

Intelligence and Analysis Division

OPEN SOURCE UPDATE

January 2022

INTENT

This open source periodical is designed to provide an overview of relevant, publicly available information on threat and hazard events and analysis of potential impacts to the interests of the United States, both at home and abroad. This product is not intended to be a comprehensive overview of all threat and hazard news and inclusion in this product does not constitute a confirmation of credibility nor precedence by RMC.



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Threats

Three Attacks in Three Days on Soleimani Anniversary – Terrorism

Summary: Two fixed-wing "suicide drones" of unknown origin were shot down by a C-RAM air defense system en route to Baghdad International Airport on 02 January 2022. One had the words "Soleimani's Revenge" in Arabic on the wing. It was the second anniversary of the U.S. drone strike that killed Iranian General Qassem Soleimani of the Islamic Revolutionary Guard Corps (IRGC) in the same area. Thousands of demonstrators, including militia members, marched in Baghdad prior to the anniversary to protest the 2,500 U.S. troops still stationed there. Iran has vowed revenge for the killing of Soleimani unless former President Donald Trump and former Secretary of State Mike Pompeo are tried under Islamic law, along with over 100 other individuals allegedly tied to the incident. Then-Attorney General William Barr asserted that Soleimani was a legitimate military target. Soleimani was killed for both past actions and the attack on the American embassy in Baghdad by an Iran-backed Shia militia. There were also two additional attacks in two days following the initial attack near the airport. On 03 January 2022, two more drones carried out an attack on the Ain al-Asad airbase to the west of Baghdad but were shot down by its C-RAM system. On 04 January 2022, a Katyusha rocket hit the Iraqi military base housing U.S. troops at, again, Baghdad International Airport. There was no reported damage nor were there any casualties.

Analyst Comment: While the C-RAM system prevented loss of life and property at Baghdad International Airport during the initial attack, many other government and civilian targets lack the same defensive capabilities. The use of unmanned aerial systems (UAS or "drones") for longrange strikes can also provide attackers plausible deniability. Adversaries can also use them in a surveillance capacity to map out an installation's missile defense capabilities. The fact that the Katyusha rocket reached its target at Baghdad International Airport without interception by the C-RAM is troubling. It could indicate that future attacks could be launched against gaps in defensive coverage. While the motivations for the first attack are clear, the culprits are not. The perpetrators in the second and third attacks are also unknown. The drones bearing the words "Soleimani's Revenge" had similarities to crudely made drones that were used to attack Iraq's Erbil International Airport on 11 September 2021. However, militias sometimes imitate the design associated with rival groups in order to shift blame. U.S. forces will likely continue to face Iran-linked attempts at retribution for the killing of Soleimani and for the continuing U.S. presence in the region.

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IS Fighters Attempt to Free Fellow Jihadists from Syrian Prison – Terrorism

<u>Summary</u>: On 20-21 January 2022, fighters from the Islamic State (IS) attacked a prison in northeast Syria in an attempt to free thousands of their comrades, making the attack one of the larger assaults by the terrorist group in the Middle East since the fall of its so-called caliphate three years ago. This attack set off deadly clashes with the Kurdish-led militia that controls the area, killing dozens of people and allowing hundreds of prisoners to flee, at least temporarily. The Ghweiran prison holds about 3,500 men who were arrested by the Syrian Democratic Forces (SDF) during battles to drive the Islamic State out of territory it controlled in eastern Syria. The militia partnered with an international military coalition led by the United States to fight the Islamic State, which, at its height, ruled territory the size of Britain in Syria and Iraq. U.S. officials and terrorism experts have warned that the continued detention of these people risks sowing the seeds of a future insurgency. After nearly a week of fighting through US-led coalition airstrikes and limited, strategic ground support, the siege, believed to be the biggest coordinated attack by IS since the fall of its so-called caliphate nearly three years ago, finally came to an end. Reports indicate that the attack had been coordinated and planned over the course of six months.

