

Intelligence & Analysis Division Open Source Update

October 2023

www.RMCGlobal.com

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

Air Force Contractor Investigated for Breaching Military Communication Networks and Theft – Insider Threat

Summary

According to documents filed in U.S. District Court, an Air Force contractor in Tennessee is under investigation for a "critical compromise" of Air Force community networks used by training units at 17 bases, as well as other state and federal agencies. Reports indicate that the individual allegedly stole about \$90,000 in military and state government radio equipment and software. The contractor reportedly acquired "unauthorized administrator access" to the radio network utilized by the Air Education and Training Command (AETC) and had access to the entire radio system of Arnold Air Force Base (AFB). Furthermore, public court documents note that he could access the communications systems of the FBI, the Tennessee Valley Authority, and other state agencies. Following local law enforcement's search of the contractor's home in January 2023, an Air Force spokesperson noted that they took steps to mitigate compromises to their networks. In addition, the spokesperson stated that the incident was not an active security concern.

Analyst Comment

In August 2022, colleagues noted that military communications equipment was missing at Arnold AFB, where the contractor worked. Coworkers were reportedly suspicious of the contractor in question, as they knew he possessed government radio equipment and demonstrated questionable behaviors, including working off hours, lying, and engaging in inappropriate workplace behavior and sexual harassment. The affidavit also indicates that he had financial problems. Additional open-source reporting revealed that the contractor pleaded not guilty in Coffee County Circuit Court to charges of felony solicitation of sexual exploitation of a minor, misdemeanor assault by offensive touching, and felony theft of property in excess of \$60,000. According to the National Cybersecurity and Communications Integration Center, working unusual hours without authorization, financial difficulties, and hostile actions are behavioral indicators of insider threat activity.

Property crime by insiders can impact an installation's security posture, supply of resources, and operations. During the search of the contractor's house, law enforcement found a USB that included administrative passwords and electronic system keys for the AETC radio network. Investigators also discovered that the contractor had blueprints of buildings on Arnold AFB and programming for the installation's "Giant Voice" announcement system. In addition to the stolen property and information, the contractor has conducted security tests on Arnold AFB, has experience in cybersecurity and radio communications, and possesses knowledge of the encryption used on government data. An insider with access to an installation's communications system, combined with preexisting experience conducting tests around a base, could present a significant risk to an installation, its assets, and its personnel.



Sources

https://www.militarytimes.com/news/your-air-force/2023/08/02/feds-investigating-air-force-contractor-for-network-breach-theft/

https://www.airforcetimes.com/news/your-air-force/2023/08/04/air-force-contractor-charged-with-soliciting-minor-stealing-gear/

https://taskandpurpose.com/news/air-force-engineer-under-investigation-for-critical-compromise-of-communications/

https://www.forbes.com/sites/thomasbrewster/2023/07/29/exclusive-pentagon-suffers-critical-compromise-of-air-force-communications/?sh=c45b8a63198c

https://www.cisa.gov/sites/default/files/publications/Combating%20the%20Insider%20Threat_0.pdf

Australian, Philippine, and U.S. Militaries Conduct Drill Following Incidents Between Philippines Navy and Chinese Vessels — Foreign Nation-State Military (FNSM)

Summary

On 25 August 2023, 1,200 Australian and 560 Philippine soldiers joined 120 U.S. Marines for a drill on the northwestern coast of the Philippines, facing the South China Sea. Open-source reports indicate that the drill practiced retaking a seized island through mock beach landings, assaults, and helicopter insertion of forces on a Philippines Navy base. In a joint statement, the Australian Defense Minister and the President of the Philippines asserted that they would seek to develop plans for joint patrols in the South China Sea and expand bilateral activities between the two (2) nations. They also reaffirmed the Hague's 2016 ruling invalidating China's claim to the whole South China Sea.

This drill followed an incident wherein a China Coast Guard (Haijing) ship used a water cannon to deter a Philippine supply run in August 2023. The U.S. Navy deployed a surveillance plane over the scene for more than three (3) hours. In response to the attempted Chinese blockade, the U.S. warned that they would defend the Philippines if its forces were attacked in the region. Later that month, Chinese coast guard ships prevented two (2) Philippine Coast Guard ships from maneuvering towards the Second Thomas Shoal after two (2) supply boats delivered supplies past a Chinese blockade.

Analyst Comment

A number of additional recent maritime incidents in the Second Thomas Shoal highlight the increased tensions in the Indo-Pacific and the South China Sea. On 04 October 2023, a China Coast Guard ship came within three (3) feet of colliding with a Philippine patrol ship near the Second Thomas Shoal. Furthermore, open-source reports indicate that China Coast Guard and militia ships blocked and surrounded one (1) other Philippine Coast Guard vessel in the event, which lasted approximately eight (8) hours.



