

DAILY TRACKER**NUCLEAR ISSUES**

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1. This is known as an “early warning counterstrike,” which is sometimes referred to as a “launch of warning posture” or LOW. The report, titled Military and Security Developments involving the People’s Republic of China, notes that the Chinese military could change the calculus of contemplating the use of a nuclear weapon. The report speculates that the People’s Republic of China (PRC) likely plans to keep a certain segment of its nuclear arsenal on a LOW posture. This speculation stems from China’s trend of conducting “exercises involving early warning of a nuclear strike and launch on warning responses” in recent years, according to the report.

**Source:** <https://nationalinterest.org/blog/buzz/how-china-could-mask-its-intent-launch-nuclear-attack-196025>

2. China is stepping up its nuclear weapons arsenal at a stunning pace. And one of its main aims is to gain a strategic advantage over the US in any future war over Taiwan.

**Source:** <https://www.independent.co.uk/asia/china/nuclear-arms-pentagon-report-china-b1954318.html>

3. Israel has used it to intercept thousands of Palestinian rockets and mortars. Now the Iron Dome missile-defense system is being tested in Guam by U.S. military planners concerned about possible Chinese attacks.

**Source:** <https://www.wsj.com/articles/u-s-tests-israels-iron-dome-in-guam-as-defense-against-chinese-cruise-missiles-11636455224>

4. Utility company E.ON said on Wednesday it had sold forward 97% of its German nuclear power output in 2021 and 74% of its 2022 output at prices well below the current wholesale market from its reactors ahead of their pending closure. The company has to date also sold its entire output in the current year from the reactors at its non-core PreussenElektra unit, it showed in presentation slides as it reported financial results for the first nine months of the year.

**Source:** <https://www.fxempire.com/news/article/e-on-sells-german-nuclear-output-below-market-prices-803469>

5. Over the past year, I have discovered that whenever the word “bitcoin” features in a column I write, it sparks attacks on social media. Cryptocurrency is a deeply divisive issue so it has not come as a great surprise that so many — on both sides of the argument — feel compelled to lash out. Last week, I discovered another topic that sparks almost as much ire: nuclear power. During the COP26 summit, I conducted an onstage interview with Rafael Grossi, the head of the UN’s nuclear watchdog, the International Atomic Energy Agency.

*Source: <https://www.ft.com/content/0823c7a9-ca75-4a75-96cb-e0c006ca791c>*

6. Over the past nine days, the world has come together to take firm action on one of our time's most defining issues: climate change. With nuclear power increasingly being recognised as an essential player in achieving global net-zero by 2050, World Nuclear Association and the broader nuclear community are here, explaining why nuclear power should be at the heart of any climate change action plans - because it is a proven, low-carbon, round-the-clock energy source, deployable at scale. Since it was first formed more than 20 years ago, World Nuclear Association has represented the global nuclear industry at many of these climate change conferences. Over the past week, I have participated in many different events, and my team and I here in Glasgow have spoken with delegates from around the world - conversations that in many cases will continue long after we all leave Scotland.

*Source: <https://www.world-nuclear-news.org/Articles/Message-Nuclear-industry-calls-for-successful-conc>*

7. President Emmanuel Macron, making the announcement in a nationwide address on Tuesday, said it would also help the country achieve "energy independence". Unlike many of its European neighbours, which are moving away from nuclear, France will build its first new reactors in decades. Paris had previously said it wouldn’t build new reactors until the completion of a new reactor at Flamanville in northern France, which has suffered a decade of delays and huge cost overruns. France already has 56 operational reactors and derives about 70% of its electricity from nuclear energy, according to the World Nuclear Association.

*Source:* <https://www.euronews.com/2021/11/10/france-vows-to-build-new-nuclear-reactors-to-meet-climate-goals>

8. Updated and relaunched every year, Tecnópolis is a public art, science and technology park in the suburbs of Buenos Aires. It features thematic zones such as culture, childhood, human development, urban life, as well as energy. Dozens of pavilions showcase the work of Argentine national science and technology organisations, while the overall space hosts a programme of cultural events. "Tecnópolis is one of the most important events of the year," said Isidro Baschar, director of Nucleoeléctrica, adding: "Our stand is a proposal that allows an interactive tour of the 70 years of nuclear development in Argentina." Nucleoeléctrica has held a prominent space in Tecnópolis since its inception in 2011. The company's renewed pavilion gives visitors the chance to learn about nuclear energy from the perspective of a reactor operator using a specially designed control room. They can also tour both of the country's nuclear plants, Atucha and Embalse, using a '4D' experience.