Analyst Comment: While this is not the first such prison break attempt by IS fighters, several escaped from the same facility in 2020 by ripping off doors and using them to destroy a wall. Concerns are mounting that the timing and audacity of the attack may indicate the terror group's renewed strength. IS has repeatedly vowed to break out prisoners since its defeat at Baghouz. Since 2013, it has been reported that the group has carried out 22 operations targeting prisons holding IS members. The Ghweiran prison was already a target: In November 2021, the SDF foiled a plot against the prison that also involved car bombs and smuggling in arms. However, coalition leaders insist that, far from demonstrating IS' resurgence, the assault on Ghweiran prison in January 2022 showed the group's weakness (as the assault by more than 100 Islamic State extremists was a failed attempt in the end). Still, the UN is concerned about the continued presence of IS members in the region, despite their downfall, as the UN has warned that IS was beginning to reassert itself in Iraq and Syria as recently as 2020. The UN said the group was "mounting increasingly bold insurgent attacks, calling and planning for the breakout of [IS] fighters in detention facilities and exploiting weaknesses in the security environment of both countries. The U.S. military and intelligence communities will need to assess whether this attack is indicative of a resurgence in IS capability as IS cells are continuing to plan and stage attacks. Though the recent prison attack may be indicative of a potential resurgence, IS remains far from their previous power and presence in the region.

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Texas Gunman Takes Hostages in Synagogue – Terrorism

<u>Summary</u>: A gunman took four hostages at the Congregation Beth Israel synagogue in Colleyville, Texas on 15 January 2022. The gunman released one of the four hostages during the ordeal. The other three escaped when the synagogue's rabbi threw a chair at their captor. After they exited, the FBI breached the building. The gunman was killed inside, but details regarding any exchange of fire have not yet been published.

The gunman was previously investigated by Britain's MI5 as a "Subject of Interest" in late 2020. He was cleared in 2021 and remained as such when he flew to the United States two (2) weeks prior to the incident. The gunman claimed he was taking hostages as leverage to demand the release of an incarcerated female Al-Qaeda operative. She is serving an 86-year prison sentence for shooting at FBI and Army personnel while in the custody of the Afghan National Police in 2008.

The incident at the synagogue has raised numerous questions that U.S. and British authorities are investigating. A total of five suspects have been arrested by law enforcement in the U.K., with four in Manchester and one in Birmingham. All but two of the Manchester suspects have since been released. The FBI's North Texas Joint Terrorism Task Force (NTJTTF) is investigating the incident both in the U.S. and Great Britain, in cooperation with authorities there. Members of the U.S. Senate have asked the State Department, the Department of Homeland Security, and the FBI how the gunman was able to enter the country with current screening processes in place.

<u>Analyst Comment</u>: The gunman appears to have acted independently of Al-Qaeda, IS, or any similar organization. Regardless, law enforcement is treating the incident as an act of terrorism, as the gunman was a foreign national who took hostages with the goal of freeing a known Al-Qaeda operative. His actions were also in keeping with a long-term strategy implemented by both IS and Al-Qaeda, whereby adherents are encouraged to stage attacks on their own. As recently as July 2021, Al-Qaeda's magazine *Inspire* encouraged lone wolf jihadists to act in its name.

However, the arrest of additional suspects raises more questions about whether he was part of a larger operation. It is not yet clear whether they were accomplices or how they were otherwise associated with the gunman. The gunman's brother told a British tabloid that the gunman had experienced a series of mounting personal and professional difficulties, including mental health issues and associations with alleged religious extremists. Open sources also show that the gunman publicly expressed enthusiasm over the attacks on the World Trade Center and the Pentagon on 11



September 2001. He also may have had ties to a transnational Islamic sect that calls for Muslims to return to a stricter interpretation of the Quran.