Ultimately, considering the extensive history of aggressive maneuvers by Chinese vessels and aircraft in recent years and the Department of Defense's (DoD) increasing access to Philippine military bases, including the four (4) identified in April 2023 (Balabac Island in Palawan; Naval Base Camilo Osias in Santa Ana, Cagayan province; Lal-lo Airport in Cagayan; and Camp Melchor Dela Cruz in Gamu, Isabela), DoD operations in the region could be affected if tensions continue to rise in the South China Sea. Continued access to these locations enables the U.S. and the Philippines to respond to challenges, including natural and humanitarian disasters.

In addition to aggressive maritime actions, the People's Liberation Army (PLA) has expanded and modernized to include space, counterspace, cyber, electronic, and informational warfare capabilities. In response to China's actions in the region over the decade, the Philippines is increasingly modernizing its defensive capabilities.

Sources

https://www.stripes.com/theaters/asia_pacific/2023-08-25/south-china-sea-island-exercise-11156056.html

https://www.stripes.com/theaters/asia_pacific/2023-08-22/philippines-china-blockade-south-china-sea-11130995.htm

https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF

https://www.military.com/daily-news/2023/10/06/philippines-protests-after-chinese-coast-guard-ship-nearly-collides-philippine-vessel.html

https://www.state.gov/u-s-support-for-the-philippines-in-the-south-china-sea-5/

https://www.cnn.com/2023/04/04/asia/us-philippines-military-base-access-intl-hnk-ml/index.html

Military Exercises Provide Opportunities for Intelligence Collection – Foreign Intelligence Entities (FIE)

Large, multinational military exercises that include all-domain training (sea, air, land, cyber, and space) are becoming more common. These exercises are intended to improve combat readiness and communications interoperability between allied nations. Additionally, these exercises have geopolitical implications, as they can serve as a tool to signal military might to adversaries. This year, Russia and China conducted joint exercises in the East China Sea, the Bering Sea near Alaska, and South Africa. The U.S. and its allies have trained together in Europe, North Africa, and the Indo-Pacific.



However, exercises also present an opportunity for foreign intelligence entities. During Operation Talisman Sabre earlier this year, a Dongdiao Class Auxiliary General Intelligence ship 793 of China's People's Liberation Army Navy (PLAN) was observed in the Coral Sea of the northeastern coast of Australia. The ship was sighted by a Royal Australian Air Force (RAAF) P-8 Poseidon reconnaissance aircraft. Talisman Sabre is a biennial training exercise between the U.S. and Australia that has grown to include nearly 30,000 troops from 13 nations from the Indo-Pacific region. The Australian P-8 hailed the vessel and received a courteous response, as is customary in international waters. Operation Talisman Sabre leaders indicated that they expected the PLAN ship to passively collect on the exercise. They emphasized that they were able to protect sensitive aspects of the training. In accordance with international law, the PLAN ship stayed more than 24 nautical miles outside of contiguous zones.

Analyst Comment

The Chinese have expanded exercises in and around the Taiwan Strait in recent years to both train and project power in the region. Although there are opportunities for other nations to observe China's capabilities, these drills are unlikely to offer a complete picture, as China is unlikely to display its full capabilities when it knows that its forces are being watched.

As military tactics and capabilities evolve, training involving new equipment and tactics is essential to readiness. Training with partner nations is critical to interoperability. However, large exercises present opportunities for foreign intelligence collection. Awareness of FIE methods and capabilities is crucial when planning exercises to prevent exposing critical information.

Sources

https://www.abc.net.au/news/2023-07-24/first-image-of-australian-encounter-with-chinese-spy-ship/102637528

https://www.defense.gov/News/News-Stories/Article/Article/3476514/talisman-sabre-23-reflects-us-allies-commitment-to-indo-pacific/

https://www.reuters.com/world/asia-pacific/chinas-taiwan-military-drills-offer-spying-opportunity-us-2022-08-12/



CISA Releases 2022 Top Routinely Exploited Vulnerabilities — Cyber

Summary

The Cybersecurity and Infrastructure Agency (CISA) has released the 2022 Top Routinely Exploited Vulnerabilities in association with the National Security Agency, the Federal Bureau of Investigation, and cybersecurity agencies from Australia, Canada, New Zealand, and the United Kingdom. The purpose of the paper is to educate end-users, designers, and developers to reduce the risk posed by threat actors online. Links to the details of Common Vulnerabilities and Exposures (CVEs) and the associated Common Weakness Enumerations most often leveraged in 2022 are included.

