids, and a remote antenna. There is also a portable version with two UAVs.

"Some people may think that the presence of information about a small-size UAV at a Rosoboronexport's exhibition is an insignificant fact. Nevertheless, this signifies a very important step: Just a few years ago we were importing such systems, and now we have the chance to turn from a buyer into a supplier..."

— Denis Fedutinov, UAV Systems Expert

Source:http://izvestia.ru/news/636937

T-14 Armata Improvements, T-72 Modernization

OE Watch Commentary: The accompanying article from *Voyenno-Promyshlennyy Kuryer* (*Military-Industrial Courier*) features an interview with Lieutenant General Alexander Shevchenko, Chief of the Main Armored Directorate of the Russian Ministry of Defense. Lieutenant General Shevchenko discusses several topics of interest, including the fielding of the T-14 Armata, robotization, and a tank support combat vehicle (BMPT). Perhaps the most interesting aspect of the interview is his discussion of the T-72 modernization. Shevchenko explains that approximately 1000 T-72s have been modernized to the T-72B3 standard, with plans that another 300 tanks will also be upgraded. In terms of capabilities, the T-72B3 has much more in common with the T-90 than with older T-72s, and it is almost certain that that many T-72s can be refurbished for the price of one T-14 Armata.

The accompanying article from *Izvestia* mentions an interesting aspect about future T-72 modernizations. Much as Russia has adapted technologies found on older tanks to be used on the T-14 Armata, technologies developed for the T-14 Armata will now be incorporated into future T-72 and T-90 modifications. Russia's design emphasis on incremental development and modularity significantly eases problems related to sharing components across different platforms. In addition, the T-14 and T-72 are made by the same manufacturer, *UralVagonZavod*. This system not only facilitates development, but also presumably lowers research and development costs. **End OE Watch Commentary (Bartles)**

"There are actually more than 1,000 of these tanks in the armed forces... In the near future the armed forces will be acquiring ... over 300 improved T-72-B3 tanks modified to meet the field's requirements."

— Lieutenant General Alexander Shevchenko, Chief of the Main Armored Directorate of the Russian Ministry of Defense.

T-14 Armata.
Source: Sergei Fadelchev, http://i.dailymail.co.uk/i/pix/2015/06/12/10/000113C400000CB2-3121195-image-a-1_1434101515649.jpg

Source: Oleg Falichev, "Armata-Led Breakthrough," *Voyenno-Promyshlennyy Kuryer Online*, 27 September 2016, http://vpk-news.ru/articles/32436

The Kavkaz-2016 strategic command staff training exercise showed that the Russian army is ready to accomplish the most unexpected missions in diverse theaters of operations. Officers and men mobilized, morale high. But to what extent does our combat hardware meet the new challenges? What new models of armaments and specialized equipment (VVST) are in development, are ready to go into series production? Answers to these and other questions have been provided by Lieutenant General Alexander Shevchenko, Chief of the Main Armored Directorate of the Russian Federation Ministry of Defense…

[Falichev] *Uralvagonzavod's general director has said that as of today around 1,000 T-72 tanks have been modernized to T-72-B3 standard. What now?*

[Shevchenko] *We began this work four years ago under the armored vehicle armament development program. There are actually more than 1,000 of these tanks in the armed forces. It should be mentioned that in terms of the cost-quality ratio we entered the top 10 with this vehicle. It has good prospects and will continue to evolve. In the near future the armed forces will be acquiring under the state defense order over 300 improved T-72-B3 tanks modified to meet the field's requirements. The upgrade will apply to the power plant, protective systems, and the sighting and aiming system…*

[Falichev] *A tank support combat vehicle (BMPT) development is based on the T-90, and deliveries of it to Kazakhstan have begun. It is true that our colleagues are at a loss to explain why it has not entered service with us here at home. What are the prospects in this respect?*

[Shevchenko] *This emphasizes yet again the attitude people have toward our equipment. So we should say to our colleagues that we are already accepting it for service here. This, I believe, will simultaneously increase its price and raise procurement volumes. At the same time, the General Staff has yet to have its say on the vehicle in question, and this is beyond the competence of the Main*

(continued)

Continued: T-14 Armata Improvements, T-72 Modernization

Armored Directorate. I repeat: The vehicle has been built and is ready at any moment to go for trials…

[Falichev] *Right now our so-called partners are paying a lot of attention to robotics. The soldier, the officer are as it were withdrawing from the firing line and increasingly becoming operators, which reduces losses in a combat environment.*

[Shevchenko] *In 2017, as has already been mentioned, we are planning to put an entire range of new vehicles into service. Being aware that their construction incorporates unique technologies, we have now initiated a program that will submit recommendations and developments relating to robotization. The exceptional nature of this technology lies in the availability of digital equipment, which gives them unique capabilities and creates a strong foundation for the robotization of armored equipment. To this end the corresponding scientific research has been started…The basis for robotization has been established by the digital technologies incorporated at the respective design stages of the Armata, the Kurganets, and the Bumerang. It is a matter of building a system that will independently take decisions on the battlefield, which is difficult enough. This requires us to resolve the problems of machine vision and situational awareness…*

The work is intended to run for two years, by which time a robotic Armata in which a digital device independently performs missions on the basis of the objective situation may already have been built…I repeat: In two years' time a robotic Armata may have made its appearance, but I wouldn't kick up a fuss around a robotic tank….

Lieutenant General Alexander Shevchenko, Chief of the Main Armored Directorate of the Russian Federation Ministry of Defense.
Source: http://vpk-news.ru/articles/32436 http://www.automobili.ru/upload/medialibrary/9ad/9ad05bf3e5da547c094910b1b2e00108.jpg

T-72B3M.
Source: Image courtesy: Vitaly Kuzmin

Source: Aleksey Moiseyev "T-72 and T-90 Tanks to Receive 'Electronic Brain' From Armata," *Izvestiya Online*, 10 October 2016. http://izvestia.ru/news/636502

Russia's T-72 and T-90 main battle tanks are to receive the latest electronic components of the Armata tank's fire-control system: the automatic target tracker (ASTs) and the computer unit, which enable enemy combat hardware to be destroyed with the very first round with almost 100-percent precision even in zero visibility.

The ASTs allows the gunner simply to point the sight at an enemy tank and press a special button. The automatic tracker will independently track the enemy vehicle, swinging the turret to follow its movement and raising and lowering the tank's gun. For its part, by analyzing the various parameters, from the combat vehicle's speed and direction of movement to the weather conditions and the status of the gun barrel, the system computes the optimal firing parameters so as to guarantee target kill with the very first round.

"Currently the Defense Ministry has scheduled several extensive modernization options for the T-72 and T-90 tanks. The list of prospective components planned for installation includes the automatic target tracker and computer unit of the T-14 Armata's fire-control system," Izvestiya has been informed by a military department official familiar with the situation. "Following the completion of trials of the Armata tank and its electronic systems, work to install the ASTs and the computer unit on older models of the T-72 and T-90 is scheduled. We plan to be testing the modernized 'seventy-twos' and 'nineties' with the new systems over the course of two to three years."

As the paper's contact described it, work to install the latest components is greatly facilitated by the fact that the Kalina fire-control system (SUO) — of differing generations, admittedly — is installed on all three tanks.

"The most advanced version of the Kalina is installed on the Armata. A previous-generation SUO is installed on the T-72B3 and the T-90. Specifically, the T-72B3 is fitted with an ASTs with limited capabilities compared to the Armata, and even this is lacking on the T-90," the Defense Ministry official explains. "But the underlying thinking and the technical solutions are largely identical for all the SUOs, and therefore it is not technically that difficult to transfer the units from the Armata to the T-72 and the T-90…

The Russian Ground Forces Communication 'Backbone'

OE Watch Commentary: The accompanying excerpt from an interview with the Russian Ground Forces Signals Chief, Major General Aleksandr Viktorovich Galgash, discusses many aspects of the Russian military's communications modernization effort. As Major General Galgash explains, The Russian Federation has made great efforts in transitioning away from Soviet era analog based equipment, to digital equipment with substantial data transmission, encryption, and anti-jamming capabilities.

At the tactical level, the Russian Ground Forces, the Aerospace Defense Forces, and Navy have been receiving fifth generation R-168 Akveduk radios for the last few years. The entire Russian Ministry of Defense, as well as Russia's other militarized intelligence and security structures appear to be transitioning to the same radios for interoperability reasons. Russia has also started introducing the sixth generation R-187 Azart radio series. The compact, frequency hopping VHF capable, Azart reportedly implements a Software-Defined Radio (SDR) technology that replaces some of the radio's components (mixers, filters, amplifiers, modulators/demodulators, detectors, etc.) with software solutions.

At the operational-strategic level, the communications backbone for the Ground Forces will be based on the vehicle mounted 'Redut-2US'. The Redut-2US is a five vehicle system that supports videoconferencing, data retransmission, telephone communications, automated command and control systems, and is capable of interfacing with legacy technologies. Major General Galgash explains Russian military communications theory, and the premise that the Russian Ground Forces must use a networked combination of satellite and terrestrial radio communications at different wavelengths and alternating frequencies to maintain secure and robust communications. The Russian communications "backbone" provided by the Redut-2US is not only maintained through radio communications, but also by wired and fiber optic networks. This redundancy not only facilitates greater data flows, it also provides more secure and less disruptible communications in an electromagnetically challenged environment. The fielding of the Redut-2US is another example of Russian efforts to develop a cross-platform "network-centric" C4ISR system. **End OE Watch Commentary (Bartles)**

Major General Aleksandr Viktorovich Galgash, Ground Forces Signals Chief.
Source: https://life.ru/t/%D0%B7%D0%B2%D1%83%D0%BA/920740/armieiskiie_brighady_osnastiat_riedutami_novuiu_sistiemu_sviazi_obkatali_na_uchieniiakh

Source: Igor Korotchenko: "They Will Equip Army Brigades with 'Redut'" *Life Online*, 23 October 2016. https://life.ru/t/звук/920740/armieiskiie_brighady_osnastiat_riedutami_novuiu_sistiemu_sviazi_obkatali_na_uchieniiakh

About the Development of the Ground Forces Advanced Communications System

[Korotchenko] *Let's talk a bit about how the development of the Ground Forces advanced communications system is progressing. And if you can, discuss it in maximum detail within what you can say on the air.*

[Galgash] *The Ground Forces conduct ground operations, at the same time the communications equipment, while taking into account the physics of the process, use all echelons from space and air to ground. Within the space, air, and ground echelons, a series of definite experimental design work projects is being conducted, which will permit us, for example, for the space echelon, to create a single third-generation satellite communications system (right now the second generation is being used). The projects will also permit us to create an orbital constellation and a ground grouping, which provide communications at any point. Relay stations on various flight-lifting devices are being used for the air echelon – this includes unmanned aerial vehicles, helicopters, aircraft, which use the physics distribution process and radio wave propagation to increase the communications range and support the command and control of troop groupings, which are operating on remote axes.*

The ground echelon at the operational-strategic echelon – is the foundation of the communications system's field component. Redut complexes constitute it – these are communications devices, which consist of communications equipment, channel encryption devices, and devices for providing services to officials. Contemporary requirements for the command and control system and, naturally, for the communications system, compel us to provide such types of communications as videoconference communications, telephone communications, data transmission, and troop automated command and control. And all of these communications devices are connected in certain individual devices of this complex. The hardware complex and the command-staff vehicles, which are being developed within Sozvezdiye-2015, constitute the foundation for the tactical echelon..