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North Korea Conducts Hypersonic Missile Tests – Foreign Nation-State Military

Summary: From 05 through 28 January 2022, Kim Jong-un, the North Korean Supreme Leader, has launched at least six ballistic missiles in five known weapons tests. This is almost as many missiles in one month as North Korea launched in all of 2021. In North Korea's first two tests in January 2022, the country launched short-range ballistic missiles with what it referred to as hypersonic glide vehicles (HGVs). HGVs, like other weapons delivered by medium- and longerrange rocket boosters, can travel at speeds of at least Mach 5, or about 1 mile per second. The key difference between missiles armed with HGVs and standard ballistic missiles is not their speed, but their ability to maneuver and change course after they are released from their rocket boosters. Furthermore, these hypersonic missiles are suspected of hitting a speed of Mach 10, meaning these missiles are traveling at ten times the speed of sound. In a test on 13 January, North Korea launched the KN-23, one of three new solid-fuel ballistic missiles the North has been testing since 2019. The KN-23 can perform low-altitude maneuvers, making it harder to intercept. When North Korea first launched a pair of KN-23s in 2019, there was a 16-minute interval between the two missiles fired. That gap was reduced to four minutes in the recent test, indicating that the Strategic Rocket Force has likely improved its ability to conduct consecutive missile launches while also reducing the potential for interception by the United States and South Korea.

Analyst Comment: The recent uptick in missile tests from North Korea's leader, Kim Jong-un, suggests that North Korea is both pushing ahead with his program of modernizing its country's missile forces and trying to force the U.S. to engage with North Korea on Kim's terms. Repeated U.N. Security Council resolutions currently ban North Korea from developing or testing ballistic missile technologies or technologies used to make and deliver nuclear weapons. North Korea insists that it is exercising "its right to self-defense" and that the missile tests are "part of its efforts for modernizing its national defense capability." Although these tests do not consist of intercontinental ballistic missiles, North Korea has focused on testing missiles that can carry smaller, lighter, and tactical nuclear weapons traveling faster than the speed of sound. These successful tests are not a direct threat to the United States; however, they place American allies such as South Korea and Japan under nuclear threat. The missiles themselves had already been tested by North Korea prior to 2022 and some are still under development. With the Beijing Olympics in China in February 2022, South Korea electing a new President in March 2022, and the ongoing Russia-Ukraine tension, these missile tests are a potential opportunity for North Korea



to make its presence known in the region and push the U.S. and other nations to take notice of its growing military capabilities.

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Log4j Vulnerability Discovered – *Cyber*

<u>Summary</u>: A common open source software tool utilized by numerous private actors was found to have a bug, known as the "Log4j" vulnerability, or "Log4shell." As programmers build a code, the often utilize open-source software for common tasks: building blocks to take care of the basics. Log4j is a key software building block found in a wide variety of Java applications. This software Log4j is intended to create an activity log for a computer, noting a complete log of activity for any running programs. However, it was discovered a hacker could send commands to this piece of software via the internet. This creates the opportunity for bad actors from any location to take over a device that utilizes Log4j. Cybersecurity researchers have noted that the flaw is relatively easy to exploit.

There will be an ongoing race between cybersecurity teams and hackers to identity, then patch or exploit this vulnerability. Addressing this vulnerability is a unique challenge. The software is present in an unknown number of codes, used privately and publicly. It is estimated over 100,000 products from hundreds of vendors (and in house developed software) may contain Log4j. As such, the patch for this issue must be applied in each scenario, necessitating awareness by numerous creators and users. Fortunately, additional layers of security within a network can minimize damage once systems are breached.

Analyst Comment: Exploiting the Log4j vulnerability is relatively simple. It can permit malicious cyber actors can gain control of vulnerable systems; steal personal data, passwords and files; and install backdoors for future access, cryptocurrency mining tools and ransomware. However, thanks in large part to the massive response effort from the security community, there have been few cyber-attacks of consequence leveraging the Log4j vulnerability. As of early January, most of those intrusions were by cryptocurrency miners. There are a few other attacks exploiting this vulnerability that have been publicly identified. For example, on 20 December 2021, the defense ministry in Belgium disclosed that a portion of its network was shut down after a cyberattack that relied on use of the Log4j vulnerability. Other attacks that have been reported were disrupted midway through. On 29 December, CrowdStrike said its threat hunters identified and disrupted an attack by a state-sponsored group based in China, which also involved an exploit of the Log4j vulnerability.