Older, unpatched legacy systems are often targeted, as opposed to more recently disclosed vulnerabilities. Publicly available Proof of Concept code allows a broader range of threat actors to target these vulnerabilities. Globally prevalent CVEs are more likely to be selected because the number of targets increases the likelihood of success. Publicly documented vulnerabilities are a low-cost, high-reward tool that can be used for several years. Successful attacks are most prevalent in the first two (2) years of public disclosure and gradually subside as systems are patched or upgraded.

Analyst Comment

A review of DoD critical infrastructure indicates that there are potential vulnerabilities. An example is the recent discovery of malicious code from China in the telecommunications system used by the U.S. military in Guam, where three (3) strategic installations are located. Threat actors use cyberspace for espionage and intellectual property theft. Malware hidden in critical networks can be used to disrupt DoD response to active threats. Using cyberspace to deny the availability and function of weapon systems is as effective as destroying them on the battlefield.

A proactive approach to cybersecurity is required to reduce risk and to assure that critical systems remain fully mission-capable, beginning with leadership that supports a "whole of organization" approach. The maintenance of hardware and software requires an understanding that preventive expenditures save both money and manhours in the long run, compared to the cost of a cyberattack. Validation of vendor and developer claims prior to implementation is also an integral part of upgrading or building infrastructure. An understanding of threat actors and their methods allows experts to stay ahead of them. It is imperative that the DoD secures its control systems and operational technology while building resiliency across the digital battlespace.

Sources

https://www.cisa.gov/news-events/cybersecurity-advisories/aa23-215a

https://nationalinterest.org/blog/techland/dod%E2%80%99s-critical-infrastructure-dangerously-insecure-206832



U.S. Shoots Down Armed Drone Flown by Turkey -

Unmanned Aircraft/Unmanned Aircraft Systems (UA/UAS)

Summary

After multiple warnings to redirect, U.S. forces shot down an armed Turkish drone near northeastern Syria. The drone was shot down by an American F-16 fighter jet on Thursday, 05 October. This is the first time the U.S. has acted against a Turkish aircraft. This is especially relevant because Turkey is a North Atlantic Treaty Organization (NATO) ally. The incident occurred amid efforts by Syrian Kurds and the U.S. to defeat the remnants of the Islamic State (IS) in the region.

U.S. troops on the ground made multiple attempts to contact Turkish forces to redirect the craft. However, the drone continued to carry out airstrikes against sites in Jazeera, Derik, and Tal Rifat. All of the targeted areas are likely used by the Kurdistan Workers' Party (PKK). The PKK is waging an ongoing insurgency in Turkey and is allied with Kurdish militia personnel in Syria.

The U.S. has designated the PKK as a "foreign terrorist organization" but has declined to label the militia groups as such. The Kurdish People's Protection Units (YPG) have been an ally against ISIS, and the U.S. does not believe the YPG represents a threat to Turkey. Ultimately, an official of the Turkish Defense Ministry claimed that the drone in question was not a weapon of the Turkish armed forces. However, Turkey's state-run Anadolu Agency reported that the nation's intelligence service, MIT, had carried out an operation against the PKK and the YPG.

Analyst Comment

The targeting of PKK-occupied areas is a reaction to the Kurdish insurgency that has lasted for decades in Turkey. The airstrike followed a suicide attack that occurred on 01 October at the Turkish capital Interior Ministry building. However, as a NATO member, Turkey's retaliatory strikes had the potential to escalate tensions between U.S. and Turkish officials. Following the shootdown of the drone, Secretary of Defense Lloyd Austin and Joint Chiefs chairman General CQ Brown spoke with their Turkish counterparts, hoping to avoid such incidents in the future.

Although Syrian Kurds have assisted the U.S. in the fight against IS, there is still tension because of the alliance between YPG and PKK. As the latter acts in opposition to the government, Turkey also considers their Syrian counterparts a terrorist threat. The fact that the YPG are backed by American forces is a point of contention between the U.S. and Turkey. While the U.S. continues to route the remaining IS forces, it must continue to maintain the relationship with its NATO ally. Whether the drone incident in northeast Syria portends future strikes by Turkey remains to be seen.

