

Nuclear, Missile & Space Digest

Volume 16, Number 18

A Fortnightly Newsletter from the MP-IDSA

September 30, 2024

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A. India

Solar, wind, hydro and nuclear to power India in years to come: PM Narendra Modi

Hindustan Times, September 16, 2024

Prime Minister Narendra Modi on September 16, 2024 said India has decided to build its future based on solar, wind, nuclear and hydro power. "Today's India is preparing a base not only for today but for the next thousand years", PM Modi said while speaking at the 4th Global Renewable Energy Investor's Meet and Expo (RE-INVEST) in Gujarat capital Gandhinagar. Under the PM Surya Ghar Free Electricity Scheme, PM Modi said every power consumer can become a power producer. He added that if the saved money is invested in the Public Provident Fund (PPF) for 20 years, then the whole sum would amount to over ¹ 10 lakh.

<https://www.hindustantimes.com/india-news/solar-wind-hydro-and-nuclear-to-power-india-in-years-to-come-pm-narendra-modi-101726475019096.html>

India's third home-built 700 MWe nuclear reactor achieves criticality

The Economic Times, September 20, 2024

India's third home-built 700 MWe nuclear power reactor has achieved criticality and is expected to start commercial electricity generation soon, operator NPCIL said on September 20, 2024. The nuclear power reactor that achieved criticality on Thursday night is the first of a new series of Pressurised Heavy Water Reactors (PHWRs) to be built at Rajasthan Atomic Power Project in Rawatbhata. Earlier, two 700 MWe PHWRs started commercial operation at Kakrapar Atomic Power Station (KAPS) in Gujarat. The milestone was achieved after clearance of first approach to criticality by the Atomic Energy Regulatory Board (AERB). The NPCIL said RAPP-7 was the third in the series of 16 indigenous PHWRs of 700 MWe each being set up in the country.

<https://economictimes.indiatimes.com/industry/energy/power/indias-third-home-built-700-mwe-nuclear-reactor-achieves-criticality/articleshow/113522142.cms?from=mdr>

nuclear-reactor-achieves-criticality/articleshow/113522142.cms?from=mdr

India's new atomic energy unit to help reduce carbon emissions

Emirates News Agency, September 29, 2024

India's goal of reaching 500 Gigawatts (GW) of non-fossil fuel energy by 2030 as part of its strategy to achieve a low-carbon economy touched a new milestone with a new unit of the Rajasthan Atomic Power Project achieving criticality. "This achievement is notable as India continues to balance its growing energy needs with its commitments to reducing carbon emissions," the Indian Department of Atomic Energy announced on September 28, 2024. Reaching criticality in a nuclear reactor marks the transition from its construction phase to the operational phase. It refers to the beginning of nuclear fission chain reaction resulting in a stable level of power output. The Rajasthan Atomic Power Project has a total planned capacity of 1400 MW. Its unit which has now begun operation is the seventh. Its eighth unit is slated for electricity generation next year.

<https://www.wam.ae/en/article/1455i7n-india%E2%80%99s-new-atomic-energy-unit-help-reduce-carbon>

Small nuclear reactors get traction: Private players offer captive sites for power projects

The Indian Express, September 30, 2024

India's plans to get into the manufacturing value chain of Small Modular Reactors is yielding some positives with a handful of private players learnt to have shown interest in deploying these at their captive site. SMRs — with a capacity of 30MWe to 300 MWe per unit — are increasingly seen as important for nuclear energy to remain a commercially competitive option in the future. India is pushing for a leadership slot in this small reactor space, both as a way of fulfilling its commitment to clean energy transition, and bundling

SMRs as a technology-led foreign policy pitch. According to government officials, detailed technical discussions are currently underway in policy circles to plan a roadmap for studying the feasibility and effectiveness of the deployment of such reactors.

<https://indianexpress.com/article/business/small-nuclear-reactors-get-traction-private-players-offer-captive-sites-for-power-projects-9595157/>

B. Pakistan

How US hit Pakistan-China missile nexus amid rising nuclear tensions

India Today, September 18, 2024

The US government, last week, announced fresh sanctions targeting a Pakistan company and several Chinese “entities and one individual” for allegedly supplying equipment and technology for what it claims is the development of ballistic missiles by Islamabad. This is the sixth round of such sanctions imposed by the US on Chinese and Pakistani firms since November 2021.

The development follows a recent report by the Stockholm International Peace Research Institute (SIPRI). The report highlighted that the size of China’s nuclear arsenal had increased to 500 as on January 2024, from 410 a year ago, and was poised to continue growing. Also alarmingly, for the first time, China may be deploying a small number of warheads for missiles during peacetime.

According to the report, India, in comparison, had 172 nuclear warheads as on January 2024 (against 164 in January 2023); Pakistan had 170 warheads, unchanged since January 2023.

The latest US sanctions reflect ongoing concerns about nuclear proliferation in South Asia. With Pakistan’s missile programme aimed at maintaining regional balance and deterring potential threats, these sanctions signal Washington’s increasing scrutiny of the flow of technology between China and Pakistan, particularly amid rising tensions in the region.

<https://www.indiatoday.in/india-today-insight/story/how-us-hit-pakistan-china-missile-nexus-amid-rising-nuclear-tensions-2602084-2024-09-18>

Pakistan elected to IAEA Board of Governors for 2024-26 term

Emirates News Agency, September 20, 2024

Pakistan has been elected as a member of the International Atomic Energy Agency’s (IAEA) Board of Governors (BOG) for a two-year term from 2024 to 2026.

The election, which took place at the 68th Session of the IAEA’s General Conference in Vienna, was conducted by consensus from the Middle East and South Asia region.

According to the Associated Press of Pakistan (APP), this marks Pakistan’s 21st term on the IAEA’s Board of Governors, underscoring its long-standing commitment to the agency’s objectives in promoting the peaceful use of nuclear energy. A spokesperson from the Foreign Office remarked that Pakistan’s election reflects its positive contributions to the IAEA’s policies and programs.

Currently, Pakistan operates six nuclear power plants, generating a total capacity of 3,530 MW of clean energy, with an additional 1,200 MW plant under construction. The Foreign Office reiterated Pakistan’s dedication to sharing its expertise in peaceful nuclear technology with other IAEA member states through the agency’s technical cooperation programmes.

<https://www.wam.ae/article/144m7ui-pakistan-elected-iaea-board-governors-for-2024-26>

C. China

Chinese researchers reveal Chang’e-6 lunar samples composition

Global Times, September 17, 2024

A joint research team consisting of several Chinese institutions published the very first research paper on the nature of lunar samples returned by the Chang’e-6 mission in the journal *National Science Review*. The paper not only filled a historical gap in the study of the Moon’s far side, but also

provided direct evidence for researching its early evolution. The paper, led by China's leading research institutions, including the National Astronomical Observatories of the Chinese Academy of Sciences and the National Space Administration Lunar Exploration and Aerospace Engineering Center, discussed the physical, mineralogical and geochemical characteristics of the returned samples.