(continued)

Continued: The Russian Ground Forces Communication 'Backbone'

On the Modernization of Command and Control Posts in 2016

[Korotchenko] *Well, and what kinds of changes will occur in the technical equipment of the field component of the signals troops and in the development of satellite communications, well, in particular, what is planned in the near future?*

[Galgash] *As I have already said, equipping with Redut complexes is planned in the near future for the operational and strategic echelons for the communication system's field component. They have undergone testing in the troops in the last two years and they did themselves justice: they provide officials with all types of communications. And the comprehensive equipping of all of the command and control brigades of the military district army echelon with these complexes is beginning this year. Work is being conducted at the tactical echelon on the creation of a single command and control system at the tactical command and control echelon, which is complex based upon its structure and consists of 13 command and control subsystems: the headquarters command authorities, artillery, and others, and the types of troops, which are part of a combined-armed formation…*

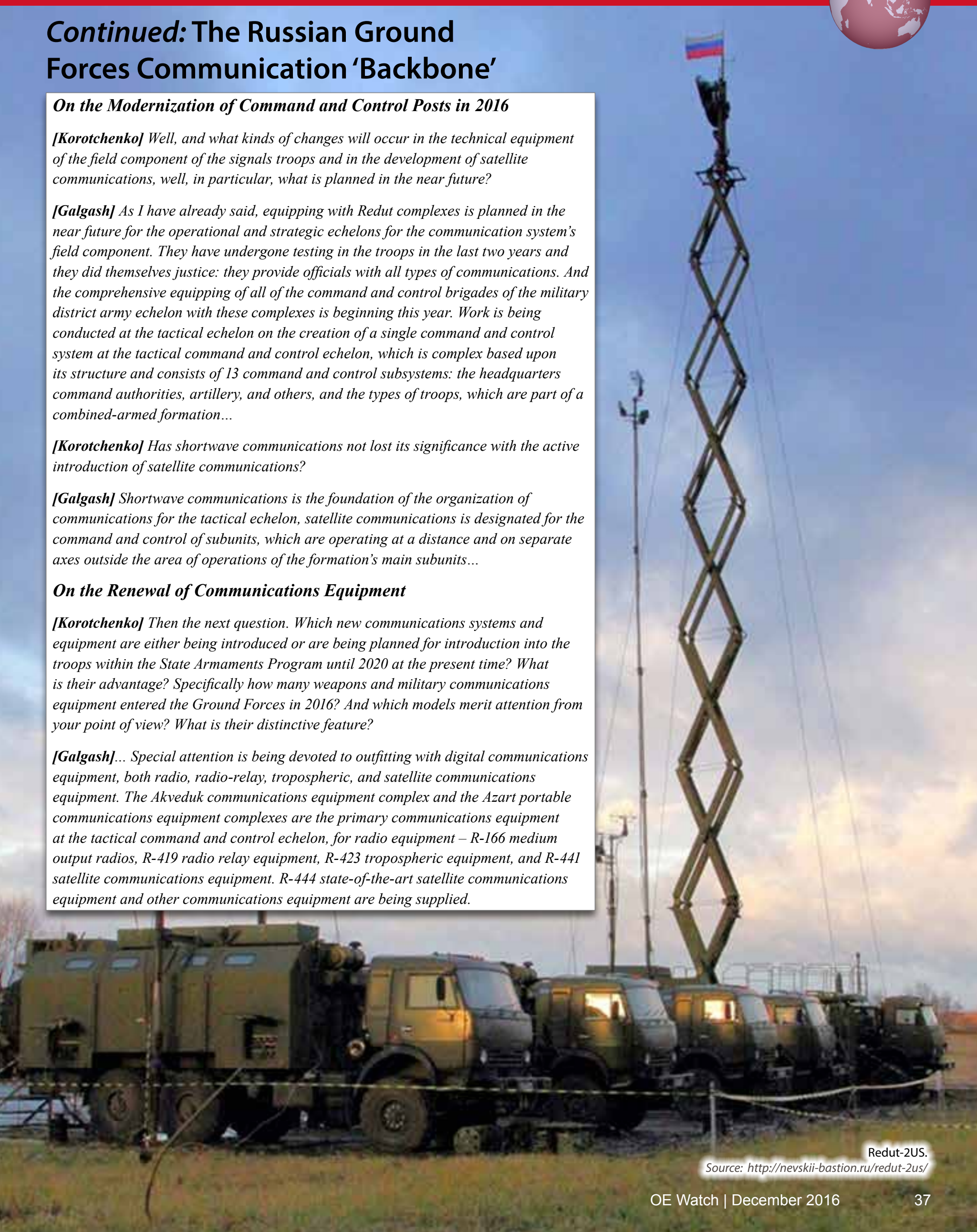
[Korotchenko] *Has shortwave communications not lost its significance with the active introduction of satellite communications?*

[Galgash] *Shortwave communications is the foundation of the organization of communications for the tactical echelon, satellite communications is designated for the command and control of subunits, which are operating at a distance and on separate axes outside the area of operations of the formation's main subunits…*

On the Renewal of Communications Equipment

[Korotchenko] *Then the next question. Which new communications systems and equipment are either being introduced or are being planned for introduction into the troops within the State Armaments Program until 2020 at the present time? What is their advantage? Specifically how many weapons and military communications equipment entered the Ground Forces in 2016? And which models merit attention from your point of view? What is their distinctive feature?*

[Galgash]*… Special attention is being devoted to outfitting with digital communications equipment, both radio, radio-relay, tropospheric, and satellite communications equipment. The Akveduk communications equipment complex and the Azart portable communications equipment complexes are the primary communications equipment at the tactical command and control echelon, for radio equipment – R-166 medium output radios, R-419 radio relay equipment, R-423 tropospheric equipment, and R-441 satellite communications equipment. R-444 state-of-the-art satellite communications equipment and other communications equipment are being supplied.*



Redut-2US.
Source: http://nevskii-bastion.ru/redut-2us/

Declining Pay and Housing Shortages in the Russian Military

OE Watch Commentary: The Kremlin leadership continues to wrestle with a struggling economy. Reduced fossil fuel revenues and Western economic sanctions, combined with an aging infrastructure and persistent corruption, have hindered economic growth and have forced the government to reduce social expenditures. While the Kremlin's patriotic rhetoric remains as strident as ever, it appears that these economic challenges are also beginning to affect military spending, at least with regard to quality of life issues for military personnel.

Quoting a recent report from the State Duma Defense Committee, the excerpt from the centrist newspaper *Nezavisimaya Gazeta*, points out that due to the devaluation of the ruble and inflation, "servicemen's pay and allowances have depreciated practically by half over the last five years." What makes this report doubly interesting is that it was "signed by Duma Defense Committee head, Hero of Russia Colonel General Vladimir Shamanov, who had commanded the Airborne Troops prior to the September elections." Shamanov is widely regarded as a strong Kremlin loyalist, and for him to sign such a report suggests that the economic situation for those in uniform has reached a troubling level. The report argues that the government has failed to properly index the pay to account for inflation for active duty and retired military personnel.

The economic downturn has also hampered the government's ability to provide adequate housing to military personnel. According to this State Duma Defense Committee report, as of "October 2016, 30,000 servicemen are among those who need permanent housing, and 11,000 of these await the receipt of a housing subsidy." Despite President Putin's directive to "provide permanent housing to all servicemen by 2015" the military housing waiting list continues to grow. The excerpt claims that "every tenth Russian Army officer needs permanent housing."

The article concludes by pointing out the comments of a high-level uniformed official, who claims that these budget shortfalls "will negatively impact prestige of the Armed Forces and their authority in the eyes of society and in the final account can negatively impact their combat effectiveness, which cannot be permitted." As the Russian economy continues to sputter, the military's fight over scarce budget allocations appears to be intensifying. **End OE Watch Commentary (Finch)**

"To this day every tenth Russian Army officer needs permanent housing."

Source: Vladimir Mukhin, "В страну возвращаются 'бездомные полки,' ('Homeless Regiments' Are Returning to the Country)," *Nezavisimaya Gazeta Online*, 7 November 2016. http://www.ng.ru/politics/2016-11-07/1_6852_army.html

A reduction in military expenditures in the next three years will affect social items of the defense budget to a considerable extent. The State Duma Defense Committee expressed concern on this score in its Conclusion No 4/1.1, which noted in particular that in the last five years "servicemen's pay and allowances have depreciated practically by half." They have not been indexed for a long time, however, nor will they be in 2017. The Conclusion states: "The Defense Committee believes that a diminished level of servicemen's social protection is impermissible" considering the importance of missions being performed by servicemen and the role of this social category of citizens in the life of society and the state."

The Conclusion on the draft bill "On the Federal Budget for 2017 for the Planning Period of 2018 and 2019" was signed by Duma Defense Committee head Hero of Russia Colonel General Vladimir Shamanov, who had commanded the Airborne Troops prior to the September elections…. It becomes clear that the State Duma Defense Committee disagrees not only with government refusal to index servicemen's pay and allowances, but also with the fact that President Vladimir Putin's May (2012) Edict No 604, which prescribes paying pensions to retirees two percent above inflation annually, also "is not being completely fulfilled." …

Former Airborne Commander, now Duma Deputy and Chair of the Defense Committee, Vladimir Shamanov.
Source: Wikimedia Commons

…It is apparent from the document signed by Shamanov that serious underfunding also is expected for other social items of the military budget. The Duma Defense Committee gives the reminder that "according to RF Defense Ministry data, as of the end of October 2016, 30,000 servicemen are among those who need permanent housing, and 11,000 of these await the receipt of a housing subsidy.… This, too, is not much: with this money it is possible to provide housing only to 7,000 officer and warrant officer families annually. This means the waiting list for housing in the Army and Navy will not be exhausted in the next three years. Meanwhile, the President assigned the task of providing permanent housing to all servicemen already by 2015.

This did not happen. To this day every tenth Russian Army officer needs permanent housing. Military deputies direct attention to the fact that "according to RF Defense Ministry data, as of the end of October there are 100,800 servicemen on file as needing official housing."…

…Major General Vladimir Bogatyrev, chairman of the National Association of Armed Forces Reserve Officer Associations, believes for his part that problems involving Armed Forces underfunding can be solved, but that this can be done only by the Supreme Commander. "Our Association sent a letter to the head of state on behalf of veterans of war and combat operations in which we expressed our concern over the possible reduction in defense expenditures," Bogatyrev told NG [Nezavisimaya Gazeta]. "We directed the President's attention to the fact that this will negatively impact prestige of the Armed Forces and their authority in the eyes of society and in the final account can negatively impact their combat effectiveness, which cannot be permitted."