Sources

https://www.npr.org/2023/10/05/1204009210/u-s-shoots-down-armed-drone-flown-by-nato-ally-turkey



https://www.washingtonpost.com/world/2023/10/06/turkey-warplanes-syria-kurdish-militants/14df6a46-641b-11ee-b406-3ea724995806_story.html

https://apnews.com/article/syria-turkey-shot-down-06b5b407e91ffb3d41096bbfe5f1ef75

Driver Attempts to Breach Marine Corps Base Twentynine Palms Gate – Active Shooter/Active Assailant

Summary

On 22 September 2023, a military police officer shot at a driver attempting to forcefully breach the gate at Marine Corps Air-Ground Combat Center (MCAGCC), Twentynine Palms in California. The driver had evaded civilian law enforcement before reaching the installation. After the shooting at the gate, he was found to be unarmed. After being arrested, he was evaluated for injuries at a nearby Naval hospital. There were no reports of injuries or fatalities among personnel.

Similarly, in December 2022, another driver, a U.S. Army veteran, was shot while attempting to breach the gate at Shaw Air Force Base (AFB) in South Carolina, which led to a multiagency investigation. According to an FBI spokesperson, the individual had a prohibited weapon in the vehicle. After an Airman from the 20th Security Forces Squadron opened fire, the driver was taken to a nearby medical facility for treatment. He sustained no life-threatening injuries. It was unclear in open source if he would be charged with a crime.

Analyst Comment

While the September 2023 incident at Twentynine Palms was not assessed to be motivated by malicious intent, this is a prominent example of a particular TTP used by would terrorists and lone wolf actors. "Gate runners" have demonstrated the capability to cause damage not only to DoD assets, but also personnel and civilians that may be in the area. There has been a recent history of civilians attempting to unlawfully gain access to secure installations, or even inflicting harm due to personal motivations. In some incidents, the perpetrators were unarmed. Others involved civilians with weapons with the intention to hurt or kill personnel and cause significant damage.

Every day, the DoD reportedly conducts over 10,000 refusals of individuals who attempt to enter one (1) of 1,400 installation gates. Typically, they depart without incident. Many are civilians who do not understand DoD security policies or may have been misinformed about community access. A few warrant additional consideration or even investigation, but they are virtually never treated as espionage, active shooters, or terrorism. In a small number of cases, an individual or group may unlawfully enter an installation, either by speeding through a checkpoint or due to lax security.



When caught, these individuals are often cited criminally and barred from future access. In the December 2022 and September 2023 attempts, there were no casualties. Not only can DoD assets and personnel be harmed, but sensitive information can be collected by foreign intelligence entities. It is incumbent upon DoD installations to continue maintaining a firm security posture that plans for similar attempts in the future and rigidly enforces gate access policies.

Sources

https://www.foxnews.com/us/mp-opens-fire-civilian-attempting-illegally-enter-california-marine-base

https://www.foxnews.com/us/south-carolina-airman-shoots-gate-runner-attempting-illegally-enter-shaw-air-force-base-property

https://www.airforcetimes.com/news/your-air-force/2022/12/28/army-vet-faces-federal-charges-after-forcibly-entering-shaw-afb/

https://www.foxnews.com/politics/fbi-tracks-100-incidents-chinese-nationals-posing-tourists-breach-us-military-sites-report.amp

Mexican Cartels Target DoD Personnel for Recruitment - Narcotics

Summary

There is growing concern for U.S. servicemembers as Mexican cartels expand their operations and recruitment efforts along the southern border. Cartels are interested in the leadership skills, training, and experience that servicemembers possess. They also believe that servicemembers will have an easier time passing through border security. Cartels have been known to use social media, word of mouth, video games (via online chat), and trips to Mexico as recruitment tools. They offer money to current and veteran servicemembers to traffic illegal drugs, weapons, and human cargo, and to perform contract killings. Of particular concern is the deployment of Soldiers and Marines to the southern border in support of the Department of Homeland Security and Customs and Border Protection. Many of those targeted are junior enlisted personnel who may be enticed by the cartel's offer of money.

There are multiple examples of these recruitment efforts. In June 2022, a former Marine with dual U.S. and Mexican citizenship was sentenced in federal court to 16 years in prison for leading an international organization that transported cocaine from South America to Mexico and into the U.S. His organization had ties to the Sinaloa Cartel and the Jalisco New Generation Cartel. In September 2020, two (2) U.S. Army Soldiers were sentenced to one (1) and two (2) years in prison, respectively, for conspiring to transport undocumented immigrants within the U.S. They attempted to go through the checkpoint in Hebbronville wearing their uniforms. Upon inspection, authorities discovered two (2) individuals hidden in the trunk who were in the country illegally. There are numerous other examples in recent years.