<https://www.globaltimes.cn/page/202409/1319930.shtml>

China's Yutu-2 lunar rover beams back images from moon's far side

CGTN, September 17, 2024

China's Yutu-2 lunar rover sent back the latest images of the lunar surface from the far side of the moon, according to China Media Group (CMG). The rover has traveled 1,613 meters so far, becoming the longest working rover on the moon. Yutu-2, or Jade Rabbit-2, is part of the Chang'e4 probe that landed on the Von Karman Crater in the South Pole-Aitken Basin on the far side of the moon on January 3, 2019. The rover has completed its work for the 71st lunar day, marking nearly five years and nine months of operation – far beyond its original three-month design lifespan.

<https://news.cgtn.com/news/2024-09-17/China-s-Yutu-2-lunar-rover-beams-back-images-from-moon-s-far-side-1wYxUaNEewU/p.html>

Chinese Foreign Ministry on the possibility of the US deploying medium and short-range missiles in Japan

Ministry of Foreign Affairs, the People's Republic of China, September 18, 2024

In recent years, the US has been hellbent on advancing military deployment, including Mid-Range Capability missile system, in the Asia-Pacific to pursue absolute military advantages. This move will heighten arms race, exacerbate regional tensions, threaten peace and security in this region, and disrupt global strategic balance and stability. China has made clear its opposition more than once. We urge the US to give up its

deployment plan, and call on relevant country to have a clear understanding of the real intention of the US, act prudently in fields related to military and security and take concrete actions to uphold regional and international peace and stability. China will keep a close eye on relevant developments, and firmly safeguard its security, rights and interests.

https://www.fmprc.gov.cn/eng/xw/fyrbt/lxjzh/202409/t20240918_11492497.html

China launches two BeiDou navigation satellites

Xinhua, September 19, 2024

China launched two new satellites for the BeiDou-3 Navigation Satellite System (BDS-3) from the Xichang Satellite Launch Center in southwest China's Sichuan Province. They are the second group of medium Earth orbit (MEO) satellites launched since BDS-3 was formally commissioned to provide satellite navigation services worldwide. After entering orbit and completing in-orbit tests, they will be connected to the BDS system. Compared with the previous group of MEO satellites, these new satellites feature upgraded onboard atomic clocks and new inter-satellite link terminals. They will further improve the reliability of the BDS-3 system and the performance of its positioning, navigation and timing (PNT), global short message communications and other services.

[https://english.news.cn/20240919/408aa11f51134c3297a38bdd7dc66301/c.html#:~:text=XICHANG%2C%20Sept.%2019%20\(Xinhua,launched%20at%209%3A14%20a.m](https://english.news.cn/20240919/408aa11f51134c3297a38bdd7dc66301/c.html#:~:text=XICHANG%2C%20Sept.%2019%20(Xinhua,launched%20at%209%3A14%20a.m)

China opens 12 nuclear research facilities to global scientists

Global Times, September 20, 2024

China will open 12 nuclear research facilities and testing platforms to international scientists and institutions to enhance global cooperation, a senior Chinese official said. These include the China Advanced Research Reactor, the new-generation tokamak device Huanliu-

3, and the Beishan Underground Research Laboratory, Liu Jing, vice chairman of the China Atomic Energy Authority (CAEA), said at a meeting on the sidelines of the International Atomic Energy Agency's (IAEA) annual general conference. The facilities span areas such as basic nuclear research, isotope production, nuclear environment simulation, equipment testing, and radioactive waste treatment and disposal.

<https://www.globaltimes.cn/page/202409/1320080.shtml>

Nuclear fuel prices surge as west rues shortage of conversion facilities

Financial Times, September 21, 2024

The price of fuel for nuclear reactors has surged much faster than that of raw uranium since the start of 2022, in a sign of the bottlenecks that have built up in the west following Russia's invasion of Ukraine. Enriched uranium has more than tripled in price to \$176 per separative work unit – the standard measure of the effort required to separate isotopes of uranium – since the start of 2022, according to UxC, a data provider. Demand for uranium has been driven by a revival in atomic power. However, Russia plays a significant role in the multi-stage process of turning mined uranium into the fuel for a nuclear reactor.

<https://www.ft.com/content/49b6bdf5-4e64-47e5-83ed-1d0384a76cf4>

Why US-China rivalry 'impedes' global efforts to regulate artificial intelligence

South China Morning Post, September 21, 2024

Beijing raised eyebrows when it decided not to sign an international declaration this month to keep humans, not artificial intelligence, in control of decision-making on nuclear weapons. It is unclear why China opted out of the non-binding joint statement – endorsed by over 60 countries, including the US and Ukraine – at the end of the second Responsible AI in the Military Domain

(REAIM) conference, hosted by South Korea. Observers say it underlines Beijing's dilemma as it tries to balance concerns about making nuclear-related commitments amid its rivalry with the US on military AI, and its desire for a bigger say in global governance of the rapidly evolving technology.

<https://www.scmp.com/news/china/diplomacy/article/3279368/why-us-china-rivalry-impedes-global-efforts-regulate-artificial-intelligence>

China's 'Carrier Killers': How DF-21D and DF-26B missiles threaten U.S. Navy

The National Interest, September 21, 2024

China's People's Liberation Army Navy (PLAN) has developed advanced anti-ship ballistic missiles (ASBMs), specifically the DF-21D and DF-26B, known as "carrier killers." The DF-26B, unveiled in 2015, boasts a range of 4,000 km and can carry nuclear or conventional warheads, posing a threat to ground and naval targets, including U.S. territories like Guam. The DF-21D, the world's first ASBM, has a range up to 2,150 km and features a maneuverable warhead with high accuracy, capable of striking moving vessels like U.S. aircraft carriers. China's testing of these missiles in the South China Sea signals a strategic effort to counter U.S. naval power, impacting not only the U.S. but also regional navies such as India and Japan. The United States Navy is one of the most powerful maritime forces in the world.

<https://nationalinterest.org/blog/buzz/chinas-carrier-killers-how-df-21d-and-df-26b-missiles-threaten-us-navy-207372>

Mainland China's Norinco unveils drone that can reach Taiwan and may outperform US rival

South China Morning Post, September 23, 2024

China's largest weapon manufacturer has unveiled a small but ultra-long range "kamikaze" drone that could significantly outperform its main American competitor,

<https://www.scmp.com/news/china/science/article/3279607/chinas-norinco-unveils-drone-can-reach-taiwan-and-may-outperform-us-rival-switchblade>

https://english.www.gov.cn/news/202409/23/on_65765522.htm

The United States is not yet losing the global information war, but we soon will be — unless we act quickly and make the most of our strengths. Still, of all the globe's

https://www.fmprc.gov.cn/eng/xw/fjyrbt/lxjzh/202409/t20240924_11496008.html

Construction of FAST telescope's Core Array gets underway

China Daily, September 25, 2024

At the eighth anniversary of the completion of China's Five-hundred-meter Aperture Spherical Radio Telescope (FAST), construction officially began on the prototype of the Core Array of the "China Sky Eye", aiming to enhance FAST's resolution, precise positioning, and mapping capabilities. As the world's largest single-dish radio telescope, FAST boasts unparalleled sensitivity in the world. Since its completion on Sept 25, 2016, FAST has achieved numerous world-class scientific breakthroughs, according to the National Astronomical Observatories of the Chinese Academy of Sciences.