*Source:* <https://www.world-nuclear-news.org/Articles/Argentina-invests-in-nuclear-education>

## NUCLEAR PROLIFERATION

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1. Britain is keen on nuclear power—in theory, at least. In 2010 the government gave permission for eight new reactors to be built in England and Wales, as part of its efforts to decarbonise electricity generation. Things have proved harder in practice. A decade later only one—at Hinkley Point on the Somerset coast (pictured)—is being built. It is late and over budget. Construction only began at all because in 2013 ministers committed consumers to paying EDF, the French firm building the plant, a fixed price far above the going rate for its electricity for the first 35 years.

*Source:* <https://www.economist.com/britain/can-smaller-reactors-make-nuclear-power-economic/21806208>

2. Radio waves and mobile phone signals rely on electromagnetic radiation for communication but in a new development, engineers from Lancaster University in the UK, working with the Jožef Stefan Institute in Slovenia, transferred digitally encoded information using "fast neutrons" instead.

**Source:** <https://www.sciencedaily.com/releases/2021/11/211110131531.htm>

3. It is a long-standing dilemma that the European Commission, the executive arm of the EU, must resolve in the coming weeks. The commission is due to publish its sustainable finance taxonomy — rules that will help clarify to investors what the bloc sees as green investments — as an attempt to boost financing in these areas.

**Source:** <https://www.cnn.com/2021/11/09/cop26-europe-has-a-big-decision-to-make-on-nuclear-power.html>

4. Nuclear power could become a crucial feature in a world free of fossil fuels. This is why Rolls-Royce secured financial backing from a consortium of private investors and the U.K. government to build small modular nuclear reactors capable of generating cleaner energy in the region, according to a press release from the company.

**Source:** <https://interestingengineering.com/why-you-should-care-about-small-nuclear-reactors>

5. Nuclear energy could present a “tremendous opportunity” to introduce “enormous amounts of clean, carbon-free” energy to the base load, said GRIDD vice president Harry Sudok at the ‘Bitcoin & Beyond Virtual Summit’ on Nov. 10. GRIDD is an American company that procures low-cost, renewable energy to build vertically-integrated Bitcoin mining facilities.

**Source:** <https://cointelegraph.com/news/bitcoin-miners-look-toward-nuclear-power-for-sustainable-energy>

6. The world needs to mount a “Covid-scale” investment worth hundreds of billions of pounds in green technologies if it is to tackle global warming, the head of Britain’s nuclear fusion programme has warned. Professor Ian Chapman, who heads the UK Atomic Energy Authority (UKAEA), told i that he believes nuclear fusion, which aims to produce safe and virtually limitless low-carbon power by recreating the sun’s process of creating energy, is viable but society “does not have its priorities right” when it comes to spending on green technologies.

**Source:** <https://inews.co.uk/news/nuclear-fusion-requires-covid-scale-investment-to-unlock-green-energy-tech-says-atomic-chief-1294033>

7. The water was hot, steamy and plentiful, and Pavel Rozhkov let it flow over his body, enjoying a shower that is not for the squeamish: On his bare skin, he was feeling the heat produced by an atomic reaction, pumped directly from a nuclear reactor into his home. “Personally, I’m not worried,” Rozhkov said.

**Source:** <https://www.ekathimerini.com/nytimes/1171498/a-nuclear-powered-shower-russia-tests-a-climate-innovation/>

8. RWE ([RWEG.DE](http://RWEG.DE)), Germany's largest power producer, posted a 6% rise in nine-month core profit, as weaker earnings at the group's solar and wind units were offset by its energy trading and nuclear and coal divisions.

**Sources:** <https://www.reuters.com/business/energy/rwe-posts-9-month-profit-rise-trading-nuclear-coal-2021-11-11/>

## MISSILES/BIO WEAPONS

1. Approximately three ballistic missiles launched by [Houthi rebels](#) hit a Saudi military installation on Wednesday evening near the Yemeni border, *Sputnik* reported, citing multiple sources. The report stated that while at least three missiles struck the Saudi military installation, there remained a possibility of at least seven missiles hitting the facility, with numerous casualties reported. Citing a statement by the Houthi armed forces in Sana'a, the report further stated that a series of ballistic missiles also struck targets in Yemen's Ma'rib and Taiz governorates. The statement revealed that the three missiles were used in the strike on Dhahran al-Janub, a Saudi base in Saudi Arabia's Asir region, which "resulted in the killing and wounding of large numbers of Saudi enemy officers and soldiers." Commander of the Saudi First Regiment, Mansour Ali al-Asmari was reportedly killed in the air attack.

**Source:** <https://www.republicworld.com/world-news/middle-east/saudi-arabian-army-commander-killed-in-houthi-missile-attack-on-military-base-reports.html>

2. Advanced innovation and excellence in engineering have driven our company forward. Learn where our legacy is leading us today

**Source:** <https://twitter.com/RaytheonDefense/status/1266112065816625153?s=20>

3. The US should be studying in far deeper detail China's missile silos & satellite systems to understand exactly what different types of missiles/projectiles might be launched from them— there is new tech on the horizon that could surpass the speed of this summer's hypersonic missile.