Analyst Comment

Mexican cartels are able to adapt to the changing environment along the southern border. As U.S. immigration policy and posture has shifted, Mexican cartels' command structures, communications, and tactics have evolved, including their recruitment efforts targeting DoD personnel. Servicemembers are already supporting operations on the border, particularly in logistics and intelligence. These personnel can provide these and other skills, along with freedom of movement, to the cartels, which have the funds to entice them to join their criminal enterprise. It is incumbent upon DoD officials and leadership within the ranks to educate personnel on these efforts and identify individuals who may be struggling personally or financially. Early support and intervention can help prevent recruitment by cartels or other criminal enterprises who may seek to exploit them.

Sources

https://www.thenationalnews.com/world/us-news/2023/03/23/how-mexican-cartels-recruit-us-soldiers-and-other-americans-to-do-their-dirty-work

https://www.foxnews.com/us/mexican-cartels-hiring-us-soldiers-as-hit-men

https://www.science.org/content/article/cutting-cartel-recruitment-could-be-only-way-reduce-mexico-s-violence



Hazards

U.S. Marines Support Relief Efforts Following Volcanic Eruption in Papua New Guinea – Natural Hazards (Geological)

Summary

Following the active volcano eruption on the eastern island of Bougainville, Papua New Guinea in July 2023, the chief of the U.S. Indo-Pacific Command ordered troops with the 31st Marine Expeditionary Unit and the America Amphibious Ready Group to assist with humanitarian aid. In July, Mount Bagana, which is among the most active volcanoes in Papua New Guinea, started spewing ash and noxious gas. As a result, thousands of people were evacuated to shelters, and the government of Papua New Guinea requested military assistance on 01 August 2023. According to the U.S. Agency for International Development, in August, Sailors and Marines provided emergency relief to parts of Papua New Guinea impacted by the ashfall, gas, lava flows, and steam plumes from the volcanic eruptions. The most recent U.S. Geological Survey Weekly Volcanic Activity Report highlighted that images of summit activity from 17-19 August showed emissions rising no higher than one (1) km above the summit and drifting Southeast.

According to NASA's Earth Observatory, Mount Bagana is the only currently active volcano out of three (3) total on the island of Bougainville. The volcano, which has been in an eruptive period since February 2000, releases thousands of tons of sulfur dioxide per day, which is the most of any volcano in the world devoid of a lava lake. Open-source reporting indicates that several thousand people live within 30 km of Mount Bagana.

Analyst Comment

The humanitarian assistance in Papua New Guinea shortly followed the Marines' support in the wake of Typhoon Egay in the Philippines. Thirty-five (35) Marines and Sailors transitioned from preparation to redeploy home to supporting the Philippines in August 2023. The relief efforts in Papua New Guinea and the Philippines followed Secretary of Defense Lloyd Austin's visit to Papua New Guinea in July 2023. Reports indicate that Secretary Austin met with officials to strengthen security cooperation with Papua New Guinea and discuss efforts to stop China's increased influence in the South Pacific.

Volcanic eruptions and other natural disasters can disrupt installation operations in the Indo-Pacific. They can impact the transportation of essential resources and supplies, as well as threaten the lives and safety of personnel. For instance, following the conclusion of the Talisman Sabre military exercises in eastern Australia, the USS America diverted from a planned port call to assist in Papua New Guinea.



Recovery efforts following this eruption could delay the implementation of the Defense Cooperation Agreement, as the U.S. helps expand Papua New Guinea's military capabilities and increase its interoperability with DoD systems. Geological and meteorological hazards in the region could delay potential joint exercises between U.S. and Papua New Guinea, as well as critical infrastructure development in the nation. Despite the two (2) countries' cooperation, reports suggest that some locals in Papua New Guinea are concerned about increased militarization, as the signing of the Defense Cooperation Agreement in May 2023 led to student protests.

Sources

https://www.military.com/daily-news/2023/08/09/marines-tapped-aid-papua-new-guinea-wake-of-volcanic-activity.html

https://earthobservatory.nasa.gov/images/149899/young-active-bagana-volcano

https://abcnews.go.com/Politics/defense-secretary-makes-historic-visit-papua-new-guinea/story?id=101659240

https://www.stripes.com/branches/navy/2023-08-14/us-marines,-navy-deliver-aid-to-papua-new-guinea-after-volcanic-eruptions-11043086.html

https://volcano.si.edu/showreport.cfm?wvar=GVP.WVAR20230816-255020

https://www.marines.mil/News/News-Display/Article/3485048/us-marines-answer-the-call-3rd-marine-aircraft-wing-conducts-typhoon-egay-relie/

https://apnews.com/article/united-states-pacific-security-china-papua-new-guinea-blinken-a4a052e05ff3f03f9e392e66cca74018