<https://www.chinadaily.com.cn/a/202409/25/WS66f3ab51a310f1265a1c4c21.html>

China to launch moon base mission as early as 2026, expected to be equipped with wireless network

People's Daily Online, September 25, 2024

China's lunar exploration program will carry out two more launch missions to lay the groundwork for the International Lunar Research Station (ILRS), with the first launch expected to take place as early as 2026, announced the China National Space Administration (CNSA).

According to the plan, China will launch the Chang'e-7 mission in 2026 and the Chang'e-8 mission around 2028, China Central Television (CCTV) reported. Chang'e-7 will survey the environment and resources of the lunar South Pole, while the Chang'e-8 mission will focus on validating technologies for in-situ resource utilization on the moon, laying the foundation for the future construction of the ILRS, which is expected to be established around 2035, said Bian Zhigang, deputy director of the CNSA.

[http://en.people.cn/n3/2024/0925/c90000-20222991.html#:~:text=China's%20lunar%20exploration%20program%20will,Administration%20\(CNSA\)%20on%20Tuesday](http://en.people.cn/n3/2024/0925/c90000-20222991.html#:~:text=China's%20lunar%20exploration%20program%20will,Administration%20(CNSA)%20on%20Tuesday)

China's ICBM test launch legitimate, reasonable routine training: Chinese Defense Ministry

Global Times, September 26, 2024

China's intercontinental ballistic missile (ICBM) test launch is a routine military training that is completely legitimate and reasonable, a Chinese Defense Ministry spokesperson said. The launch aimed to test the performance of weapon and equipment, as well as troops training level, Senior Colonel Zhang Xiaogang said at a regular press conference. Zhang stressed that China's nuclear policy is highly stable, consistent and predictable. China always follows a policy of no-first-use of nuclear weapons and a nuclear strategy that focuses on self-defense, does not engage in an arms race, committed itself not to use or threaten to use nuclear weapons against nonnuclear states or in nuclear-free region, and keeps its nuclear capabilities at the minimum level required by national security, the spokesperson said.

<https://www.globaltimes.cn/page/202409/1320419.shtml>

CNSA to open access to Chang'e-6 lunar samples to global scientists

CGTN, September 26, 2024

The China National Space Administration (CNSA) plans to open Chang'e-6 lunar soil sample applications to scientists around the world, Bian Zhigang, vice administrator of the CNSA, told CGTN in an interview earlier this week, adding that they will continue to be open to global scientists in the future. "This is our policy," Bian said. "For many future missions, we could be working with international partners starting at the design stage, for example, with the International Lunar Research Station (ILRS)," he said. "From the very beginning, there will be joint design and construction, and then all will share the benefits."

<https://news.cgtn.com/news/2024-09-26/CNSA-to-open-access-to-Chang-e-6-lunar-samples-to-global-scientists-1xbobf3VbMI/p.html>

China's newest nuclear submarine sank, setting back its military modernization

The Wall Street Journal, September 26, 2024

China's newest nuclear-powered attack submarine sank in the spring, a major setback for one of the country's priority weapons programs, U.S. officials said. The episode, which Chinese authorities scrambled to cover up and hasn't previously been disclosed, occurred at a shipyard near Wuhan in late May or early June. It comes as China has been pushing to expand its navy, including its fleet of nuclear-powered submarines. The Pentagon has cast China as its principal long-term "pacing challenge," and U.S. officials say that Beijing has been using political and military pressure to try to coerce Taiwan, a separately governed island that Beijing claims as part of its territory.

<https://www.wsj.com/world/china/chinas-newest-nuclear-submarine-sank-setting-back-its-military-modernization-785b4d37>

China insists nuclear stance defensive after 'routine' ICBM launch

CNA, September 27, 2024

China said on September 26 that its launch of an intercontinental ballistic missile (ICBM) into the Pacific Ocean was "legitimate and routine", insisting that its nuclear stance remained defensive after the rare test prompted an outcry from countries in the region. The launch sparked protests from countries in the region, with China's neighbour Japan saying it had not been given advance notice and Taiwan expressing "solemn condemnation". Beijing's defence ministry said the test was "a legitimate and routine arrangement" that aimed to "test our weapon and training performance".

<https://www.channelnewsasia.com/east-asia/china-insists-nuclear-stance-defensive-after-routine-icbm-launch-4639576>

China launches first reusable, returnable test satellite

Xinhua, September 27, 2024

China sent its first reusable and returnable test satellite, the Shijian-19, into space on Friday, using a Long March-2D rocket for the launch. The Shijian-19 satellite has realized a number of technological breakthroughs, and will significantly enhance the technical level and application efficiency of China's returnable satellites. It was the 537th flight mission of the Long March series rockets.

[https://english.news.cn/20240927/ec5d5b9d2c444421891f84211b1cc5f2/c.html#:~:text=BEIJING%2C%20Sept.%202027%20\(Xinhua,Launch%20Center%20in%20northwest%20China](https://english.news.cn/20240927/ec5d5b9d2c444421891f84211b1cc5f2/c.html#:~:text=BEIJING%2C%20Sept.%202027%20(Xinhua,Launch%20Center%20in%20northwest%20China)

A missile test by China marks its growing nuclear ambitions

The Economist, September 27, 2024

The last time China fired an intercontinental ballistic missile (ICBM) out over the Pacific, Xi Jinping was 27 years old, China's GDP per head was less than \$200 and America had just lifted an arms embargo on the country. So the missile that rose from Hainan island on September 25th – carrying a dummy warhead and plunging into the waters around French Polynesia, some 12,000km to the east – was a mark of China's soaring nuclear ambitions.

<https://www.economist.com/china/2024/09/27/a-missile-test-by-china-marks-its-growing-nuclear-ambitions>

China's nuclear-submarine mishap points to challenge of catching up with U.S.

The Wall Street Journal, September 27, 2024

The reported sinking of a Chinese nuclear-powered submarine at a Wuhan shipyard highlights the difficulties Beijing faces in

building an advanced oceangoing navy that can challenge U.S. maritime power. China has been racing to expand its relatively modest fleet of nuclear submarines as part of a campaign to modernize its military and tilt the strategic balance with Washington in Beijing's favor.

<https://www.wsj.com/world/china/chinas-nuclear-submarine-mishap-points-to-challenge-of-catching-up-with-u-s-58721ce9>

China, Brazil urge against nuclear threats over Ukraine

The Hindu, September 28, 2024

China and Brazil led a joint call on September 27, 2024 against any use or threat of nuclear weapons over Ukraine, in a thinly veiled criticism of Russian President Vladimir Putin's sabre-rattling. "We call on refraining from the use or the threat of weapons of mass destruction, particularly nuclear weapons and chemical and biological weapons," said a joint statement issued at the United Nations that was also signed by South Africa and Turkey.