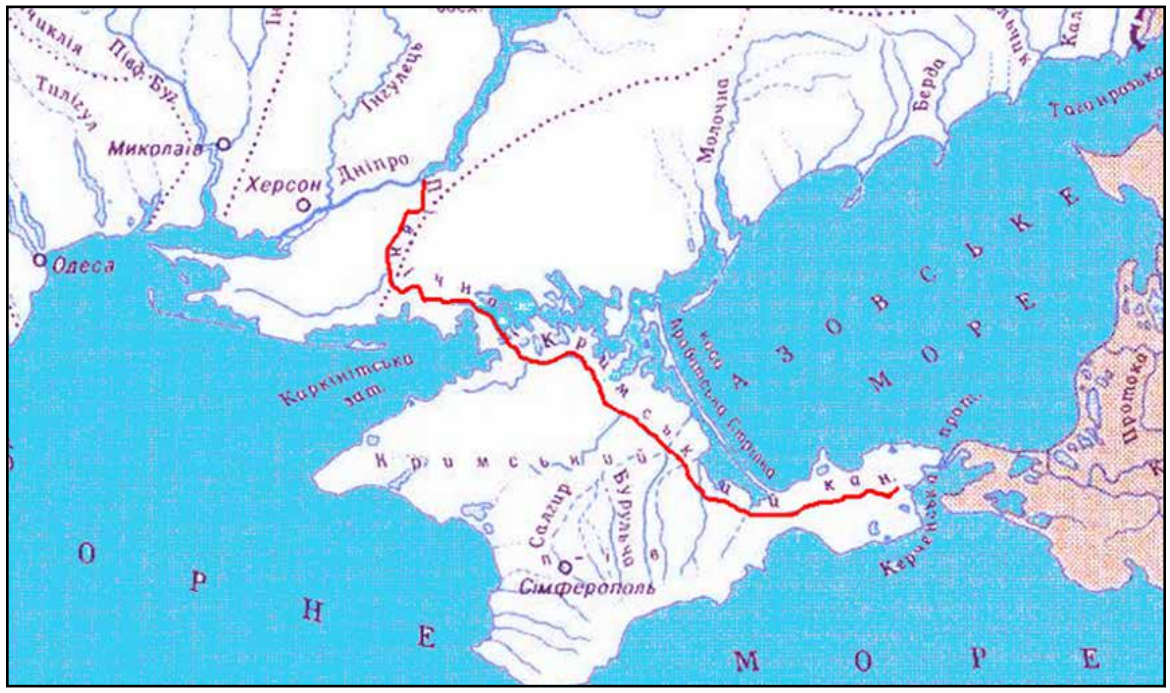
Crimean Water Problems: "Settlements are Doomed"

OE Watch Commentary: Over the past decade, Russian military theorists and pundits have posited that one of the chief drivers of future conflict will be scarce natural resources. The current lack of fresh water supply in Crimea may be a case in point. In the accompanying excerpt from a Ukrainian weekly, the author points out that the fresh water supply in Crimea has dropped toward critical levels, and that if a solution is not found soon, some settlements may be "doomed."

Prior to March 2014, Ukraine provided the bulk of energy and water to Crimea via power grids and the North Crimean Canal, which supplied "85 per cent of Crimea's fresh water needs." These sources have since been restricted by the government in Kiev, forcing Russia to ferry supplies into Crimea. Deprived of a land route into Crimea, the author describes the challenges the Kremlin has faced in providing water and energy to the peninsula. While the construction of a rail/road bridge from Russia to Crimea over the Kerch Strait continues, it will likely not be completed for at least another year. Indeed, the author refers to "the fairy tale about the bridge," which will purportedly solve "a number of problems," yet in reality, will not fully address Crimea's water and energy shortage. Plans to generate more energy for Crimea via electric turbines or gas pipelines (which could be used to run a desalinization project) have been hampered by Western sanctions.

The author describes how Russian officials have attempted in the past to bribe local Ukrainian authorities to channel water into Crimea. To date, these efforts have failed, and the water situation in some parts of Crimea has fallen to dangerous levels, where "soil salinization, particularly in north Crimea, [has begun] to develop." According to the experts quoted in the article, should the shortages continue, people living in these areas will be forced to relocate, perhaps even off of Crimea. The author concludes the article by suggesting that the Kremlin may ultimately back down and renounce its annexation of Crimea if the Ukrainian government remains firm in its resource blockade of Crimea. To date, however, the current Kremlin rhetoric and other available evidence do not point toward a such a resolution of Crimea's water problems. **End OE Watch Commentary (Finch)**

"Now water costs like gold, and, consequently, it must be handled in the same manner..."



Map of North Crimean Canal (red).
Source: Wikimedia commons

Source: Valentyna Samar, "Туды и сюды без воды…(There and here, but without water…)," *Zerkalo Nedeli*, 29 October 2016. http://gazeta.zn.ua/internal/tudy-i-syudy-bez-vody-_.html

...Regarding [shortage of fresh] water, electric power and everything linked to the above, one will have to stay patient. For two or three years to come according to President Putin....

...From small gas-turbine substations, and to building a bridge over the Kerch Strait. So far, only the technological, "capital" foundations of the future overpass have been erected and only on the narrow strip of the Tuzla Island, but, all of a sudden, there is no money any more... However, the fairy tale about the bridge, as a button for solving a number of problems, can be fed to the people for a number of years to come...

Any school pupil will tell you that to increase the consumption of electricity one must increase its generation first.... Which, according to the plan, will be launched only if Siemens turbines are supplied. However, the EU sanctions have stalled this project completely....As we can judge from Putin's words, by the end of this year Russia will have to lay across the bed of the Kerch Strait another "bridge" (a [natural] gas one) - a pipeline going to thermal power plants that are being under construction in Simferopol and Sevastopol. Which, using nobody knows which turbines (considering Siemens' assurances that the company is not going to break the EU sanctions), is to step up domestic production [of energy].

...The other sectors include water desalination technologies, which are now impossible because the process is energy-intensive. And, after that resorts will be developing, which depends on energy supplies.... So, the unresolved energy-supply problem is stuck into another one - the shortage of fresh water. Both before and immediately after the annexation of Crimea, many pundits were publicly saying that there was no alternative to [pumping] the water from the Dnieper River through the North Crimea Canal which supplies Crimea with up to 1bn cu.m. of water a year, enabling irrigation in this high-risk farming area....

The problems remain, and it is increasingly difficult for Vladimir Putin to find words to convince that these problems will be soon resolved. ...The minister of Russian resources and ecology of the Russian Federation, Sergey Donskoy, said in October that the situation with water supplies in Crimea was "objectively

(continued)

Continued: Crimean Water Problems: "Settlements are Doomed"

somewhat worse than a year previously". That water pipelines must be built to enable a flexible redistribution of water resources, that the local authorities must tighten their control over water consumption. "Now water costs like gold, and, consequently, it must be handled in the same manner..."

I will remind you that 85 per cent of Crimea's fresh water needs was satisfied owing to the North Crimea Canal. Moscow could not close this deficit, which occurred after Kyiv's refusal to let pump the Dnieper water through this canal to Crimea after the latter was occupied in the spring of 2014, nor can it close it two and a half years later....

...It has to be said that in the beginning, in 2014, the occupiers tried to solve the problem with running the water along the North Crimea Canal according to the "understandings" [the criminal world's rules of ethics]. At that time, according to the deputy head of the administration of the acting president, Andriy Senchenko, who in the spring of 2014 insisted on not pumping water through the North Crimea Canal, the travelling messengers from Simferopol offered a bribe of 20m dollars....

..."Since they have stopped watering the soil, capillary salinisation has started ALREADY. It produced a synergy effect, and soil salinisation, particularly in north Crimea, began to develop fast.... And without the Dnieper water, these settlements are doomed."...

...Today, many Crimean residents are fighting against Russia. Many regular servicemen who have kept their oath of allegiance to the people of Ukraine, and many heroic volunteers.... Many of them have relatives in Crimea. Perhaps, that is why none of them wants to retake Crimea by force. ...A different, bloodless way is the way of economic sanctions and resource limitations. Our people will understand it and will cope with it. The other ones - the recent arrivals - will have to go away.

Source: Ministry of Defense of Ukraine ; http://www.mil.gov.ua

Expanding Kremlin Influence in the Balkans?

OE Watch Commentary: Over the past several years, senior Kremlin officials have repeatedly expressed their displeasure at the continued expansion of NATO and Russia's decreased influence in Eastern Europe. This sense of anger and disapproval was reignited when, earlier this year, NATO officials announced that Montenegro would soon become the 29th member of the alliance. While uncovering the facts in the Balkans has always been a challenge, the two brief excerpts from Albanian sources suggest that the Kremlin may be using economic, information, and various forms of influence to foment "internal destabilization" in and around Montenegro to prevent the country's accession into NATO. This would allow Russia to keep its last bit of land access to the Adriatic Sea.

The first article insinuates that the (recently unsuccessful) coup d'etat in Montenegro was orchestrated by Russia, in order to "turn Montenegro into a satellite of Russia and Serbia." The article also questions why most Albanian media "remained almost totally silent over both the coup in Montenegro and the dangerous implications it has beyond its borders." Pointing to possible Russian-Albanian economic concerns, the author claims that the "silence in Albania regarding the events in Montenegro and the failed coup d'état there stinks of sponsorship," pointing out that some "Albanian ministers have sent written requests to the Russian Gazprom requesting that they set up an operation in Albania." In addition to economic incentives, the Kremlin has worked "to create a friendly Russian climate within the Albanian public through the daily glorification of Russian military power and glory, as well as the Russian president."

The excerpt from the second article describes an unsettled border issue between Kosovo and Montenegro, which if not resolved, could also stymie Montenegro's accession into NATO. The actual size of the disputed territory is relatively small (8,200 hectares or 31 square miles), but pro-Serbian deputies within the Kosovo Assembly continue to block ratification of the border agreement with Montenegro. The article points out that "there is widespread speculation in Kosovo that the Serbian deputies acted after consulting with Belgrade. If true, Serbia and Russia have killed two birds with one stone: both the Kosovo-Montenegro border agreement and Montenegro's NATO membership bid have been delayed."

While Montenegro's military contribution to the NATO alliance will be small, the second article explains that its accession "would enable the West to close Russia's last overland corridor of access to the Adriatic Sea." Incidents over the past couple of months appear to indicate that the Kremlin is willing to employ and expand its significant influence within the region to prevent Montenegro from joining NATO and to keep open its land access to the Adriatic Sea. **End OE Watch Commentary (Finch)**

"Russia is using all means to overturn Montenegro's current NATO membership situation and deviate its pro-Atlantic policy."