Saltwater Wedge Threatens Drinking Water in Southeast Louisiana – Natural Hazards (Geological)

Summary

For the first time since 1988, Southeastern Louisiana faces a potential threat to its drinking water supply. The midwestern and southern regions of the U.S. have been facing an ongoing drought that has affected freshwater levels in the Mississippi River. The drought has led to low levels and an intrusion of saltwater, which is traveling upriver. This could affect the drinking water in Belle Chasse, Louisiana where Naval Air Station Joint Reserve Base (NAS JRB) New Orleans is located. With the historic low river levels expected to last for several weeks, experts believe that salt levels in drinking water could rise by mid-to-late November, with 20,000 residents in Belle Chasse affected first. If the saltwater intrusion reaches New Orleans, the number of affected residents could double. City officials are monitoring over 50,000 lead pipes in the area that are likely to be affected by the saltwater intrusion. However, between 03 and 10 October, the saltwater wedge retreated more than



five (5) miles. It is a pattern that city officials hope continues as they consider options to deliver fresh drinking water in the coming weeks and months.

Analyst Comment

The saltwater intrusion has the capability to affect both DoD assets and personnel alike due to the installations in the immediate area, including NAS JRB New Orleans and the 4th Marine Division. Thousands of residents in lower Plaquemines Parish in Louisiana have already had contaminated drinking water since June. Most residential water filters do not perform reverse osmosis to desalinate drinking water, although there are home models available at the retail level. Most homes are not equipped with these systems.

However, there are efforts to mitigate the problem by diluting the water at the source or piping in freshwater from further up the river. High salinity levels can degrade residential plumbing systems and appliances, making it difficult to bathe, wash dishes, or do laundry. Louisiana Governor John Bel Edwards submitted a request for a Federal Emergency Declaration on 25 September, which was granted by President Joe Biden two (2) days later. The situation is developing.

Sources

https://www.theguardian.com/us-news/2023/oct/10/louisiana-drinking-water-saltwater-mississippi-river

https://www.cnn.com/2023/10/05/health/louisiana-salt-levels-drinking-water-health/index.html

https://www.fox8 live.com/2023/09/22/time line-saltwater-wedge-could-reach-new-orleans-by-late-october/

https://news.yahoo.com/orleans-faces-drinking-water-crisis-170703040.html

https://news.yahoo.com/salt-water-moving-mississippi-river-143820234.html

https://gov.louisiana.gov/index.cfm/newsroom/detail/4270

https://www.cnn.com/2023/09/27/politics/biden-approves-louisiana-emergency-saltwater-climate/index.html



Wildfire Smoke from Canada Affects U.S. East Coast — Natural Hazards (Meteorological)

Summary

Canada's worst wildfire season on record has had far reaching impacts on smoke and air quality throughout North America. The interaction of high-pressure systems with these wildfires pulls smoke long distances from its origin. In early October, smoke from Canadian wildfires covered most of the eastern coast of the U.S., all the way down to Florida. The presence of this smoke, and its dispersal, is dependent upon weather systems.

Analyst Comment

Smoke from wildfires brings a host of potential issues with it. Reduced visibility can impact a variety of modes of transit. Heavy smoke can also damage aircraft, thereby generally preventing flights. Smoke particles can clog air filters, coat engine components, and interfere with navigation systems. Additionally, the air quality inside the plane can be reduced, impacting the health of those inside. Similarly, car passengers may deal with air quality issues and clogged filters.

Residents in areas affected by wildfire smoke should monitor the air quality index and take appropriate actions depending on the rating. Generally, indoor spaces will be cleaner than outdoor areas. Use of air purifiers, masks, and respirators, combined with a reduction in outdoor activities is an effective way to reduce exposure to smoke.

Avoiding or reduction exposure to the smoke from wildfires is important due to the numerous potential health impacts. Studies estimate global deaths from wildfire smoke to range between 260,000 and 600,000, with wildfires leading to 339,000 annual premature deaths. Furthermore, there is a recent significant increase in exposure to wildfires across the globe.

Depending upon the type of fuel burned by the wildfire, a variety of chemicals may be emitted, including particulate matter. Sensitive groups and vulnerable populations are likely to experience worse effects. These include the young, the elderly, and those with heart or lung conditions. Overall, health effects depend on type of smoke or particulate, the length of time exposed, mitigation efforts, and individual health. However, even short-term exposure can have long-term health impacts.