<https://www.thehindu.com/news/international/china-brazil-urge-against-nuclear-threats-over-ukraine/article68691985.ece>

China unveils moon-landing spacesuit for the first time

Xinhua, September 28, 2024

The China Manned Space Agency (CMSA) unveiled the exterior design of the country's moon-landing spacesuit for the first time, soliciting its name from the public. Displayed on the third Spacesuit Technology Forum hosted by the China Astronaut Research and Training Center in southwest China's Chongqing Municipality, the white moon-landing spacesuit is decorated with red stripes. The red stripes on its upper limbs are inspired by ribbons from the famous "flying apsaras" of Dunhuang art, while those on its lower limbs resemble rocket launch flames.

<https://english.news.cn/20240928/9ab0008f3ab14f23be7b258eb4cc4539/c.html>

China sends plateau barley and rapeseed to space with nation's first reusable satellite

Global Times, September 28, 2024

Some 16 varieties of highland barley and rapeseed totalling 520 grams have been sent into space for breeding experiments with the successful launch of China's first reusable satellite the Shijian-19, Xizang media reported, noting that the move marks new progress in the construction of a key laboratory for plateau space breeding. Space breeding utilizes extreme space environments such as microgravity and strong radiation to induce genetic mutations in the seeds. The seeds will be returned to Earth after a period of time, for the selection and breeding of new plant varieties. This process usually induces better-performing seeds.

<https://www.globaltimes.cn/page/202409/1320501.shtml>

China's astronauts are aiming to land on the moon by 2030. They now have a new spacesuit to do it

CNN, September 30, 2024

China has taken a step forward in its ambitious plan to land astronauts on the moon by 2030 – unveiling the specially designed spacesuit its crew will don for what's expected to be a landmark mission in the country's space program. The new red-and-white suit – revealed by the China Manned Space Agency (CMSA) over the weekend – is made to withstand the moon's extreme temperatures, as well as radiation and dust, while allowing astronauts physical flexibility to perform tasks on the lunar surface, according to state media.

<https://edition.cnn.com/2024/09/30/style/china-unveils-moon-landing-spacesuit-intl-hnk/index.html>

China-developed photovoltaic nuclear battery could run for centuries: scientists

South China Morning Post, September 30, 2024

Chinese scientists say they have developed a nuclear-powered battery with a photovoltaic cell that could generate electricity for hundreds of years, at an overall efficiency thousands of times higher than its closest rivals. According to a paper published in the peer-reviewed journal *Nature*, the researchers were looking for a way to harness alpha rays released by decaying radioactive isotopes, in a field where most advances have focused on beta radiation. The increasing demand for clean energy solutions and small, long-lasting alternative power sources have sparked broad research interest in nuclear batteries but alpha-radioisotopes are considered the most likely contenders for a micronuclear battery.

<https://www.scmp.com/news/china/science/article/3280512/china-developed-photovoltaic-nuclear-battery-could-run-centuries-scientists>

D. Russia

Russian Soyuz brings crew of three back from International Space Station

Reuters, September 24, 2024

A Russian Soyuz capsule landed on the Kazakh steppe on Monday, bringing two Russian cosmonauts and a U.S. astronaut back to Earth after a stint on the International Space Station (ISS).

The Soyuz MS-25 spacecraft with Roscosmos cosmonauts Nikolai Chub, Oleg Kononenko and NASA astronaut Tracy Dyson landed at 1159 GMT.

Kononenko and Chub had been part of the ISS crew since last September, completing a 374-day mission. Dyson's stay was shorter, lasting 184 days.

<https://www.reuters.com/science/russian-soyuz-brings-crew-three-back-international-space-station-2024-09-23/>

Russia's new Sarmat missile suffered 'catastrophic failure': Researchers

Al Jazeera, September 24, 2024

Russia appears to have suffered a "catastrophic failure" in a test of its Sarmat missile, a key weapon in the modernisation of its nuclear arsenal, according to analysis of satellite images of the launch site.

The images captured by Maxar Technologies on September 21 show a crater about 60 metres (200 feet) wide at the launch silo at the Plesetsk Cosmodrome in northern Russia. They reveal extensive damage that was not visible in pictures taken earlier in the month.

The RS-28 Sarmat intercontinental ballistic missile is designed to deliver nuclear warheads to strike targets thousands of miles away in the United States or Europe, but its development has been dogged by delays and testing setbacks.

"By all indications, it was a failed test. It's a big hole in the ground," said Pavel Podvig, an analyst based in Geneva, who runs the Russian Nuclear Forces project. "There was a serious incident with the missile and the silo."

<https://www.aljazeera.com/news/2024/9/24/russias-new-sarmat-missile-suffered-catastrophic-failure-researchers>

Exclusive: Russia has secret war drones project in China, intel sources say

Reuters, September 26, 2024

Russia has established a weapons programme in China to develop and produce long-range attack drones for use in the war against Ukraine, according to two sources from a European intelligence agency and documents reviewed by Reuters.

IEMZ Kupol, a subsidiary of Russian state-owned arms company Almaz-Antey, has developed and flight-tested a new drone model called Garpiya-3 (G3) in China

with the help of local specialists, according to one of the documents, a report that Kupol sent to the Russian defence ministry earlier this year outlining its work.

Kupol told the defence ministry in a subsequent update that it was able to produce drones including the G3 at scale at a factory in China so the weapons could be deployed in the “special military operation” in Ukraine, the term Moscow uses for the war.

Kupol, Almaz-Antey and the Russian defence ministry did not respond to requests for comment for this article. China’s foreign ministry told Reuters it was not aware of such a project, adding that Beijing had strict control measures on the export of drones, or unmanned aerial vehicles (UAVs).

Fabian Hinz, a research fellow at the International Institute for Strategic Studies, a London-based defence think-tank, said the delivery of UAVs from China to Russia, if confirmed, would be a significant development.

“If you look at what China is known to have delivered so far, it was mostly dual-use goods - it was components, sub-components, that could be used in weapon systems,” he told Reuters. “This is what has been reported so far. But what we haven’t really seen, at least in the open source, are documented transfers of whole weapon systems.”

<https://www.reuters.com/world/russia-has-secret-war-drones-project-china-intel-sources-say-2024-09-25/>

Putin outlines new rules for Russian use of vast nuclear arsenal

Al Jazeera, September 26, 2024

Russian President Vladimir Putin has warned that Russia could respond with nuclear weapons if it were attacked with conventional arms in the latest changes to the country’s nuclear doctrine.

In a televised meeting of Russia’s Security Council, Putin on Wednesday announced that under the planned revisions, an attack

against the country by a non-nuclear power with the “participation or support of a nuclear power” would be seen as a “joint attack on the Russian Federation”.

Putin emphasised that Russia could use nuclear weapons in response to a conventional attack that posed a “critical threat to our sovereignty”, a vague formulation that leaves broad room for interpretation.

On Thursday, Kremlin spokesman Dmitry Peskov said “this should be considered a definite signal” to the West.

“This is a signal that warns these countries about the consequences if they participate in an attack on our country by various means, and not necessarily nuclear ones,” he said.