It is very likely that the effects of this vulnerability will be long-term in nature. Not only will finding and patching this issue take time, but once software is breached, hackers likely have access to networks and systems for months and years to come. This will permit them to use their established foothold to survey users and security protocols before executing their attack in the future, increasing the likelihood of such an attack's effectiveness.

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Nationwide Protests in Kazakhstan – Civil Disturbance

<u>Summary</u>: Kazakhstan has been experiencing large protests and civil disturbance activity throughout January 2022. An unusual event for the former Soviet republic, the protests began on 02 January in the southwest of the country, in the city of Zhanaozen. They were triggered by a sharp increase in liquefied gas prices in the new year, which doubled from 60 to 120 tenge (the local currency). As it is usually priced so low, this fuel is utilized by many Kazakhs to run their cars. The protests against rising gas prices rapidly spread to other regions. In hopes to quell the ongoing protests and civil disturbance activity, the country's cabinet resigned their posts.

Following the resignations, the protests became political rather than socio-economic in motivation. During a televised speech on 07 January, President Tokaev ordered security forces "to shoot to kill without warning." Protestors stormed several public buildings, lighting some on fire. State forces responded by using tear gas, water cannons, and stun grenades. A private lobbying group for businesses reported attacks on banks, stores, and restaurants. The president then ordered price controls to be reinstated for 180 days. Following the continued unrest, President Tokaey called on support from the Collective Security Treaty Organization to quash protests.

Analyst Comment: The situation in Kazakhstan highlights the importance of economic conditions as a potential trigger for civil disturbance activity in many countries. There have been a number of recent protests and civil disturbance activity prompted by scarcity of common goods. However, in this situation, a rise in the price of a commonly used good triggered unusual, large scale civil disturbance activity. The protests then developed, changing from a economically motivated movement to a politically motivated one.

Compared to the recent protests in other post-Soviet countries such as Belarus, the demonstrations in Kazakhstan were more dynamic and radical, including acts of violence towards security forces. The average age in the county is relatively young, around 30, and the income inequality is significant throughout the county. These protests resulted in more than 12,000 arrests and at least 225 deaths.



An additional complicating factor in the civil unrest is the President's use of the Collective Security Treaty Organization (CSTO). Triggering use of this organization permitted Russian forces to enter the county and suppress opposition forces. This likely increases the current administration's dependance on Russia for maintaining power and stability, and allows Russia to portray itself as a reliable security partner to its allies.

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Hazards

Underwater Volcano Erupts in Tonga – Geological Hazards

Summary: On 15 January, likely the largest eruption in 30 years occurred at Tonga's Hunga Tonga-Hunga Ha'apai submarine volcano. The eruption produced both a tsunami and an atmospheric shock wave. The eruption sent volcanic material surging as high as 25 miles into the atmosphere and generated tsunami waves up to 49 feet high. A volcanic cloud extended to cover all of the country's roughly 170 islands. Many of Tonga's islands were devastated by the 50-foot waves generated by the explosion. In the 12 hours following the eruption, about 400,000 lightning events were reported in the area.

The associated cloud of ash, steam, and gas that comes from a volcanic eruption can prevent flights over a large area and lead to a sharp drop in air quality. In this case the ash also covered local runways, preventing transportation until it could be cleared. Aid agencies and Tongan politicians have warned of water contamination and potential food shortages after crops were ruined by the ash.

NASA has estimated the power of this eruption to be somewhere between 4 to 18 megatons of TNT. In comparison, the 1980 Mount St. Helens eruption released an estimated 24 megatons of energy, and Krakatoa (one of the biggest volcanic events in history) erupted in 1883 with 200 megatons. Volcanologist Robin George Andrews estimates undersea volcanoes like Hunga-Tonga-Hunga-Ha'apai erupt in such an explosive way about once every 1,000 years.

Analyst Comment: This volcanic eruption has had global impacts. Large waves and flooding was observed up and down the western coasts of the Americas. One such example is Peru. Within hours of the eruption, large waves hit the coast of the country. That day, the Italian oil tanker Mare Dorium was at Ventanilla's La Pampilla refinery unloading its cargo of Brazilian crude. The rough seas caused a rupture of the terminal's submarine pipeline, and it is now estimated that 6,000 barrels of oil (more than a quarter of a million gallons) spilled as a result, devastating local ecosystems. Peru's Foreign Ministry declared the incident the worst ecological disaster in recent times.