Map of Montenegro-Kosovo border.
Source: Wikimedia commons

Source: Shaban Murati, "Failed Coup d'Etat in Montenegro and Albania," *Gazeta Shqiptare*, 31 October 2016.

Events with international implications which occur in a neighboring country should automatically draw special attention from Albania's official offices and the public. However, this did not happen when a shocking event took place in Montenegro. A coup d'etat organized to take over the parliament, liquidate the prime minister, and bring the opposition to power through violence failed on the parliamentary Election Day on 16 October. This incident, during which, as Montenegro's Prosecutor Milivoje Katnic put it, "unprecedented terror and bloodshed was prevented," was almost not mentioned at all in Albania and the Albanian media, which supply the public with all kinds of daily banalities from Serbia and Greece. They remained almost totally silent over both the coup d'etat in Montenegro and the dangerous implications it has beyond its borders….

…It is not in Albania's vital strategic and geo-political interests to have a government in power in Montenegro that follows a policy aimed at turning Montenegro into a satellite of Russia and Serbia, which is the objective of the current pro-Russian and pro-Serbian opposition in Montenegro….

…Russia is using all means to overturn Montenegro's current NATO membership situation and deviate its pro-Atlantic policy. Unable to impose the electoral victory of the pro-Russian and pro-Serbian forces in Montenegro, Moscow applied the well-known geo-political method of changing the country's strategic orientation and its Atlantic policy by removing the government from office…. The silence in Albania regarding (continued)

Continued: Expanding Kremlin Influence in the Balkans?

the events in Montenegro and the failed coup d'etat there stinks of sponsorship. The confirmed implication of Serbian and Russian citizens shows that the coup d'etat was a joint Russian-Serbian operation….

…Pro-Russian factors in Albania, in politics, in the media, in non-profit, non-governmental associations, and in academic and religious circles have unusually strengthened over the last two years. There is a clear Russian strategy to create a friendly Russian climate within the Albanian public through the daily glorification of Russian military power and glory, as well as the Russian president…. Albanian ministers have sent written requests to the Russian Gazprom requesting that they set up an operation in Albania.

…"Montenegro has entered the arena of the Russian strategy to overthrow the pro-Atlantic government through internal destabilization. This is Moscow's strategy in the Balkans."

Source: Blerim Reka, "New Border Conflicts in Balkans Could Foil NATO Strategy," *Geopolitical Intelligence Services*, 14 September 2016. https://www.gisreportsonline.com/new-border-conflicts-in-the-balkans-could-foil-nato-strategy,defense,1982,report.html

Border disputes in the Western Balkans are stirring again. The newest one has flared up between Kosovo and Montenegro — two small nations that emerged from the breakup of the former Yugoslavia. Both are West-leaning, but their inability to handle a border demarcation issue threatens to derail NATO's larger strategy for containing Russia's influence in the region.

…The new conflict surfaced after a European Union-Balkans summit in Vienna, in August 2015, at which Kosovo and Montenegro signed an agreement on border demarcation. Montenegro's Assembly ratified it, but the Assembly of Kosovo has balked, as the opposition claims that the deal deprives Kosovo of 8,200 hectares of its land.

…At this point, Montenegro is just one step shy of becoming NATO's 29th member. Its accession has a particular weight for the alliance because it would enable the West to close Russia's last overland corridor of access to the Adriatic Sea. Having accepted Albania and Croatia in 2009, NATO is now tantalizingly close to being able to complete its southern security ring by covering the entire Adriatic line from Trieste to Otranto. All that needs to happen is that the missing link, Montenegro, meets the criteria for acceptance. The snag is that a candidate state must have no outstanding border issues with neighbors….

…There is widespread speculation in Kosovo that the Serbian deputies acted after consulting with Belgrade. If true, Serbia and Russia have killed two birds with one stone: both the Kosovo-Montenegro border agreement and Montenegro's NATO membership bid have been delayed.

Ukrainian Military Manpower Challenges

OE Watch Commentary: As winter approaches, the conflict between pro-Russian separatists and Ukrainian forces in the Donetsk and Luhansk regions of the country continues to smolder. All sides claim they are working toward a peaceful resolution, yet the political status of these regions remains undetermined and the fighting drags on. The Kremlin leadership appears intent on exploiting this conflict to weaken the current pro-Western orientation of the government in Kiev. The ability of the Ukrainian military to maintain a robust defense will be key in thwarting the Kremlin's plan. Alongside modern weaponry, trained and motivated personnel are central components of the Ukrainian defensive operations. The accompanying excerpts from Russian and Ukrainian sources describe some of the recent achievements and challenges in the realm of Ukrainian military manpower.

Since May 2014, the Ukrainian military has gone through six waves of mobilization (men, between the ages of 18-50, were conscripted for a period of up to 18 months) to beef up military manpower. These mobilized soldiers have now completed their tour of duty, and as the first excerpt points out, in early November 2016, President Poroshenko announced that "not a single military person called up under mobilization remains on the frontline." President Poroshenko went on to emphasize that now, the "Ukrainian Armed Forces must be fully staffed with volunteers, contract soldiers who are very well drilled, motivated, trained and equipped."

The second excerpt challenges the president's assertion that all drafted soldiers have been released and claims that "mobilized soldiers still remain on the frontline." The article goes on to point out that "the contract servicemen who have already been recruited are not so good or so well-motivated. In addition, a serious shortage of personnel is observed in units." According to a quoted source, "because they [the military] did not manage to recruit a sufficient number of people, they simply changed and reduced the establishment. For example,

(continued)

Source: "Ukraine finalizes 6th wave of demobilization," *Interfax*, 2 November 2016.

Ukrainian President Petro Poroshenko has accepted the report of Defense Minister Stepan Poltorak and Chief of the General Staff Viktor Muzhenko regarding completion of the process of discharge of military personnel in the country's sixth wave of demobilization…

"As the president and the Supreme Commander-in-Chief, I can report to the Ukrainian people that from now onwards, that not a single military person called up under mobilization remains on the frontline, in the ATO [Ukraine's military operation in Donbas] area. And the Ukrainian Armed Forces must be fully staffed with volunteers, contract soldiers who are very well drilled, motivated, trained and equipped,… The Ukrainian Armed Forces that we have today are qualitatively new," Poroshenko said.

(continued)

Continued: Ukrainian Military Manpower Challenges

whereas before, there were 670 persons in the establishment of a battalion, now there are only 500. Consequently, battalions and brigades are not at full strength." This article also questions the willingness of these new contract soldiers to fight, claiming that "far from all contract servicemen are well-motivated."

The article concludes by describing the continued challenges in transforming Ukraine's mobilization military to a professional force, particularly in light of the semi-frozen conflict in the Donetsk and Luhansk regions. Should the conflict escalate and require additional manpower, the excerpt points out the Ukrainian military will be able to draw upon the "reservists from all six waves of mobilization," totaling "100,000 such persons."

The Ukrainian military continues its transformation toward becoming a professional fighting force. However, as this conflict drags on, the resolve and tenacity of the Ukrainian state and military will be tested. **End OE Watch Commentary (Finch)**

Source: Artur Hor, "Порошенко уничтожил эту армию: в АТО жалуются на качество контрактников (Poroshenko Has Destroyed This Army: Volunteers in Antiterrorism Zone Complain About Quality of Contract Servicemen)," *Apostrophe*, 2 November 2016. http://apostrophe.ua/article/politics/government/2016-11-02/poroshenko-unichtojil-etu-armiyu-v-ato-jaluyutsya-na-kachestvo-kontraktnikov/8118

President Petro Poroshenko stated on 2 November that not a single military person called up under mobilization remains on the frontline. In his words, the Army should henceforth be provided only by well-motivated contract servicemen. However, participants in the antiterrorism operation say that the head of state's information is inaccurate and that mobilized soldiers still remain on the frontline. And in the words of volunteers, the contract servicemen who have already been recruited are not so good or so well-motivated. In addition, a serious shortage of personnel is observed in units….

Immediately under this statement comments appeared from people representing the military who stated that commanders were reporting inaccurate information to the president and that mobilized soldiers remain on the frontline after all….

…However, in the words of volunteers, the full replacement of mobilized soldiers with contract servicemen remains a big problem. Let us note that, according to the information of the Defense Ministry, 60,000 persons have signed a contract with the Ukrainian Armed Forces since the beginning of the year, and the total number of military persons who were accepted to serve under contract from 2014 through 2016 was 90,000.

"There are not enough personnel, and the contract-based army is not [as] successful as they are trying to make out to us," volunteer Olha Reshetylova says. "Because they did not manage to recruit a sufficient number of people, they simply changed and reduced the establishment. For example, whereas before, there were 670 persons in the establishment of a battalion, now there are only 500. Consequently, battalions and brigades are not at full strength. This is precisely how the command authority got out of the situation."

Problems are present not only with regard to the numbers of contract servicemen, but also with their motivation. Military expert Ihor Romanenko noted that one should not idealize mobilized soldiers. In his opinion, it is necessary to work more actively on the development of a professional army, and then the Defense Ministry will receive the possibility of filtering out unmotivated people….

In the expert's words, if an escalation of the conflict begins in the Donets Basin, reservists from all six waves of mobilization will come to help. According to the information of the Defense Ministry, there are 100,000 such persons.

Ukrainian President, Petro Poroshenko.
Source: Wikimedia commons

Russian UAV Defense and Developments

OE Watch Commentary: The Russian armed forces continue to develop and strengthen their unmanned aerial vehicle (UAV) technology and defenses. While perhaps not as advanced as their Western counterparts, Russian weapon manufacturers continue to close the UAV technology gap. The accompanying two excerpts describe two recent technological advances within Russian UAV defense and development.

The first excerpt from the government news source, *Rossiyskaya Gazeta Online*, describes a new Russian weapon which purportedly can defend against even swarms of drones by "reliably disabling their built-in radio-electronic systems, turning the drone into a useless piece of inert iron and plastic." This article also goes on to claim that "Russia is also developing a state-of-the-art, custom-built electronic warfare system, the Shipovnik AERO, which will have the capability to hack the built-in computers of enemy drones, in addition to taking them under full control."

The second excerpt, from the pro-Kremlin source *Izvestiya Online*, claims that Russia's new National Guard will soon be equipped with "tailor-made unmanned air vehicles that are protected against hostile takeover by enemy electronic warfare systems." According to the article, if an enemy tries to hack into the ZALA 16E5 system, the UAV "will ignore any incoming commands from an alien source and, in the event of loss of contact with the base, will switch to automatic mode and return to base under its own steam." This UAV will have a range of up to 150 km and will be equipped with "photographic and video cameras, night vision instruments, and a thermal imaging device."