<https://www.aljazeera.com/news/2024/9/26/putin-outlines-new-rules-for-russian-use-of-vast-nuclear-arsenal>

Kremlin Says New Nuclear Doctrine Is ‘Warning’ to West

Moscow Times, September 26, 2024

The Kremlin said Thursday that an updated nuclear doctrine allowing Moscow to use nuclear weapons against non-nuclear states should be seen as a warning to the West.

Russian President Vladimir Putin on Wednesday announced plans to broaden Russia’s rules on the use of its nuclear stockpiles, allowing it to unleash a nuclear response in the event of a “massive” air attack.

The proposals would also permit Moscow to respond with nuclear weapons against non-nuclear states, where they were being supported by nuclear powers — a clear reference to Ukraine and its Western backers.

Kremlin spokesman Dmitry Peskov said the planned changes “must be considered a specific signal.”

“A signal that warns these countries of the consequences if they participate in an

attack on our country by various means, not necessarily nuclear,” Peskov told reporters.

Without mentioning Ukraine by name, Peskov said Russia’s “nuclear deterrence is being adjusted on account of elements of tension that are developing along the perimeter of our borders.”

<https://www.themoscowtimes.com/2024/09/26/kremlin-says-new-nuclear-doctrine-is-warning-to-west-a86485>

Here’s what Putin really meant by updating Russia’s nuclear doctrine

RT, September 28, 2024

This week’s proposed update of Russia’s nuclear doctrine was signaled well in advance. According to President Vladimir Putin, it was under preparation for at least several months, and probably longer. The catalyst was, of course, Ukraine’s expansion of both the list of Western weapons it uses and the geography of its military operations against Russia. Obviously, based on these experiences, the country’s leadership decided to refine its doctrinal documents and ensure they reflect all the threats that were previously considered insignificant, but which have now come to the fore.

As this is a long process, experts from different countries have been discussing the possible development of the situation for a long time. There is an understanding among our friends that Russia’s nuclear deterrence policy will evolve in the current unprecedented conditions. We should not expect any expressions of joy, but neither will there be any significant negative consequences.

The West has a well-developed model for responding to any Russian actions in the nuclear sphere. Officially, it declares that it won’t be affected in any way and that it doesn’t intend to take Russian warnings into account. But in practice we know that a statement made at the presidential level always has an impact, and often a strong one. It is worth remembering that during the Ukraine conflict quite radical options have been discussed, including the creation of a no-fly zone, the deployment of NATO

troops, the stationing of fighter jets that could operate over Ukrainian soil, and much more. But none of this happened, precisely because the Russian side expressed and articulated very painful options for its military response. And these warnings worked.

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<https://www.rt.com/russia/604871-russian-nuclear-doctrine-update/>

Russian Military to Have Authority Over Nuclear Strike Conditions, Kremlin Says

Moscow Times, September 30, 2024

Russia's Defense Ministry will soon have the authority to determine whether the conditions for using nuclear weapons are met, the Kremlin said Sunday, following announced plans to revise the country's nuclear doctrine.

"This is the prerogative of our specialists, our military, who are closely monitoring the weapons used and how they are being employed," Kremlin spokesman Dmitry Peskov told journalists. He said the military is responsible for tracking the "direct involvement" of Western countries in war on Ukraine.

Peskov confirmed that recently announced amendments to Russia's nuclear doctrine are taking shape and will be legally formalized soon. These changes, he said, are necessary due to the growing role of nuclear powers in the war in Ukraine and NATO's expanded presence near Russia's borders.

Last week, President Vladimir Putin revealed plans to broaden the rules governing Moscow's use of nuclear weapons, allowing for a nuclear response in the event of a "massive" air attack. The proposed changes would also treat attacks by non-nuclear countries supported by nuclear powers as joint attacks by both.

<https://www.themoscowtimes.com/2024/09/30/russian-military-to-have-authority-over-nuclear-strike-conditions-kremlin-says-a86513>

E. Europe

France and Italy order upgraded SAMP/T air-defense systems

Defense News, September 18, 2024

France and Italy ordered the next generation of the SAMP/T air-defense system as they seek better protection against threats including hypersonic missiles, with French Armed Forces Minister Sebastien Lecornu touting the "fully European" nature of the system.

Lecornu announced an order for eight SAMP/T NG systems, with the first ones to enter the armed forces in 2026, while Italy ordered ten systems, the country's Defense Minister Guido Crosetto said on Tuesday. Neither country provided a value for the order, though France included a spending authorization of •674 million (US\$750 million) for the purchase in its 2024 military budget.

The French are still smarting from Germany proposing Diehl Defence's IRIS-T and the U.S.-made Patriot as the backbone of the European Sky Shield Initiative, rather than the SAMP/T developed by Thales and missile maker MBDA. The next-generation upgrade gives the French-Italian system an intercept range of more than 150 kilometers (93 miles), similar to the range reported for RTX's Patriot, and improved capability to intercept hypersonic missiles.

"This fully European system is capable of dealing with more significant threats, in particular short- and medium-range ballistic missiles, including hypersonic," the French Armed Forces Ministry said. "European air defense is central to the security of all Europeans."

<https://www.defensenews.com/global/europe/2024/09/18/france-and-italy-order-upgraded-samp-t-air-defense-systems/>

American long-range missiles are coming back to Europe

The Economist, September 24, 2024

When Donald Trump pulled out of the Intermediate-range Nuclear Forces (INF) Treaty in 2019 most European states were aghast. They agreed that Russia had cheated on the cold-war pact, which prohibited all ground-based missiles (conventional and nuclear alike) with ranges between 500km and 5,500km. But they thought Mr Trump's decision reckless and liable to start an arms race. Who in Europe would host such missiles anyway? Pretty much everyone, it turns out.

On July 10th America and Germany announced that from 2026 a trio of

American medium-range missiles—all non-nuclear—would be deployed to Germany. It is the latest manifestation of the *Zeitenwende* (turning point) in German security policy. But it is also part of a wider resurgence of European interest in “deep-strike” capabilities, fuelled by the lessons of the war in Ukraine. That has implications for European defence industries, the military balance between NATO and Russia and the dynamics of escalation in any future war.

America plans to put three missiles in Germany. One is the 500km-plus range SM-6 ballistic missile, currently used as a ship-based anti-air weapon. The second is the 2,500km-range Tomahawk cruise missile, largely fired today from ships. The third and most capable is the Long-Range Hypersonic Weapon, also known as Dark Eagle, thought to travel a whopping 3,000km-plus. All far outstrip the longest-range land-based missile in Europe today, the 300km-range ATACMS ballistic missile.

They will not be the only such missiles in Europe. In April Emmanuel Macron, France’s president, called on allies to build Europe a deep-strike capability of its own. On July 12th France, Germany, Italy and Poland signed a letter of intent to build a cruise missile with a range of more than 1,000km. Many countries already operate similar missiles launched from planes and ships. Finland, Germany, the Netherlands and Poland are buying 1,000km-range JASSM-ER missiles for their F-35 jets; the Dutch navy is also buying Tomahawks for its ships and subs.