Sources

https://www.cnn.com/2023/10/01/weather/canada-wildfire-smoke-northeast/index.html

https://www.msn.com/en-us/weather/topstories/canadian-wildfire-smoke-is-reaching-tampa-bay-how-long-will-it-last/

https://www.gleimaviation.com/2023/06/08/up-in-smoke-a-look-at-the-dangers-of-airborne-smoke-ash/



https://www.abc27.com/national/can-wildfire-smoke-cause-damage-to-your-car/

https://www.usfa.fema.gov/blog/minimizing-the-effects-of-wildfire-smoke/

https://www.ifm.org/news-insights/impact-of-wildfire-smoke-on-respiratory-health-research-interventions/

Mediterranean Storm Daniel Breaks Records – Natural Hazards (Meteorological)

Summary

Mediterranean Storm Daniel hit parts of the central and eastern Mediterranean in early September. Sometimes called a "medicane," these storm systems are similar to a tropical cyclone, but they are rare. The storm hit parts of Greece, Turkey, and Bulgaria, causing over a dozen deaths. On 10 September, Storm Daniel hit the northeast of Libya. With winds between 70-80 mph and rainfalls of 150 mm to 414.4 mm being reported within 24 hours, local infrastructure was overwhelmed. The rain caused the collapse of roads, bridges, power lines, and two (2) significant dams.

Analyst Comment

As with many natural disasters, compounding logistical issues and secondary hazards greatly exacerbate severe weather events. In this particular case, local politics, improperly maintained infrastructure, and subsequent flash flooding all greatly increased the damage done by Storm Daniel.

The city of Derna, Libya was the hardest hit by Storm Daniel. Residents were told to shelter in place as the system approached. The significant rainfall caused two (2) dams inland from the city to collapse. The resulting flood waters reached the city in waves exceeding 20 feet in height. The city was home to around 90,000 people. While exact numbers are still unavailable, tens of thousands have been reported missing and at least 11,300 are reported dead. Large sections of the city were washed away completely, with officials estimating that 25% of the city was destroyed. A further 30,000 people have been displaced from the storm.

Recovery operations are complicated by national politics. Derna is controlled by the Libyan National Army, run by Field Marshal Khalifa Hifter and based in the eastern city of Tobruk. The rest of the country is run by the Government of National Unity based in the capital, Tripoli, in the west. This spilt also likely hindered dam repairs, which had not been carried out since 2008.

It is important to note that events such as this are more likely to occur in the future. On average, medicanes only form about once or twice a year, but changing climate patterns will likely cause an increase in both the frequency and intensity. Warming sea surface temperatures make storms more intense, pushing a small storm to medicane status. Additionally, warmer air can hold more water, meaning the storms will likely bring more



intense rainfall, flooding, and flash flooding. Storm Daniel brough record-breaking rain to several countries. Events such as this will increase in likelihood as the climate continues to warm.

Sources

https://www.nbcnews.com/news/world/libya-floods-death-toll-derna-rcna105001

https://phys.org/news/2023-09-medicanes-rare-supercharging-mediterranean-storms.html

https://www.theguardian.com/environment/2023/sep/15/weather-tracker-libya-floods-storm-daniel-medicane

https://www.reuters.com/world/mediterraneans-devastating-storm-daniel-may-be-harbinger-storms-come-2023-09-12/

https://public.wmo.int/en/media/news/storm-daniel-leads-extreme-rain-and-floods-mediterranean-heavy-loss-of-life-libya

GAO Reports Substandard Conditions at Barracks – Accidental Events (Human or Technologically Caused)

Summary

A new report from the Government Accountability Office (GAO) details substandard living conditions at barracks onboard multiple DoD installations. Many junior enlisted personnel live in proximity to vermin, hazardous waste, and squatters occupying rooms without authorization. Unsanitary conditions have the potential to propagate disease and infections, while hazardous waste can result in a wide range of injuries and illnesses. The presence of unauthorized individuals living in the barracks increases the likelihood of crime. All of these factors are a threat to personnel health and safety. The GAO concluded that the DoD has failed to exercise adequate oversight. The individual branches of the military are largely responsible for the problem. Investigators from the GAO inspected housing facilities at 12 DoD installations and spoke with servicemembers, who cited unsafe drinking water, broken air conditioning and heating systems, and inadequate security, including broken windows and doors. Photos within the GAO report show restrooms with overflowing sewage, cracked pipes, water damage, vermin, and mold and mildew growth. The report also cited slow response times to address problems or repair and maintain building systems, with inconsistent evaluation programs that allow conditions to deteriorate. The report cited a lack of service-wide requirements for barracks conditions and no rules preventing servicemembers from being housed in the unsafe living spaces. Thousands of servicemembers are likely affected by the situation. The report outlines 31 recommendations to "provide guidance on barracks condition assessments, obtain complete funding information, and increase oversight of barracks programs." The DoD concurred with 23 of the recommendations and partially concurred with another eight



(8) of them, while acknowledging its obligation to maintain "safe and secure" living conditions for personnel.