With regard to Russian weapon developments, sifting the truth from disinformation has always been a challenge. Nevertheless, over the past several years, the Russian military and associated manufacturers have made significant improvement with advanced weapon systems to include UAV deployment and defense. **End OE Watch Commentary (Finch)**

"And such a weapon has already been developed in Russia; it does not destroy the drones physically or jam them, but reliably disables their built-in radioelectronic systems, turning the drone into a useless piece of inert iron and plastic…"

Source: Dmitriy Grigoryev, "В России создали эффективную систему борьбы со стаями ударных дронов (Effective System for Combating Swarms of Strike Drones Developed in Russia)," *Rossiyskaya Gazeta Online*, 29 October 2016. https://rg.ru/2016/10/29/v-rossii-sozdali-effektivnuiu-sistemu-borby-so-staiami-udarnyh-dronov.html

An effective weapon against swarms of mini strike drones capable of disabling an air defense system has been developed in Russia. TASS has been informed of this by a representative of the United Instrument Manufacturing Corporation (UIMC, which is part of the Rostekh State Corporation).

"To combat massed raids by robotic systems, a weapon is needed that will act on the drones on an intrinsically new level. And such a weapon has already been developed in Russia; it does not destroy the drones physically or jam them, but reliably disables their built-in radioelectronic systems, turning the drone into a useless piece of inert iron and plastic," the agency's interlocutor said….

…The source clarified that ordinary air defense systems and electronic warfare complexes are powerless against such "robotic aerial predators," but the intrinsically new weapon developed by Russian specialists will simply not allow the swarm of robots to reach its place of destination….

…As Rossiyskaya Gazeta has already reported, in addition to a weapon against robot swarms, Russia is also developing a state-of-the-art, custom-built electronic warfare system, the Shipovnik AERO, which will be able not only to hack the built-in computers of enemy drones, but also to take the flying vehicles under full control….

Source: "Росгвардия получит невзламываемый беспилотник (Federal Service of National Guard Troops To Receive Unhackable Drone)," *Izvestiya Online*, 3 November 2016. http://izvestia.ru/news/642289

The Federal Service of National Guard Troops (FSVNG) is to receive tailor-made unmanned air vehicles that are protected against hostile takeover by enemy electronic warfare systems. The drone, which is manufactured by the company ZALA AERO GROUP (which is part of the Kalashnikov concern), will ignore any incoming commands from an alien source and, in the event of loss of contact with the base, will switch to automatic mode and return to base under its own steam.

The state-of-the-art unmanned air vehicle (UAV) ZALA 16E5 is capable of carrying out aerial reconnaissance while remaining in the air for up to 16 hours consecutively and transmitting an image to the operator at a distance of up to 150 km. The flying drone's built-in equipment includes photographic and video cameras, night vision instruments, and a thermal imaging device. And images received from them are superimposed on one another, allowing the operator to monitor a terrain at any time of day or night….

The tailor-made Russian software, which, in Khamitov's words, is the exclusive design of ZALA GROUP, renders UAVs invulnerable to enemy electronic warfare systems. The control signal is encrypted by a special algorithm, and when an attempt is made to replace the communications channel or jam its built-in system, it will detect the substitution and issue a command to return the apparatus to its place of launch by the shortest route.

Russia Develops New Anti-Sonar Coating for Submarines

OE Watch Commentary: The Krylov Science Center and *Okeanpribor* (Ocean Instruments) Concern, with the support of Advanced Research Foundation (FPI) have been developing a new anti-sonar coating to be applied to Russia's submarine fleet. The excerpted article from *Izvestia* discusses the implications of this, particularly regarding signals detection and distortion.

According to the piece, the new piezoceramic coating is a polymer film with zirconium, titanium, and lead oxides, all of which have signal absorbing characteristics. The article explains that when the coating is applied to the hull of a submarine, it uses the piezoceramic's properties of absorption to detect signals that come in contact with the submarine's hull, in effect turning the hull into a hydro-acoustic antenna for the entire ship. Using the data gained from the coating, the submarine can detect signals and distort any signals coming in contact with the coating.

According to the article, the project is currently in the late stages of development, which is expected to be completed in 2017. The reliability of the new coating, and the distorting qualities it has, makes piezoceramics a likely replacement for the rubber anti-sonar coating in use with the US and Russian navies today. The article outlines the Russian Navy's plans to equip future submarines with the coating, as well as the its plans to equip current submarines with the coating after the development is complete. **End OE Watch Commentary (Gartner)**

"Aleksandr Mozgovoy, an expert in the field of naval engineering, noted that piezoceramic coatings will replace passive anti-sonar coverings made from rubber, which today cover all multirole and nuclear submarines."

Source: Dmitriy Litovkin and Aleksey Ramm, "Russian Submarines will become Invisible to Sonar: The Krylov Science Center and the 'Okeanpribor Concern are Creating a Unique Coating based on Piezoceramics," *Izvestiya Online* 30 September 2016

"The use of piezoceramics, or more precisely piezoceramic-based films, is an advancement in the development of sound-absorbing technologies, and here Russian developers again substantially surpass Western developments," noted Aleksandr Mozgovoy. The main advantage is the capability of acquiring a long-lasting and strong covering, within which various sensors and antennas can be integrated. Not only future ships, but also those already in the inventory can be covered with the new anti-sonar material. For example, the Project 667BDRM strategic nuclear-powered submarine missile cruisers, the missile attack APLs [nuclear-powered submarines], and the multirole Project 971 submarines. For this it would be sufficient to replace their hull covering with a new coating during regular between-deployment repairs, and connect it to the electronic systems of the submarine itself."

Delta IV class submarine.
Source: https://upload.wikimedia.org/wikipedia/commons/8/83/Submarine_Delta_IV_class.jpg

Return of the Antitank Rifle

OE Watch Commentary: During the Great Patriotic War (the Soviet War with Germany in World War II), Soviet infantry would haul the PTRD-41 or PTRS-41 14.5x114mm antitank rifles. These were unwieldy (just under seven feet long), heavy (38 pounds and 46 pounds respectively), could engage targets out to 800 meters and produced a very hefty recoil against the gunner's shoulder. They were not very effective in penetrating tank armor and produced an immense muzzle blast that gave away the weapon's location immediately. Despite their designation as antitank rifles, they were more accurately anti-material weapons that were effective against less-armored weapons systems and vehicles. The recoil frustrated all efforts to equip them with telescopic sights.

As the accompanying article from *Izvestia* discusses, Tula is developing a new, unwieldy, heavy, hefty-recoil, large-caliber sniper rifle for the ground forces. It is designated as the KSV. Up to this point, the maneuver brigade had a sniper platoon. The article indicates that this may be increased to a sniper company with the addition of a platoon of these anti-material weapons. It will fire a 23mm [.91 caliber] round (the same diameter as the antiaircraft round common in the ZPU-1 and ZPU 23-4 antiaircraft systems). It will use design characteristics of the 23mm round and the 30mm automatic cannon found in the turret of the BMP and helicopter gunships. This indicates that the bullet is probably a sub-caliber, fin-stabilized discarding-sabot round with a tungsten penetrator. Recoil dissipation will be a major design challenge. Tula has pulled off some real surprises in the past. It will interesting to see how they handle this latest not-so-small-arms challenge. **End OE Watch Commentary (Grau)**

"The Russian Defense Ministry plans to equip snipers and motorized rifle and tank brigades with unique large-caliber sniper rifles capable of disabling enemy tanks with a single shot using 23-mm bullets, destroying armored vehicles and armored personnel carriers, and also eliminating the crews of mortars, anti-tank missiles, and man-portable air defense systems."

Source: Aleksey Ramm, "Defense Ministry Orders Sniper 'Mini-Cannon': It Can Be Used To Smash a Tank Gun, Disable a Tank Tread or Shoot Off a Track Link," *Izvestia*, http://www.izvestia.ru, 14 October 2016

The development of the new unique sniper system is being conducted by the Tula Instrument Design Bureau, which is part of the Precision Systems Holding Company. "The large-caliber sniper rifle is listed on the development list of possible new Ground Forces small arms systems up to 2020. The Instrument Design Bureau is now leading the design of the new rifle system. After the rifle is manufactured and factory and state tests are underway, the government will decide on its adoption. We plan to complete all work in the next two-three years."

Technically speaking, this is not about a large-caliber sniper rifle but a small sniper cannon, since systems with calibers greater than 20-mm are categorized not as small arms but as small caliber cannon. Aleksei Sorokin, head of the Central Design Research Bureau of Sporting and Hunting Weapons stated that his enterprise plans to issue the first prototype of the KSV next year. "We are now at the most complex stage of work. We are developing the ammunition for the new system," Sorokin stated. "The ammunition will be based on so-called wrap-around [pereobzhaty-sub-caliber] cartridges from 30-mm shells used in automatic cannon and 23-mm anti-aircraft ammunition. A unique bullet design with very high ballistic coefficient has also been developed. According to our plans, over the next year we will prepare the working design documentation, start to issue the KSV, and then move on to design tests. It is clear that the product will be fairly big with length of almost two meters, and heavy, since the 23-mm ammunition has considerable recoil." The unique new ammunition for the KSV does not pierce thick tank armor, but can disable a tank with a single shot.

Military expert Aleksei Leonov stated "The development of sniper rifles whose caliber is close to 20-mm currently occupies an important place in the small arms system in many countries of the world. Such rifles are heavier than standard sniper rifles of 12.7-mm caliber currently in service. But in terms of range of fire the 20-mm sniper systems are not inferior to small caliber guns mounted on armored personnel carriers and infantry fighting vehicles, while surpassing them in accuracy. The energy of the ammunition in this rifle makes it possible to penetrate the armor of military vehicles and field fortifications, not to mention personnel. In fact, this rifle dominates over other sniper systems on the battlefield."

Currently, the composition of each Russian army infantry brigade includes a motorized rifle company of snipers, of which it is planned to equip one platoon with sniper 'mini-cannons.' The subunit will act as a mobile reserve headed by the unit commander in the most important area.

Sorokin stated that "the tank has many vulnerable spots. A KSV can destroy a tank gun and it will be unable to fire. By smashing its viewing devices and sights we will leave it blind. With a broken tank track or track link, and according to calculations our ammunition can do this, the tank will lose mobility. Currently, simultaneously with the creation of the KVS, we are conducting detailed scientific research where we are analyzing the vulnerabilities of tanks and ways to destroy them."

Upgrading Arctic Air Defense

OE Watch Commentary: Russia has maintained an anti aircraft gun and air defense missile capability on the assumption that electronic countermeasures can neutralize missiles, but bullets will fly unhindered through an electronic barrage. Often, the gun and missile systems are paired on tactical air defense vehicles such as the SA-22 Pantsir and the SA-6 Tunguska. As the accompanying passage discusses, this dual capability is being stripped from the Arctic version of the SA-22. The system will lose its two dual 30mm autocannon for additional missiles. The autocannon are for short range air defense and Arctic skies are not always clear or sunlit, as the passage points out. Further, there are more moving parts in a gun system that can be affected by severe cold. These may be factors in the loss of the autocannon capability.