<https://www.economist.com/europe/2024/09/24/american-long-range-missiles-are-coming-back-to-europe>

Though it’s not the moon yet, it’s the next best thing for European astronauts

The Economic Times, September 25, 2024

Donning heavy spacesuits and visors to protect them from sunlight, astronauts Thomas Pesquet of France and Matthias Maurer of Germany, accompanied by their trusty canine robot, move slowly on what looks like the lunar surface.

But it’s not the moon.

It will be years before the European Space Agency can send one of its astronauts there. For now, they are practicing in a facility the agency opened in Germany on Wednesday where lunar conditions have been replicated.

The LUNA facility at the European Astronaut Center near Cologne has 900 tons of ground-up volcanic rock like that on the moon spread over a surface a bit bigger than a basketball court. The moon’s low-gravity environment will be simulated using movable ceiling-mounted trolleys that follow a suspended astronaut or rover’s movements.

In a pre-opening briefing, ESA astronaut Alexander Gerst said the facility will offer “most aspects that we will encounter on the moon.”

“It’s the surface, it’s the lunar dust, the rocks, the lighting,” he said. “We will work in spacesuits that limit our movement, limit our view.”

ESA Director General Josef Aschbacher said at the opening ceremony that the facility “marks a significant milestone in Europe’s space exploration efforts.”

<https://economictimes.indiatimes.com/news/science/though-its-not-the-moon-yet-its-the-next-best-thing-for-european-astronauts/articleshow/113673832.cms?from=mdr>

“Reckless, Irresponsible”: EU Rejects Putin’s Nuclear Weapon Threat

NDTV World, September 26, 2024

The European Union on Thursday rejected as “reckless and irresponsible” a plan by President Vladimir Putin to authorise a nuclear response to a massive air attack on Russia.

Putin on Wednesday announced an updated nuclear doctrine that would allow the use of nuclear weapons against non-nuclear states when they are supported by nuclear powers — a clear reference to Ukraine and its Western

backers.

"Not for the first time, Putin is playing (a) gamble with his nuclear arsenal," EU foreign policy spokesman Peter Stano told reporters. "We of course strongly reject these threats."

The proposed broadening of Russia's nuclear rules, which Putin himself has the power to approve, comes as Ukraine seeks permission from Western allies to use long-range weaponry to strike targets deep inside Russia.

Kyiv says it is necessary to target Russia's airfields and military infrastructure that it uses to launch attacks on Ukraine. The United States and other Western countries are cautious about enabling further escalation.

Earlier on Thursday, Kremlin spokesman Dmitry Peskov said the planned changes should be seen as a "specific signal" to the West.

<https://www.ndtv.com/world-news/reckless-irresponsible-eu-rejects-putins-nuclear-weapon-threat-6655040>

European militaries rush to catch up on space traffic mapping

Defense News, September 27, 2024

The boom in space activity of the past few years has made Earth's orbit more crowded and dynamic, and Western militaries need to step up space awareness to counter growing threats in the domain, defense officials and space company executives said.

Commercial use of space now dwarfs the military, with thousands of new satellites joining potential menaces such as Russia's roving Luch Olymp inspector satellite. Defense firms including Safran and space-data specialists such as True Anomaly and Vyoma see an opportunity to help defense departments adapt to the ever-growing volume of extraterrestrial activity, they said at an industry summit in Paris last week.

The number of active satellites in orbit has more than tripled in just four years, according to European Space Agency data. Most of the new space activity is happening

in low Earth orbit, where agile spacecraft zip around at 27,500 kilometers per hour, while much of the surveillance by Western militaries is built on systems adapted to decades of tracking relatively static geostationary orbits.

"Space is becoming more and more challenged, more and more competitive, and we have to prepare for problems in the future," Gen. Philippe Adam, the head of French Space Command, said at the Space Defense & Security Summit on Sept. 17.

In response, France's Safran is adding ground stations to track satellite radio emissions, German firm Vyoma expects to launch its first telescope into low Earth orbit next year for visual reconnaissance, while Colorado-based True Anomaly in April won a U.S. Space Force contract for a maneuvering satellite that can take a close look at potential adversaries in various orbits.

<https://www.defensenews.com/global/europe/2024/09/27/european-militaries-rush-to-catch-up-on-space-traffic-mapping/>

Europe will launch a satellite in 2027 just to watch it burn

Space.com, September 27, 2024

The European Space Agency (ESA) wants to launch a satellite to closely watch how it breaks up during its fiery reentry into Earth's atmosphere.

ESA has awarded a contract to European technology group Deimos to begin developing the Destructive Reentry Assessment Container Object, or DRACO for short. The spacecraft will aim to collect unique data as it reenters Earth's atmosphere and disintegrates. The mission is scheduled to launch in 2027.

The objective is to understand how satellites break up, so they can be designed to more fully disintegrate and burn up. The mission will also help assess how spacecraft reentry events affect the environment, studying how parts and particles from the spacecraft interact with

the upper atmosphere and what byproducts are created.

To do this, part of the washing-machine-sized, 440-pound (200 kilograms) DRACO spacecraft will be designed to break up just like a normal satellite. But it will also include a specially designed, 15.7-inch (40 centimeters) capsule capable of surviving the tremendous forces of reentry while measuring temperatures and other forces.

<https://www.space.com/european-space-agency-draco-suicide-satellite-2027>

European twin satellite mission bids to create total solar eclipse on demand

The Guardian, September 28, 2024

European scientists are preparing to launch a space mission that has been designed to create total eclipses of the sun on demand.

The robot spacecraft Proba-3 will be launched by the European Space Agency (ESA) in a few weeks in a mission which will involve flying a pair of satellites in close formation round the Earth. They will be linked by lasers and light sensors, with one probe blocking the view of the sun as seen from the other craft. The effect will be to create solar eclipses that will last for several hours.

Observing these eclipses will revolutionise the study of the sun and understanding of how it can cause disruptions to power lines, GPS satellites and other earthly technologies, says ESA. The agency believes the mission will also act as a pathfinder for other formation spaceflights that could transform studies of gravitational waves, exoplanets and black holes.

"This is an extraordinarily promising technology," said solar physicist Francisco Diego of University College London. "It is also highly technically challenging. Getting it right will not be easy, but it will be highly rewarding."

The mission, which has taken more than 10 years to plan, has involved developing a series of complex sensors that will keep the

two satellites locked close together with an accuracy of less than a millimetre as they fly round the Earth 144 metres apart. In effect, the two probes will act as a single 144m-long observatory.

"When the two satellites are in exactly the right orbit, one will release a disk that will exactly cover the sun as seen from the second satellite and so create eclipses that will last for up to six hours a day," Proba-3's project manager, Damien Galano, told the *Observer*.

On Earth, total solar eclipses occur when the moon passes in front of the sun, blocking out its blinding glare and leaving its fiery atmosphere – the corona – open to study by astronomers.

"Unfortunately, total solar eclipses happen on average every two years or so on Earth, and scientists often have to travel long distances and be at the mercy of the weather to study them – while observations can take place for only a few minutes," added Diego. "That does not provide much time to make detailed observations." Similarly, devices – called coronagraphs – that mimic eclipses and which are fitted to telescopes cannot observe the sun's inner corona in detail."