In addition to the immediate impacts of the eruption, long-term logistical impacts have developed. A critical under-sea fiber-optic cable running to Tonga was destroyed by the eruption. It is in need of repairs that will take weeks. Currently, the damage prevents both domestic and international communication. Satellite telephones and high-frequency radio have provided limited communication, but there is no currently no internet connectivity. This has hindered rescue and repair efforts in the region. The efforts are meeting further obstacles as the volcanic ash has blanketed runways, and large waves are a challenge for sea and air transportation. Furthermore, the island nation is concerned about a surge in COVID-19 cases as foreign aid workers transit the country. Tonga has only reported a single coronavirus case since the start of the pandemic.



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Potential 5G Interference at Airports – Accidental Events

<u>Summary</u>: Safety concerns were recently raised regarding the deployment of 5G wireless technology around a number of major airports. Concerns were focused on potential interference between 5G signals and radar altimeters, a common piece of equipment which allows aircraft to determine their altitude in poor weather conditions prior to landing. Both 5G and radar altimeters operate on similar frequency bands, and limited research was available to address safety concerns related to interference which could cause an aircraft mishap.

Analyst Comment: Currently, an overwhelming majority (roughly 80-90%) of the U.S. commercial airline fleet is cleared by the FAA to land in the vicinity of this 5G technology, although most aircraft approved are larger aircraft. Many smaller regional jets and turboprops have not yet received similar FAA approval.

This issue highlights potential encroachment- and spectrum-related issues that could ultimately have similar impacts affecting the DoD. Any environmental, technological, or human encroachment on a highly sensitive or technical facility such as a DoD installation or commercial airport has the potential to impact operations (to include safety/security concerns).

Additionally, the 5G issue highlights the need for multi-disciplinary, public/private coordination to deconflict potential concerns. Airlines, the FAA, and wireless providers are all currently coordinating to ensure an adequate balance between 5G coverage and aviation safety, and such coordination began several years ago. As of 28 January 2022, the FAA has reportedly reached an agreement with wireless providers Verizon and AT&T in order to expand 5G coverage while mitigating potential interference with commercial air operations.



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Marine Corps Vehicle Accident Leads to Fatalities - Accidental Events

Summary: A 7-ton medium tactical vehicle replacement (MTVR) vehicle rolled over in Jacksonville, North Carolina on 15 January 2022, killing two Marines and injuring 17 others from the 2nd Marine Logistics Group based at Camp Lejeune. The driver attempted to turn right on U.S. Highway 17 from N.C. Highway 210 in Onslow County. The truck overturned and ejected the Marines riding in the back. Two (2) of the injured were taken to a hospital in Wilmington, North Carolina, where they are listed in critical condition. The remaining injured Marines were treated at Camp Lejeune. The driver was charged with one count of exceeding a safe speed and two counts of misdemeanor death by motor vehicle. Law enforcement commented that the speed of the truck likely caused it to overturn.

Analyst Comment: A report from the Government Accountability Office (GAO) from July 2021 stated that 123 soldiers and Marines died in 3,753 non-combat tactical vehicle incidents from 2010-2019, usually due to overconfidence, complacency, and driver error. Lack of training and supervision were also cited as reasons for these mishaps. These accidents often occurred in otherwise safe conditions during daylight hours. Across the Marine Corps and the Army, the year 2010 was the deadliest year in the past decade with 23 total deaths related to tactical vehicle accidents in non-combat situations. The report found that rollovers, despite being responsible for one-quarter of the accidents, accounted for 63% of the deaths reviewed in the study. The DoD has improved driver training, but advanced training experience differs across units. This creates a landscape of inconsistent driving skills. While accidents will always occur to some degree, the number of vehicle deaths may raise concerns about leadership and training in the ranks.