The Arctic Pantsir may also be mounted on the Vityaz DT-30P tracked, articulated, amphibious, all-terrain vehicle. This vehicle platform is becoming ubiquitous for the Arctic ground forces as it becomes the carrier of choice for supplies, personnel, medical evacuation, weapons systems and field kitchens. From a repair and logistics perspective, it makes a lot of sense. **End OE Watch Commentary (Grau)**

Source: Mikhail Kotov, "Arctic-Class Pantsir Will Have No Guns," *Moscow Life*, 9 November 2016. https://life.ru/

The Instrument-Making Design Bureau engaged in the development of the Pantsir-S1 self-propelled surface-to-air missile/gun systems has been discussing the configuration of the Arctic-version Pantsir. In the words of the designers, it will not have its gun armament but a modernized target-detection radar station will be installed on the system instead, according to the publication Voyennoye. rf reports.

In addition, the Arctic version of the air defense system will be provided with an increased missile capacity — 18 missiles will be installed instead of 12. These are the requirements of the Ministry of Defense, which directed this change.

There are very likely two principal reasons for the absence of the gun armament. First, dense fogs are a frequent occurrence in the Arctic, and the target needs to be visible for engaging it with a gun, while radar guides a missile to its target automatically. Second, the extremely low Arctic temperatures severely complicate the functioning of gun armaments.

The Pantsir system may be mounted on the Russian-built Vityaz DT-30 PM all-terrain chassis. It is a tracked vehicle and has been built to travel across ground with a low load-bearing capacity — swampland, for instance — virgin snow, roadless terrain, and rugged forested terrain. The Vityaz can operate within a temperature range of plus 40° to minus 50° C [104° to -58° F].

Previous information disclosed plans to mount the Tor-M2 short-range SAM system on a Vityaz chassis for use in Arctic and High Northern environments.

Arctic Ground Forces Training Concludes Before Onset of Polar Night

OE Watch Commentary: The weather in Murmansk this time of year is iffy. It can rain. It can snow. Daylight dwindles until December, when it disappears completely for some 40 days. As the accompanying passage by the Western Military District Press Service discusses, the Northern Fleet's 200th Motorized Rifle Brigade and the 61st Naval Infantry Brigade conducted their final major joint training exercise for 2016. The exercise included force-on-force training and live-fire exercises. **End OE Watch Commentary (Grau)**

Source: "A Two-Sided Tactical Exercise of Northern Fleet Ground and Coastal Defense Troops North of the Arctic Circle Has Ended," *Western Military District Press Service, Ministry of Defense of the Russian Federation*, 22 October 2016. http://www.mil.ru.

Over the course of several days, soldiers from a Northern Fleet motorized rifle brigade and naval infantry brigade practiced combat training missions in accordance with a combat training course. Individual elements of the exercise involved subunits moving to specified locations, taking up advantageous positions, and carrying out defensive and offensive actions.

In the course of the exercise, the Northern Fleet ground and coast guard troops improved their proficiency in utilizing standard-issue weaponry and military equipment, constructing field fortifications, and coordinating battlefield interaction. Here the motorized rifle subunits rehearsed defensive tasks, whereas the naval infantry practiced offensive tasks.

During the practical exercise phase, combat range-firing exercises involved motorized rifle, tank, and artillery subunits. In the course of the firing exercises T-72B tank crews; field gun crews of the Akatsia, [2S2 152mm self-propelled howitzers], Gvozdika [2S1 122mm self-propelled howitzers], Nona [2S9 120mm self-propelled gun/mortars], and Msta-S [2s19 152mm self-propelled howitzers]; gun crews of the Shilka quad 23mm self-propelled anti-aircraft guns; gunners of the Strela-10 surface-to-air missile system; firing crews of the Grad [BM-21 122mm] multiple rocket launchers, teams of the [AT-4 Spigot] Fagot antitank guided missile system; and subunits of motorized rifle personnel carried out fire missions to suppress and destroy a notional enemy's combat equipment and manpower.

Subunit commanders' ability to control their subordinates under the conditions of rapidly changing combat were assessed in the course of the exercise.

Around 5,000 service personnel and more than 500 pieces of armored and support vehicles were mobilized during individual phases of the exercise.

Russia Training Special Forces Helicopter Squadrons

OE Watch Commentary: Ever since the first rotary wing assets were introduced to the battlefield they have become an indispensible section of any modern military. The Russian military is now seeking to train more specialized helicopter squadrons, which will allow them to employ their special forces more efficiently.

"Military expert Anton Lavrov observed that at the present time the air and space forces of practically all developed countries have helicopter subunits specialized in work with special units and subunits."

The Mi-8AMTSh helicopter in flight.
Source: http://pinstake.com/russian-military-helicopter

The goal of the new specialized helicopter squadrons is to transport special forces soldiers to the rear of the enemy, to destroy their fire support and cut off their evacuation routes. The pilots of these new squadrons are being taught to fly at ultra low altitudes, as well as attack by utilizing the element of surprise to their advantage. These specialized pilots would increase the likelihood that the troops they transport survive, as well as accomplish their mission.

As the accompanying excerpt points out, the special forces' helicopter subunits are being formed from regimental and brigade Mi-8AMTSh and Mi-8MTV-5 transport and assault helicopter squadrons. The newly trained pilots will also be integral in the deployment of armored vehicles such as the Gusar and Tigr. These armored vehicles will be deployed with the use of the Mi-26 ultra-heavy transport helicopters, nicknamed "flying cows" due to their immense size. Their size presents a challenge for pilots trying to fly undetected into the enemy rear, but the Mi-8AMTSh and Mi-8MTV-5, the helicopters that will be transporting the special forces soldiers, cannot fit the vehicles in their fuselage.

Perhaps one of the reasons the Russian military is focusing on creating new squadrons of specially trained helicopter aviators is due to the historical success of such units. Two instances of special forces pilots being coupled with special forces soldiers are the war with Georgia in August of 2008; and the operation in Crimea in the spring of 2014. In both of these instances, the 344th Center provided the pilots for the operations. These pilots will form the groundwork and provide combat training for the pilots of the new specialized squadrons. **End OE Watch Commentary (McConnell)**

Source: Aleksey Ramm,"Российский спецназ получит вертолетные эскадрильи (Russian Special Forces Will Be Getting Helicopter Squadrons)," *Izvestiya Online*, 5 October 2016. http://izvestia.ru/news/635900

The special forces' helicopter subunits are being formed from regimental and brigade Mi-8AMTSh and Mi-8MTV-5 transport and assault helicopter squadrons. As distinct from conventional line pilots, the special forces' helicopter pilots will acquire more in-depth flying skills under adverse weather conditions and also at night under terrain-following conditions, when the crew of the rotary-wing vehicle descends to maximum low altitude, hiding from enemy observation. The special forces' pilots will also master several special tactical maneuvers making it possible to confuse the enemy and successfully land special forces in the enemy rear.... Military expert Anton Lavrov observed that at the present time the air and space forces of practically all developed countries have helicopter subunits specialized in work with special units and subunits.

Russia's National Guard to Receive "Unhackable" Drone

"The tailor-made Russian software... renders UAVs invulnerable to enemy electronic warfare systems."

OE Watch Commentary: In April 2016 Russian President Vladimir Putin authorized the development of a National Guard (NG). Over the ensuing months he has not only developed regulations for the NG and provided a manning strength of 340,000 service men and women, but he has also outfitted the NG with various types of weaponry, both new and old. As the accompanying passage discusses, the latest new addition appears to be the so-called unhackable drone, designated as the ZALA 16E5. These drones are reportedly protected against hostile takeover by enemy electronic warfare systems. The drone is designed by the ZALA AERO GROUP which, according to company spokesman Nikita Khamitov, will be delivered at the start of 2017. **End OE Watch Commentary (Thomas)**

Source: "Federal Service of National Guard Troops to Receive Unhackable Drone. Latest Flying Drone Will Identify Attempt to Substitute its Control Signal and Return to Launch Position," *Izvestiya Online*, 3 November 2016.

"The Federal Service of National Guard Troops is to receive tailor-made unmanned air vehicles that are protected against hostile takeover by enemy electronic warfare systems. The drone, which is manufactured by the company ZALA AERO GROUP (which is part of the Kalashnikov concern), will ignore any incoming commands from an alien source and, in the event of loss of contact with the base, will switch to automatic mode and return to base under its own steam.

The state-of-the-art unmanned air vehicle (UAV) ZALA 16E5 is capable of carrying out aerial reconnaissance while remaining in the air for up to 16 hours consecutively and transmitting an image to the operator at a distance of up to 150 km. The flying drone's built-in equipment includes photographic and video cameras, night vision instruments, and a thermal imaging device. And images received from them are superimposed on one another, allowing the operator to monitor a terrain at any time of day or night.

At the present time, the 16E5 DVS unmanned air vehicle is undergoing factory tests, which will last until the end of the current year," the ZALA Company's spokesman, Nikita Khamitov, told Izvestiya. "On the basis of the results of testing, the drone has received a number of improvements, including the replacement of its electric engine with a more compact and powerful internal combustion engine, which made it possible to increase flight duration and maximum speed several times over. We plan to deliver the UAV to the FSVNG for testing already at the beginning of 2017.

The modus operandi of a system for taking hostile control of drones is fairly simple: Electronic reconnaissance stations analyze the UAV's control signal and create a copy of it. After this, the station severs the drone from the original control signal with powerful interference, replacing it with the fictitious one. The tailor-made Russian software, which, in Khamitov's words, is the exclusive design of ZALA GROUP, renders UAVs invulnerable to enemy electronic warfare systems. The control signal is encrypted by a special algorithm, and when an attempt is made to replace the communications channel or jam its built-in system, it will detect the substitution and issue a command to return the apparatus to its place of launch by the shortest route."

The Zala 421 16E5 on display at an arms show.
Source: https://21stcenturyasianarmsrace.com/2015/11/10/the-drone-index-zala-421-16e5/

Russia Supplies China with 3-D Electronic Maps for the Su-35 Fighter

"...the system makes it possible to create fairly complex electronic flight maps..."

OE Watch Commentary: For the past year, Russia and China have negotiated over the decision to offer China digital maps. In late October, a decision was made to do so. China does not possess a present capability to make electronic maps, according to Russian spokesman Givi Dzhandzhgava, deputy general director of an electronic technologies concern. As the accompanying piece from *Izvestia* discusses, the 3-D maps depict the terrain, object on the ground, and enemy positions and air defense systems. With the maps, Chinese pilots will be able to fly at much lower altitudes and hit enemy target with higher accuracy. Russian military expert Yuriy Lyamin noted that by accepting Russian software "China will bind itself to us for the entire working life of the Su-35s." **End OE Watch Commentary (Thomas)**

Source: Dmitriy Litovkin, "Russia to Supply 3-D Electronic Maps for Su-35s to China. Thanks to Electronic Information Chinese Pilots Will be able to Carry Out Flights at Ultralow Altitudes and Hit Targets Accurately," *Izvestiya Online*, 1 November 2016.