<https://www.theguardian.com/science/2024/sep/28/european-twin-satellite-mission-bids-to-create-total-solar-eclipse-on-demand>

ESA releases new strategy for Earth observation

European Space Agency, September 30, 2024

By leveraging advanced satellite-based monitoring of our planet, ESA aims to provide critical data and knowledge to guide action and policy for a more sustainable future.

ESA's Director of Earth Observation Programmes, Simonetta Cheli, said, "As a space agency, it is our duty to harness the unique power of Earth observing technology to inform the critical decisions that will shape our future."

"Our new Earth Observation Science Strategy underscores a science-first approach where satellite technology provides data that contribute to our collective understanding of the Earth system as a whole, so that solutions can be found to address global environmental challenges." "The choices we make today help create a more sustainable world and propel the transformation towards a resilient, thriving global society."

The new Science Strategy presents a bold and ambitious vision for the future of ESA's Earth Observation Programmes. It shifts focus towards understanding the feedbacks and interconnections within the Earth system, rather than targeting specific Earth system domains.

Developed through dedicated studies and over a year of extensive consultation with the Earth science community and key stakeholders, the new Science Strategy includes six major thematic objectives: the water cycle, the carbon cycle and chemistry, energy fluxes, ecosystem health, extremes and hazards, and interfaces and coupling in the Earth system. These themes along with a comprehensive set of Guiding Questions provide a blueprint on where to focus future efforts in understanding our planet.

https://www.esa.int/Applications/Observing_the_Earth/ESA_releases_new_strategy_for_Earth_observation

F. The United States of America

Threat from China increasing, Air Force official says

US Department of Defence, September 16, 2024

Secretary of the Air Force Frank Kendall spoke about the growing threat that China poses to the Indo-Pacific region during a keynote address today at an Air & Space Forces Association convention just outside of Washington. "I've been closely watching the evolution of [China's] military for 15 years. China is not a future threat; China is a threat today," Kendall told a large inperson and remote audience composed

predominantly of Air and Space Force personnel. The secretary went on to explain that the Chinese Communist Party continues to heavily invest in capabilities, operational concepts and organizations that are specifically designed to defeat the United States and its allies' ability to project power in the Western Pacific region, including weapons targeting U.S. land and sea assets like air bases and aircraft carriers.

<https://www.defence.gov/News/News-Stories/Article/Article/3907669/>

SM-3 Launched From Containerized VLS For The First Time

Naval News, September 16, 2024

Another test of the U.S. Navy's Mark 70 Mod 1 Payload Delivery System (PDS) was conducted last month off the coast of Hawaii for Pacific Defender 24, this time featuring, for the first time, the launch of a RIM-161B SM-3 Block IA anti-ballistic missile which successfully engaged a ballistic target using offboard sensor data.

Participating ships in the exercise included USS *Carl M. Levin* (DDG 120), USS *Kidd* (DDG 100), USS *Shiloh* (CG 67), HMAS *Sydney* (DDG 42), ITS *Montecuccoli* (P432), JS *Haguro* (DDG 180), ROKS *Yulgok Yi I* (DDG 992), and HNLMS *Tromp* (F803). The exercise also featured an E-7A Wedgetail from the RAAF, a P-8A from the U.S. Navy, and a MQ-9 from the California Air National Guard.

The test itself featured an Aegis Readiness Assessment Vehicle-B (ARAV-B) threat representative medium ballistic missile (MRBM) target and the new Integrated Air and Missile Defense Target (IAMD-T) pitted against the USS *Carl M. Levin* (DDG 120) and an unnamed ship carrying the Mark 70 PDS launcher. Both the *Carl M. Levin* and the unnamed ship launched RIM-161B SM-3 Block IA anti-ballistic missiles.

<https://www.navalnews.com/naval-news/2024/09/sm-3-launched-from-us-navy-containerized-vls-for-the-first-time/>

US and Taiwan seek to strengthen drone supply chain to keep out China

Financial Times, September 20, 2024

Taiwan and the US are looking to kick-start co-operation between their drone companies as part of efforts to build supply chains that do not rely on China. Executives from 26 US makers of uncrewed systems or anti-drone systems will arrive in Taipei on September 22 for three days of meetings with Taiwanese industry counterparts, military officials in charge of weapons procurement and development, and other researchers and engineers. The US group also includes officials from the commerce department, the Pentagon's Defence Innovation Unit and Dev Shenoy, who leads the defence department's microelectronics research and engineering.

<https://www.ft.com/content/ce851c48-6aa5-48d2-b28a-6c806cc10518>

Three Mile Island nuclear plant to reopen, sell power to Microsoft

CBS News, September 21, 2024

U.S. nuclear plant Three Mile Island, the site of the worst nuclear accident in American history, is to restart operations in a deal to sell power to Microsoft, Constellation Energy said Friday.

The firm announced the 20-year deal would involve the restart of the Unit 1 reactor, "which operated at industry-leading levels of safety and reliability for decades before being shut down for economic reasons exactly five years ago today."

Microsoft will buy energy from the plant as part of its goal to help match the power its data centers use with carbon-free technology, according to a news release announcing the deal. The reactor is expected to be online in 2028, pending approval from the U.S. Nuclear Regulatory Commission.

In a statement, Constellation Energy CEO Joe Dominguez said the "plant was among the safest and most reliable nuclear plants on the grid, and we look forward to bringing

it back with a new name and a renewed mission to serve as an economic engine for Pennsylvania."

Georgia Institute of Technology nuclear science professor Anna Erickson, a nuclear energy expert, says demand for energy is exploding in part due to artificial intelligence.

"AI requires energy that is 24-7," Erickson told CBS News. "And the nuclear power is one of the best sources to provide that consistent need for energy."

An economic impact study commissioned by the Pennsylvania Building & Construction Trades Council found that reopening the plant will create 3,400 direct and indirect jobs, according to the news release. It would also add up to 837 megawatts of carbon-free electricity to the power grid that can power more than 800,000 average homes.

<https://www.cbsnews.com/news/three-mile-island-microsoft-nuclear-power/>

US missile system will remain in Philippines despite China's alarm

Defense News, September 26, 2024

American and Filipino security officials have agreed to keep a U.S. mid-range missile system in the northern Philippines indefinitely to boost deterrence despite China's expressions of alarm, two Philippine officials said Wednesday.

The U.S. Army transported the Typhon missile system, a land-based weapon that can fire the Standard Missile-6 and the Tomahawk Land Attack Missile, to the northern Philippines as part of combat exercises in April with Philippine troops and to test its deployability aboard a U.S. Air Force aircraft.

Tomahawk missiles can travel over 1,000 miles, which places China within their target range. Officials are considering keeping the missile system in the northern Philippines up to April next year, when U.S. and Philippine forces are scheduled to hold their annual Balikatan — Tagalog

for “shoulder-to-shoulder” — large-scale combat exercises, he said.