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Pipeline Spills 300,000 Gallons of Diesel Near New Orleans – Hazard Category

Summary: A pipeline incident occurred on 27 December 2021 involving a 16-inch diesel pipeline located at the Chalmette Refinery, just east of New Orleans, Louisiana in St. Bernard Parish. In the incident, more than 300,000 gallons of low sulfur diesel accidentally spilled, according to federal documents from the Pipeline and Hazardous Materials Safety Administration. The owner of the pipeline, Collins Pipeline Company, shut down the Meraux Pipeline on the morning of 27 December after reportedly observing pressure gauges and flow meter measurements that indicated there was a leak. Most of the fuel drained into two artificial ponds called "borrow pits" and thousands of fish, birds and other animals were killed as an effect of oil spreading into the natural environment. The spill also contaminated soil and cleanup work is ongoing. The rupture of the pipeline comes more than a year after an inspection in October 2020 revealed external corrosion 22-feet long by 25-inches wide near the failure location, according to federal documents. The root cause of the accident officially remains unconfirmed. However, preliminary reports indicate that the probable cause is likely localized corrosion and metal loss.

Analyst Comment: Louisiana is one of the top five states in terms of both natural gas production and proved reserves as the state's 17 oil refineries process about 3.4 million barrels of crude oil per day. The state accounted for 9% of U.S. total marketed gas production in 2020 and has about 8% of the nation's gas reserves. Oil spills (such as the one experienced by the Meraux Pipeline) can impact, harm, and kill wildlife. These spills also contaminate the soil, affect the economy, and can potentially lead to a long and extensive cleanup process. The Gulf of Mexico is no stranger to massive oil spills (most notably the 2010 spill involving the Deepwater Horizon drilling platform) and thousands of oil spills occur in U.S. waters each year. Depending on the severity and location of the oil spill, a medium to large scale oil spill can potentially cost billions of dollars and take several months to clean the oil from the open water, decontaminate the surrounding region, and mitigate impact to wildlife and ecosystems.

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On the Radar

Ukraine Situation Update

Tensions in Ukraine remain high as Russia continues to take a variety of actions indicative of a forthcoming military offensive. On 28 January alone, it was reported that Russia had prepositioned blood and medical supplies closer to Ukraine's border, and the Pentagon stated that Russia has enough troops and equipment at Ukraine's borders to invade the entire country. RMC's Intelligence and Analysis Division continues to closely monitor the situation, as well as the U.S. response (which has recently included the announcement of forward-deploying additional forces to the EUCOM AOR).

• Taiwan Situation Update

o Aircraft from China's People's Liberation Army Air Force (PLAAF) repeatedly breached Taiwan's air defense identification zone (ADIZ) throughout the month of January. This included 39 aircraft on 23 January 2022, which was the most since a record high of 56 in October 2021. China has given no indication that it will cease air operations within the ADIZ, as additional flights have occurred since then, including one (1) with nine (9) aircraft on 28 January 2022. Tensions related to Taiwan have been elevated for some time now, although China's latest show of force remains a cause for concern.

COVID-Related Protest Activity

There is an on-going possibility of civil disturbance activity occurring globally as the COVID-19 pandemic continues. Proponents and opponents of vaccine mandates and lockdowns/periods of mandatory isolation continue to host various form of protest activity in response to political action or non-action. These protests have the potential to develop into civil disturbance activity, though most recorded so far have been small-scale in their impact. Of note, protest activity specifically related to school vaccine/mask mandates has recently increased.

• Violent Crime Spikes in U.S. Cities

Many U.S. large cities (such as New York, Chicago, Denver, and New Orleans) have seen a notable uptick in various violent crimes (such as murders, shootings, and carjackings) as of recent. While official FBI data from this period is not yet available, the reported rise in violent crime remains concerning. Some localities have proposed more aggressive policing in response, which could in turn lead to protest/civil disturbance activity. For example, the New York City Mayor has recently re-activated a controversial unit within the NYPD known as the "anti-crime unit" to help stem an increase in shootings after the death of two police officers. This anti-crime unit was disbanded in August 2020 after a series of racial justice protests and civil unrest across the country. The unit and other similarly composed units have been marked by allegations of aggressive tactics and police brutality.