The 3-D cartography is carried out by Mobilnyye Informatsionnyye Sistemy [Mobile Information Systems] NPO [Science and Production Association] in conjunction with the Geokosmos company. The method is based on the use of an air-based laser scanner combined with a high-resolution digital aerial photography device and a module of the GPS\GLONASS satellite system for determining coordinates. Scanning the space, the laser records the inclined distance to the point of reflection and the value of the angle. The operation of the laser-ranging system results in a 3-D coordinates-linked "cloud" of laser points reflected from objects in the terrain and the surface of the land. The processing of these data by special software subsequently shapes a 3-D model of the terrain.

According to Izvestiya's information it is a question of the cartographic depiction of Chinese territory alone. In this context along with the software Beijing will be supplied with SPPZ-35 firmware systems for planning and preparing flight assignments, developed and manufactured by the Ramenskoye Instrument Making Design Bureau (RPKB).

The product makes it possible to systematize information on the tactical situation, weather conditions, and geographical relief of the terrain," Daniil Brenerman, general director of the enterprise, tells Izvestiya. "The SPPZ-35 creates an interactive layout of the aircraft's flight plan and inputs data for the use of air-launched weapons, the set of communications systems, and programs for firing decoys, combining all these data into a single electronic document that will be loaded into the fighter's onboard computer by means of a flash drive.

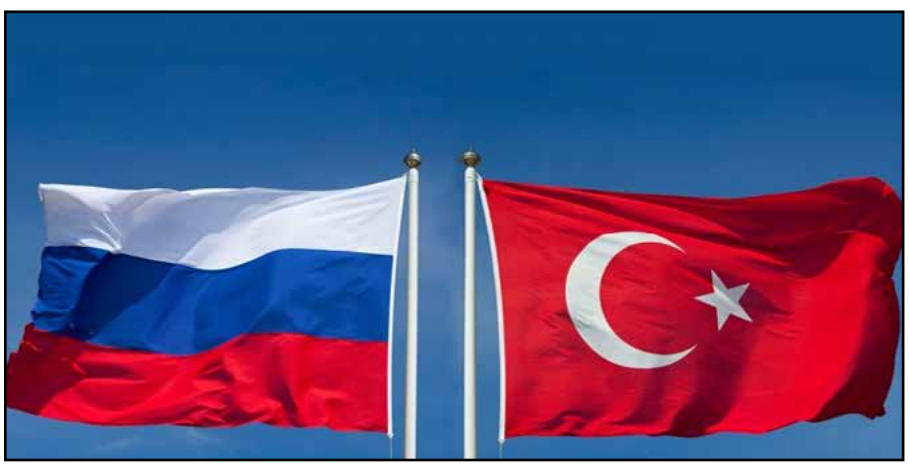
According to the specialist, the system makes it possible to create fairly complex electronic flight maps incorporating information on the aerial navigation situation in the region of flight, the boundaries of prohibited and dangerous zones where test flights are taking place, in-flight refueling, flights outside the lower echelon, data on artificial isolated and group obstacles, and navigation and flight support aids."

Sukhoi Su-35S at MAKS-2011 airshow.
Source: https://upload.wikimedia.org/wikipedia/commons/a/a9/Sukhoi_Su-35S_at_MAKS-2011_airshow.jpg

The views expressed are those of the author and do not represent the official policy or position of the Department of the Army, Department of Defense, or the US government.

The Evolution of Turkish-Russian Relations

On 9 August 2016, Russian President Putin and Turkish President Erdoğan met in St. Petersburg to restore the relationship between Turkey and Russia. Their growing friendship had come to an abrupt end when Turkey had shot down a Russian fighter jet in November 2015. The meeting resulted in some reconciliation between the two countries, particularly the effort to re-establish economic ties. It was an important moment in the complex ties between the two countries, with regional economic and security consequences. An examination of Turkish and Russian perspectives provides insight into how each country sees its interests in relation to the other; and how this might impact the future of Turkish-Russian relations. The general view on both sides appears to be that while there may be good prospects for reconciliation in the economic, energy cooperation and trade fields; Syria and wider security challenges will continue to be a thorn in relations.



Source: http://www.sigmalive.com/en/news/international/138172/russiaturkey-relations-freezing-over-fast

Background

Turkey and the Soviet Union were on opposite sides of the Iron Curtain throughout the Cold War, and relations were slow to take root in the post-Cold War era. Turkish President Erdoğan's rise to power in Turkey in the early 2000's reversed decades of Cold War freeze and ushered in an era of economic cooperation, with Russia becoming Turkey's top trade partner at one point. In December 2004, Putin became the first Russian head of state to visit Turkey since the Russian and Ottoman empires established relations in the 15th century. This was followed by Erdoğan's visit to Moscow in January 2005 and another visit a few months later. Ideological differences which defined the countries' relations during the Cold War era made way for a collaborative relationship, with some competitive overtones.

Starting in 2005, Turkish-Russian relations took on a new importance, in the form of energy. Trade had increased gradually since the end of the Cold War; but the real boost came with the growth of Russian natural gas exports to Turkey. Over the next decade, the bilateral visits and volume of trade continued to flourish. Russian tourists flocked to Turkey, becoming the second largest group of tourists in Turkey by 2015. Turkey chose Russia's state-run atomic energy company to build its first nuclear power plant.

During this time, there were stark differences in the two countries' geo-political interests, but these differences did not seem to obstruct the mutually beneficial economic ties and a strong rapport on the leadership level. In Turkey, this was characterized as 'compartmentalization' of issues.[1] This meant that despite fundamental disagreements between Ankara and Moscow on issues including Syria, Egypt, Ukraine, Georgia, Armenia, Chechens, Kurds, and a competition for influence in Central Asia, the two presidents could still work together to increase trade and forge a close energy partnership. This era of 'compartmentalization' ended with Turkey's downing of the Russian jet in November 2015 that briefly violated Turkish airspace; and the subsequent trade and economic sanctions that Russia imposed on Turkey.[2]

Economic and military ties

The Russian government imposed sanctions against Turkey soon after the downing of the Su-24, including a ban on the import of Turkish goods, the cancellation of the visa-free regime, and restrictions against tour groups traveling to Turkey. Over 4 million Russian tourists had visited Turkey in 2014.[3] An examination of the imports and exports between the two countries from 2000-2014 show that Russian exports to Turkey have been considerably larger than Turkish exports to Russia.[4] These economic ties all came to a halt in November 2015. The combined economic damage, along with a sense of isolation in the region, led Erdoğan to express his sorrow and apologies for the November incident, in a cleverly worded letter he sent to Putin on 26 June 2016, which helped reverse the negative trend in relations.[5]

The meeting between Putin and Erdoğan on 9 August 2016 included reviving "Turkish Stream," a proposed natural gas pipeline from Russia to Turkey across the Black Sea which had been put on hold since November 2015.[6] Turkey has been an important customer of Russian natural gas and according to one estimate from 2015, the country imported 27 billion cubic meters of natural gas. Turkish Stream has a potential capacity of 63 billion cubic meters, but it may be as low as 15.75 billion.[7] The total cost of the pipeline is estimated at $12.8 billion, though it is unclear how the project will be financed.[8] Charter flights for Russian tourists resumed following the meeting, but it is expected to take 2-3 months before it has a noticeable impact for the Turkish economy.[9]

Outside of economic ties, the Russian government took steps to re-establish and improve its military relationship with Turkey. Even before the Erdoğan-Putin meeting took place, the Russian Ministry of Defense (MoD) proposed a new set of procedures to improve Russian-Turkish command and control for air operations in order to avoid another incident.[10] A "hot line" was established between the General Staffs of Russia and Turkey. Putin and Erdoğan also created a committee made up of political, military, and intelligence officials in order to coordinate efforts in Syria. Officials noted that while both sides have different views on various security issues in Syria, they want Syria to remain a unified state.[11]

Conflicting Interests in Syria

While the meeting between Erdoğan and Putin resulted in some reconciliation between the two sides, Russian media and security analysts have noted conflicting interests over the situation in Syria. One of the main differences over Syria is the Russian support for President Bashar al-Assad while the Turkish government wants him removed from power.[12] In addition to this, Turkey has been fighting with the Kurdistan Workers' Party (PKK) for a number of years, while Russia's relationship with Kurds in Syria has been supportive, though not always clear. The Russian government has provided some political support for Kurds in Syria and there are reports that the government has also provided weapons in addition to air strikes which targeted groups fighting the Kurds.[13] Russia media has also not been clear about what support the government provides Kurds, but acknowledged that any support is detrimental to any reconciliation with Turkey.[14]

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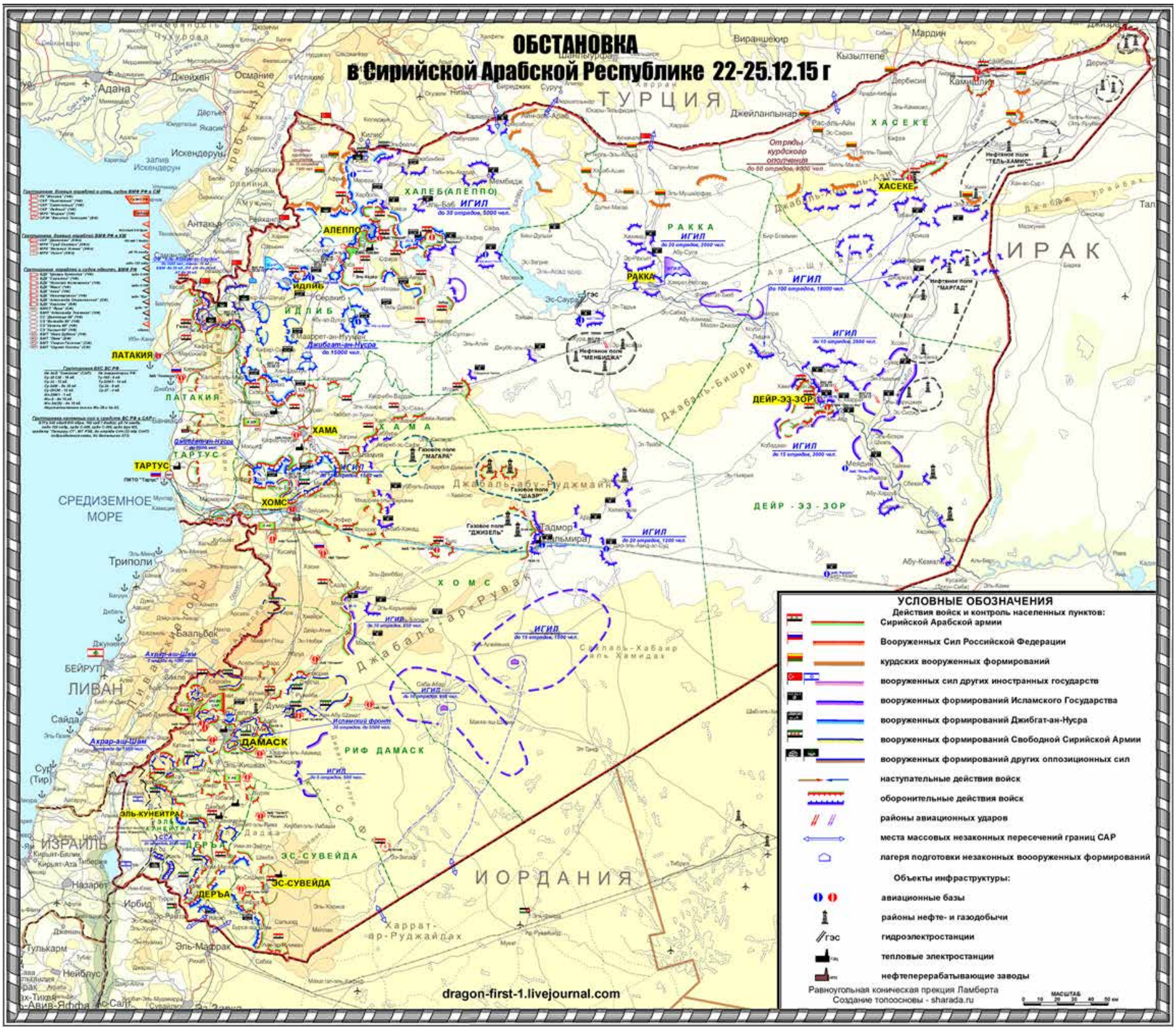
Continued: The Evolution of Turkish-Russian Relations