**Source:** <https://twitter.com/jacobhelberg/status/1458477852521795585?s=20>

4. A test-launch program of Russia's latest Sarmat intercontinental ballistic missiles (ICBM) has been re-adjusted and only one launch will take place this year instead of the previously planned two launches, a source in the country's military and industrial sector told TASS on Tuesday. "One launch is scheduled for this year in December with the frames of the flight tests," the source said. "Five launches are scheduled for 2022 with the frames of the flight tests." TASS did not receive an official confirmation of this information at the time of the publication.

**Sources:** <https://tass.com/defense/1358929>

5. Russia's new state armament program should be based on the latest hypersonic, cognitive and other breakthrough technologies, Russian President Vladimir Putin said at a meeting of the military-industrial commission on Wednesday. "It is obvious that it is important for us in the process of drafting a new state armaments program to take into account all the basic world trends in developing military hardware and armaments," the Russian leader said. "First of all, this relates to introducing advanced information and bio-cognitive technologies and to promoting hypersonic systems and weapons based on new physical principles, the latest reconnaissance, navigation, communications and control systems," Russia's supreme commander-in-chief said.

**Source:** <https://tass.com/defense/1359749>

6. The review establishes the company's technical approach for precise, timely sensor coverage to defeat ballistic and hypersonic missiles," Northrop Grumman said in a press release. "HBTSS satellites will provide continuous tracking and handoff to enable targeting of enemy missiles." Northrop Grumman received a \$153 million contract from the US Missile Defense Agency

earlier this year for a portion of the HBTSS program and is on schedule to deliver its sensor prototype in 2023, the release said.

**Sources:** <https://eurasianimes.com/us-defense-giant-northrop-grumman-developing-satellite-sensors-that-can-track-hypersonic-missiles/>

7. Turkey announced the test firing of its indigenously developed Siper air defense missile system on Saturday. The Siper is part of Turkey's "long-range and multi-layered national air defense system" being developed to protect "strategic facilities" and is planned for induction in 2023. *TRT World* cited the head of Turkey's Presidency of Defence Industries, Ismail Demir, as saying that the country will have "up to six different multi-layered air defense systems in a few years."

**Source:** <https://www.thedefensepost.com/2021/11/09/turkey-test-fires-air-defense-system/>

8. A second missile target shaped like an American aircraft carrier has been spotted in a desert in northwestern China not far from the first one, according to an analysis of satellite imagery by the U.S. Naval Institute. Images from Maxar Technologies, which were published at the weekend, showed structures that looked like a full-scale aircraft carrier and at least two Arleigh Burke-class destroyers at a suspected target range in the Taklamakan desert in China's Xinjiang region. USNI News, the Naval Institute's news portal, now reports a second site that "consists of a single aircraft carrier target" about 300 miles from the first site but also in the Xinjiang region. USNI News says the new target shares the same characteristics as the first but is only half the size of a real U.S. Nimitz-class carrier.

**Source:** <https://www.benarnews.org/english/news/philippine/chinese-missile-target-11102021151105.html>

9. The infrared technology is projected to dominate the missile seekers market during the forecast period. Infrared technology is capable of tracking the heat generated by an object. In missile guidance systems, infrared tracks the target based on the heat generated by it. Infrared is a passive type of homing technology which is effective in anti-aircraft missiles as it detects the heat generated by the jet engines of aircraft. Cross-array seekers and rosette seekers make use of infrared technology to guide missiles.

*Source:* <https://finance.yahoo.com/news/missile-seekers-market-technology-missile-163000762.html>

10. The October test flight of the Army's Precision Strike Missile flew just over 499km, or 310 miles, before the service lost contact with it, according to Army Futures Command's top general. "We say 499-plus — we lost telemetry at 499.2 [km]," Gen. Mike Murray, commanding general of Futures Command, said Tuesday at the Project Convergence media day. "So we're confident we get past 499 and probably further if we hadn't lost telemetry." The flight of the Lockheed Martin-made weapon, called PrSM, beyond the 499km (310-mile) threshold would be significant because it breaks a previously restricted distance barrier set by the now-expired Intermediate-Range Nuclear Forces (INF) treaty.