Analyst Comment

The conditions described in the GAO report have the potential to spread disease and expose servicemembers to hazardous materials. In an anecdote, personnel were ordered to clean up biological waste following a suicide in the barracks. Broken windows and doors, poor or broken lighting, inadequate security cameras, and broken fire safety systems described in the report make barracks living fundamentally unsafe for personnel and increase the likelihood of theft, property damage, and violent crime. At two (2) installations, unauthorized individuals were even living in unoccupied rooms. It is incumbent upon DoD officials to not only acknowledge the problem but act upon the GAO's recommendations.

Sources

https://www.foxnews.com/us/troops-plagued-filthy-conditions-squatter-military-barracks

https://www.gao.gov/assets/gao-23-105797.pdf

F-35 Aircraft Crashes in South Carolina — Accidental Events (Human or Technologically Caused)

Summary

An F-35B Lightning II stealth fighter jet based at Marine Corps Air Station (MCAS) Beaufort was reported missing on 17 September 2023 after the pilot ejected over North Charleston, South Carolina. Upon landing just a few hundred yards from the base, he contacted 911 from a resident's home and was taken to a nearby medical center with no life-threatening injuries. The aircraft continued its flight unmanned for about 60 miles. The jet then crashed into a wooded area where debris was found on 18 September 2023. The event was documented as a Class-A mishap by the DoD, meaning that the damages exceeded \$2.5 million, an aircraft was destroyed, the event led to a death, or an individual was permanently disabled. The Marine Corps was then ordered to stand down for two (2) days to assist the search for the missing jet.

MCAS Beaufort is located approximately 35 miles southwest of Charleston, South Carolina. It is home to nearly 4,700 personnel, and the Marine Fighter Attack Training Squadron 501 which flies the F-35B Lightning II. In August 2023, a Marine Corps pilot died after his combat jet crashed in San Diego during training. The crash was the fifth Class-A mishap of the fiscal year and only the first to involve a Marine Corps aircraft

Analyst Comment

Aircraft mishaps pose a threat not only to DoD personnel, but to civilians, private sector assets, and other persons and/or properties in the area. In the case of the F-35, the aircraft landed in a wooded area, with no casualties. However, if it had crashed into a park, museum, outdoor gathering, a home, or a school, the results could have been far worse. According to the Naval Facilities Engineering Systems Command (NAVFAC), the wreckage



was recovered and moved to MCAS Beaufort. Recovery and environmental remediation have both been completed, but an investigation is still ongoing. The F-35 program is reportedly the DoD's most expensive weapons program at nearly \$1.7 trillion. Open-source media revealed that the pilot described only an "aircraft failure" during the 911 call as the reason for his ejection. The investigation is ongoing.

Sources

https://www.msn.com/en-us/news/us/officials-finish-cleanup-of-downed-f-35-jet-investigation-into-mishap-ongoing/ar-AA1i3yFJ

https://www.usatoday.com/story/news/nation/2023/09/19/marine-corps-fighter-jet-lost/70898403007/

https://www.dailymail.co.uk/news/article-12529129/Marine-pilot-ejected-flight-Charleston-f35-plane.html

https://www.youtube.com/watch?v=AzwPak1H4jg&ab_channel=TODAY



On the Radar

- <u>U.S. Munitions Assistance to Israel</u>. The war in Ukraine has forced the U.S. to use munitions from its overseas reserves. One (1) of the munitions reserves that was tapped to support Ukraine was War Reserve Stockpile Ammunition Israel (WRSA-I), which was established in the 1980s, to support Israel during wartime. The DoD has indicated that they are in the early stages of evaluating the projected needs of the Israeli Defense Forces during its conflict with Hamas and has indicated the possibility of having to request funding from Congress.
- New Screening Policy for Personnel Involved in DoD Research. Many civilian academics are unaware of the risk posed by foreign intelligence entities to their research. The academic community typically shares its findings and has a well-established peer review process. The DoD is taking action to mitigate the risk of defense research and development falling into the hands of foreign intelligence services. A new policy calls for a review process for potential research project proposals and grants that will screen personnel associated with the project. Insider threat and risk awareness training will also be a requirement.