Russian bases and troop deployments in Syria as of 25 December 2015. A higher resolution version of the map can be found at the source link and it shows Russian forces are deployed in two main locations: the port of Tartus (on the map as "Тартус") and the Khmeimim airbase, south of the city of Latakia (Латакия). On the far left the map also lists the names and types of Russian ships in the Mediterranean and involved in the operation, the types of air defense systems, and the numbers and types of aircraft based in Syria and those conducting air strikes out of Russia.
Source: http://images.shoutwiki.com/acloserlookonsyria/6/64/Situation_in_Syria_Dragon_First_1.png

While the Russian government has shown support for Assad, it is not always been unconditional. Russia's support for Assad takes place because of an interest in protecting its influence in the Middle East and its naval facility in Tartus, which provides the Russian Navy a port in the Mediterranean Sea. Syria has been a Russian ally for a number of years, dating back to the Soviet Union's security assistance to the Syrian government and has continued to the present with assistance for Assad.[15] Russia is also interested in preventing violence and extremist groups in Syria from spreading and the government believes that the removal of Assad would allow this to happen as it sees no viable alternative leadership. The Russian government has viewed the uprising in Syria that started in 2011 as an internal issue and stated that only Syrians should be allowed to decide who will lead their country.[16]

Sometime in the summer of 2015 Assad reportedly requested that Russia conduct air strikes against opposition forces in Syria. Russian began deploying forces to Syria in August and September, and carried the first airstrikes on 30 September. The Russian government claimed that the airstrikes targeted terrorist groups, but other reports noted that they struck Assad's opposition. The airstrikes have also allowed Russian access to the Khmeimim airbase, from where it has continued to conduct operations.[17]

From the Turkish perspective, Russia's involvement in Syria complicated its plans in the region. It tipped the balance of power in favor of the regime of Assad, which Turkey was insisting, "must go."[18] Prior to Russia's involvement, Turkey was working for a 'safe-zone' along the Turkey-Syria border, which would drive the Islamic

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Continued: The Evolution of Turkish-Russian Relations

State (ISIS) out of the 68-mile area west of the Euphrates River. Turkey hoped to stop Kurdish expansion in the north of Syria, particularly to prevent the Syrian Kurds from achieving territorial continuity among their three cantons in northwestern Syria, along Turkey's borders.

Russia's involvement in Syria, and the subsequent crisis in relations due to Turkey's shoot down of a Russian jet in November 2015, upended these plans and brought Russian-Turkish tensions to an all-time high. The Russian government accused Turkey of supporting terrorism through purchases of oil from ISIS and claimed that the downing of the Su-24 took place because the bomber had just completed an air strike against ISIS' oil production. President Putin and Russian Foreign Minister Sergey Lavrov both made statements that accused Turkey of buying oil from ISIS and this accusation would be repeated a number of times by Russian officials and appeared in the media in the weeks following the incident.[19]

At some point, the Turkish press even warned against the risk of armed conflict between the two sides.[20] From the Turkish perspective, Russian airstrikes in Syria helped the Syrian Kurdish group called the YPG—the armed wing of the Democratic Union Party (PYD); which Turkey considers to be the extension of the outlawed Kurdistan Workers' Party (PKK). Turkey was also disappointed when the PYD opened an office in Moscow in February 2016.[21]

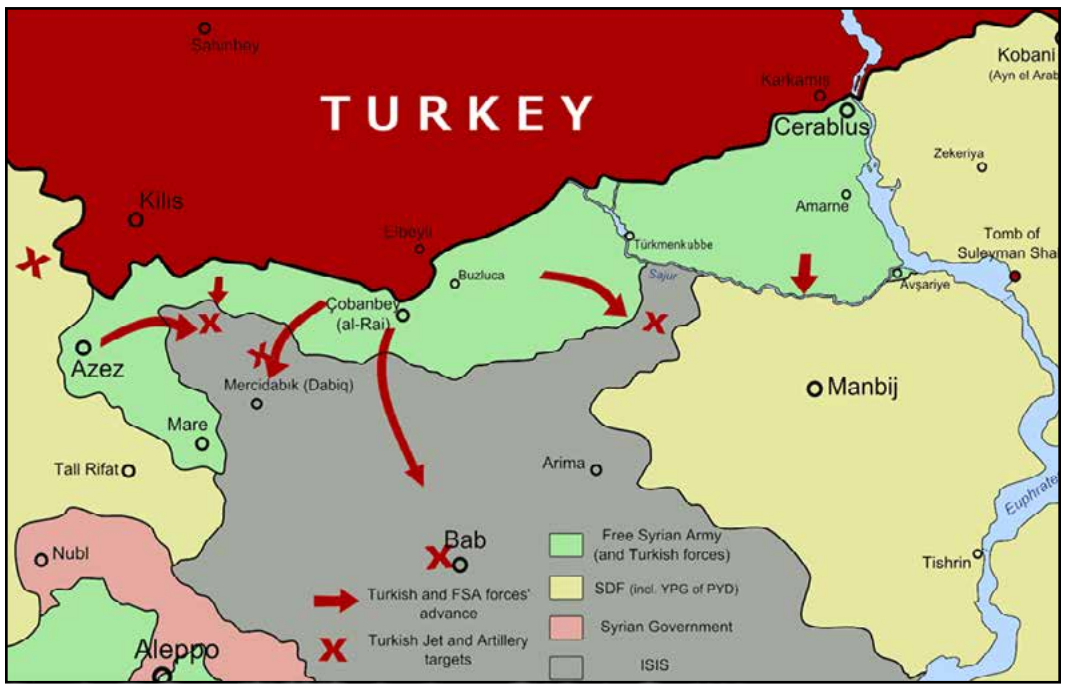
Turkey's frustration regarding this issue is impossible to understand without looking at what was happening inside of Turkey at the time. There was a peace process with the PKK, and Turkey was seeing a period of relative stability and absence of terror attacks by the group. However, Russia's involvement in Syria, which Turkey believes to have emboldened the Syrian Kurds, also had the effect of emboldening the PKK in Turkey. In the summer of 2015, the PKK ended its peace process and escalated its terror attacks inside of Turkey. Turkish officials believe that the Russian regime not only provides support and arms to the Syrian Kurdish forces, but also played a key role in the PKK's decision to start fighting again inside Turkey. Ankara regards the current escalation in PKK attacks in Turkey, as an outcome of Russian actions in Syria.[22] As an expert notes:

> *"The support that Russia gives Kurds is a huge blow to Turkey. This support will mean the unification of the Kurdish cantons established by... the PYD, [which will mean] their extension from the entire border region... This will mean the establishment of a unified Kurdish entity along the Turkish border, which can threaten the country's security; and carries the risk of sabotaging the political solution efforts that Ankara has started with the Kurds to end a war that has been going on for 30 years."* [23]

For this reason, Turkish officials view the Syrian crisis as a "domestic issue." In 2011, when the crisis erupted, then-Prime Minister (now President) Erdoğan said: "We do not view the Syria issue as an external issue or an external problem. Because the Syria issue is our domestic issue. We have an 850 km border with Syria, along with familial, historical and cultural ties. Therefore what happens in Syria can never allow us to be idle observers to it. Just the opposite- we need to hear the voices there, we do hear them, and of course, we have to do what's necessary."[24]

Recent Developments: Operation Euphrates Shield

On 24 August, the Turkish Armed Forces launched Operation Euphrates Shield against the Islamic State and Kurdish forces in Syria. Through a combined arms assault, Turkish forces quickly crossed the border and captured territory west of the Euphrates River in Syria (including the city of Jarabulus) in an effort to remove ISIS and to force the Kurds in Syria east of the river.[25] Russian officials expressed concern about the operation aggravating the situation in Syria, but refrained from condemning it.[26] While the Russian government did not criticize the goals of the operation, the Russian Strategic Studies Institute noted that the operation appears to be aimed more at Kurds than the Islamic State and other sources believed that the operation would eventually change and Turkey still wants to remove al-Assad from power. The Russian press also noted that the Turkish government gave advance notice to Russia of the operation.[27]



Operation Euphrates Shield: The situation as of 19 September 2016.
Source: https://en.wikipedia.org/wiki/Turkish_military_intervention_in_the_Syrian_Civil_War#/media/File:Turkish_Offensive_in_Northern_Syria.png

Turkey's operational goals were twofold: To clear the area of ISIS and also to ensure that the Syrian Kurdish PYD forces do not fill the vacuum. As Turkish President Erdoğan said on 6 September, "We need to demonstrate our presence in the region. If not, terrorist groups such as [IS], the PKK and its Syrian offshoot the YPG will fill the vacuum."[28] Similarly, Burhanettin Duran from the pro-government Foundation for Political, Economic and Social Research in Ankara, says Turkey's aim is to develop a comprehensive approach not to just fight ISIS, but also to block PKK and PYD aspirations in Iraq and Syria.[29]

The Kurds and Syria will likely be the key issues in the Turkish-Russian relationship, at least in the short term. The indications are that Moscow will continue to support Ankara's enemies in Syria, specifically the Assad regime and the Syrian Kurds. Turkish analysts believe that the current rapprochement is based more on necessities and interests; rather than any kind of strategic alignment.[30] They note that Turkey is trying to find ways to ensure that it gets included in the 'game' in Syria; and that Operation Euphrates Shield is an effort to ensure this.[31] In addition, the negative rhetoric used by both sides against the other when relations were frozen, means that it will take some time for the sides to re-establish trust. Despite these divergent stances on geo-political issues, relations are likely to be revived in economic cooperation, particularly in the energy field. ☐

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Continued: The Evolution of Turkish-Russian Relations

Notes

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