*Source:* <https://breakingdefense.com/2021/11/army-lost-telemetry-tracking-data-with-its-precision-strike-missile-at-499km/>

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12. India's nearly completed, \$5.43 billion purchase of Russian S-400 air-defense systems raises serious obstacles to closer politico-military relations between Washington and New Delhi. It requires rigorous strategic thinking to avoid hampering deeper policy relationships within the Asian "Quad" (the U.S., India, Japan and Australia), compromising America's stealth technology or jeopardizing

seemingly mundane but often critical issues of interoperability among national militaries. Finding mutually acceptable solutions has enormous implications; so does failure

**Source:** <https://thehill.com/opinion/national-security/580864-indias-s-400-missile-system-problem>

13. Russian Defence Minister Sergei Shoigu announced this without giving details about the design or capability of the system. With the latest S-500 system still pending induction after successful trials, the teaser of the proposed S-550 has got the world abuzz with different theories and speculations. Experts predict it could be a propaganda move by the Kremlin. However, some reports have suggested that it is actually a Soviet-era missile defense system, which was deferred due to the Arms Control Treaty with the United States.

**Source:** <https://eurasianimes.com/russia-never-seen-before-s-550-missile-defense-system/>

## UN REFORMS

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1. The United Nations Security Council has expressed deep concern over increased violence across Myanmar, calling for an immediate end to fighting and for the military to exercise “utmost restraint”. The rare statement, issued on Wednesday, was agreed to by all 15 members.

**Source:** <https://www.aljazeera.com/news/2021/11/11/un-security-council-calls-for-an-end-to-violence-in-myanmar>

2. As Afghanistan continues to slip into a devastating economic and humanitarian crisis, there is one global actor that can help the country pull through: the United Nations. While its member states continue to debate whether to recognise the Taliban’s government, the UN can still play a significant role in supporting the Afghan people. In fact, as an international institution, it often takes on the responsibilities that no single nation wants to bear.

**Source:** <https://www.aljazeera.com/opinions/2021/11/10/what-can-the-un-do-for-afghanistan-now>

3. India has paid tribute to all women and men peacekeepers, including the 14 police officers who sacrificed their lives in the line of duty, said the country's Deputy Permanent Representative to the UN, R Ravindra.

**Source:** <https://www.hindustantimes.com/india-news/india-deployed-around-3-000-police-officers-in-24-un-peacekeeping-operations-101636594415300.html>

4. The UN Security Council has slapped sanctions on three Houthi rebels linked to cross-border attacks from Yemen into Saudi Arabia and to fighting in the government's last stronghold in the country's north. The United Kingdom said Wednesday it proposed the sanctions because the attacks into Saudi Arabia have killed and wounded civilians and because the Houthi offense in the central desert city of Marib has sought to cut off access to humanitarian aid and includes the use of child soldiers.

**Source:** <https://indianexpress.com/article/world/un-slaps-sanctions-on-three-leading-houthi-rebels-in-yemen-7617661/>

5. Amid collapsing administrative systems in Afghanistan after the Taliban taking control of the war-torn nation, the United Nations Development Program (UNDP) and the Global Fund have said that they have paid USD 8 million for 23,500 health workers in 31 provinces in the country over the past month.

**Source:** <https://www.hindustantimes.com/world-news/amid-collapsing-system-un-pays-8-million-in-salaries-to-afghan-health-workers-101636565671620.html>

6. The world's top carbon polluters, China and the United States, agreed Wednesday to increase their cooperation and speed up action to rein in climate-damaging emissions, signalling a mutual effort on global warming at a time of tension over their other disputes. In back-to-back news conferences at UN climate talks in Glasgow, Chinese climate envoy Xie Zhenhua and U.S. counterpart John Kerry said the two countries would work together to accelerate the emissions reductions required to meet the goals of the 2015 Paris Agreement on climate change.

**Source:** [https://www.business-standard.com/article/current-affairs/china-us-pledge-to-increase-cooperation-at-un-climate-talks-121111100721\\_1.html](https://www.business-standard.com/article/current-affairs/china-us-pledge-to-increase-cooperation-at-un-climate-talks-121111100721_1.html)

7. Greta Thunberg and other young climate activists called on the United Nations on Wednesday to declare a state of emergency on climate change, using the U.N.'s handling of the coronavirus pandemic as a blueprint for action. In a petition to António Guterres, the U.N. secretary general, the group argued that the organization had not marshaled its full institutional powers to confront climate change. They urged it to declare a "Level 3 emergency" — the U.N.'s highest designation — as it did for Covid-19.

**Source:** <https://www.nytimes.com/2021/11/10/world/greta-thunberg-cop26-state-emergency.html>

8. Ethiopian authorities have rounded up high-profile Tigrayans - from a bank CEO to priests - as well as United Nations staff in a mass crackdown on suspected supporters of rebellious northern forces, according to people linked to the detainees.

*Source:* <https://www.reuters.com/world/africa/ethiopian-authorities-detain-more-than-70-un-drivers-un-email-2021-11-10/>