<https://www.defensenews.com/global/asia-pacific/2024/09/25/us-missile-system-will-remain-in-philippines-despite-chinas-alarm/>

First USSF Guardian launches into space with NASA mission

United States Space Force, September 28, 2024

For the first time, a U.S. Space Force Guardian was launched into space from Cape Canaveral Space Force Station, Florida, as part of the NASA SpaceX Crew-9 mission to the International Space Station, Sept. 28.

Col. Nick Hague, Space Force Guardian and NASA astronaut, will command the mission and join the Expedition 72 crew aboard the ISS, where they will conduct scientific research and maintenance activities.

“I feel privileged to have the opportunity to cast a broader spotlight on everything that Guardians do to make human space flight possible,” Hague said. “The average person might not understand that human space flight doesn’t exist if Guardians aren’t doing what they do on a day-to-day basis, whether it’s launching us into space and the range support that we get there or it’s tracking or navigation ... if the Space Force and its guardians and U.S. Space Command are not doing their jobs, we don’t explore space.”

As one of six U.S. military services, the Space Force secures our nation’s interests in, from, and to space to ensure space superiority, global mission operations, and assured space access. To do this, the service has strong partnerships within the space sector, to include NASA, which focuses on space science and exploration, and industry which provides commercial services to public and private customers.

<https://www.spaceforce.mil/News/Article-Display/Article/3920258/first-ussf-guardian-launches-into-space-with-nasa-mission/#:~:text=ARLINGTON%2C%20Va.,Space%20Station%2C%20Sept.%202028.>

Biden-Harris Administration Bringing Back Clean Nuclear Energy, Creating Clean Energy Union Jobs Across The Midwest

As part of President Biden’s Investing in America agenda, the Biden-Harris Administration, through the U.S. Department of Energy (DOE) and U.S. Department of Agriculture (USDA), today announced more than \$2.8 billion to support reliable, affordable, and clean power in the Midwest. DOE, through its Loan Programs Office (LPO), announced the closing of a loan guarantee of up to \$1.52 billion under the Inflation Reduction Act’s Energy Infrastructure Reinvestment (EIR) program to Holtec Palisades to help finance the restoration and resumption of service of an 800-MW nuclear generating station in Covert Township, Michigan. This represents a first of a kind effort by DOE to restart an American nuclear power plant—generating carbon pollution-free energy and saving and expanding a union workforce in Michigan while helping strengthen America’s nuclear energy sector and advance core climate and domestic energy goals.

USDA also announced more than \$1.3 billion in Empowering Rural America (New ERA) program awards for two rural electric cooperatives--Wolverine Power Cooperative and Hoosier Energy--to reduce the cost of electricity passed on to their members for clean power from Holtec Palisades and other clean energy sources. These awards reinforce the Administration’s approach to achieving widespread deployment of advanced nuclear as described in the updated Pathways to Commercial Liftoff: Advanced Nuclear report, also just announced by DOE, as well as supporting a more prosperous future for rural communities by accelerating the transition to clean energy, keeping monthly bills low for American families, and investing in a strong rural workforce.

“Since day one of their Administration, President Biden and Vice President Harris have been clear that rural electric

cooperatives are the backbone of our nation and investing in them is a top priority,” said Agriculture Secretary Tom Vilsack. “Through the investments announced today under USDA’s New ERA program, we can continue supporting a more prosperous future for rural communities by accelerating the transition to clean energy, keeping monthly bills low for American families and investing in a strong rural workforce.”

<https://www.usda.gov/media/press-releases/2024/09/30/biden-harris-administration-bringing-back-clean-nuclear-energy>

West Asia

G. Iran

Iran Will Never Give Up on its Missile Program, Says President

Asharq Al Awsat, September 16, 2024

Iranian President Masoud Pezeshkian said on September 16, 2024 that Tehran would never give up on its missile program as it needs such deterrence for its security in a region where Iran’s arch-foe Israel is able to “drop missiles on Gaza every day”. Iran has for years defied Western calls to limit its missile program. The United States and its allies have more recently accused Iran of transferring ballistic missiles to Russia for its war in Ukraine, imposing fresh sanctions on Moscow and Tehran. Both countries have denied the claims. “If we don’t have missiles, they will bomb us whenever they want, just like in Gaza,” Pezeshkian said, referring to the conflict in Gaza between Israel and Hamas. He reiterated Tehran’s official stance, calling on the international community “to first disarm Israel before making the same demands to Iran”.

<https://english.aawsat.com/world/5061615-iran-will-never-give-its-missile-program-says-president>

Iran has various defence systems to respond to major threats

Mehr News Agency September 16, 2024

Deputy coordinator of the Iranian Army Air Defence Force told Mehr News Agency that the Islamic Republic has various defence

systems to respond to diverse and massive threats. Air defence creates authority by producing power and this leads to the formation of deterrence against enemy threats, Mohammad Khoshghalb said in an interview with Mehr News Agency.

He stressed that a large part of the Air Defence Force equipment is domestically-built. “Today, we have a very favourable situation in the field of detection. Regarding radar and detection systems, we use radars in different frequency bands and in different ranges, and we have maximum accuracy and minimum errors in the field of detection,” he underlined, adding that regarding identification, they do a multi-layered operation. “We will not allow the enemy to enter the stage of action,” he emphasized.

<https://en.mehrnews.com/news/221309/Iran-has-various-defense-systems-to-respond-to-major-threats>

New Iranian ballistic missiles were unveiled today

Islamic Republic News Agency, September 21, 2024

On the occasion of the beginning of Sacred Defence Week, Iran Armed Forces have unveiled the latest achievements such as Shahed 136B drone and Jihad ballistic missile, in a ceremony on Saturday morning. The Iranian Armed Forces launched extensive military parades across the country on Saturday to observe Sacred Defence Week. The ceremony in Tehran was attended by Iranian President Masoud Pezeshkian and senior military officials. In Tehran, the ceremony was held in the south of the capital at the mausoleum of the Founder of the Islamic Republic, the Late Imam Khomeini. Forces from the Iranian Army, the Islamic Revolution Guards Corps (IRGC), Police, Border Guards, and Basij have participated in the parades. The march was also organized coincidentally across the country. Shahed 136B drone, the newest Iran-made drone, was showcased at the Armed Forces military parade, Jihad ballistic missile, the newest IRGC ballistic missile, was also

showcased at the armed Forces military parade on Saturday morning.

<https://en.irna.ir/news/85602726/New-Iranian-ballistic-missiles-were-unveiled-today>

Iran enjoys missile with 2000 kilometers range: Cmdr.

Mehr News Agency, September, 25, 2024

Iran's Army enjoys missiles with a range of more than 2000 km, an Iranian Army Air Force commander said. The Islamic Republic of Iran has the largest and strongest helicopter unit in the Middle East, Brig. General Qasem Khamooshi said in a ceremony on Tuesday. Today, Iranian helicopters are equipped with modern equipment which is all made by Iranian young experts, General Khamooshi said. "Now we have missiles with a range of more than 2000 km and we are defending the country at a great distance from the borders, and we must continue this path," he added.

<https://en.mehrnews.com/news/221904/Iran-enjoys-missile-with-2000-kilometers-range-Cmdr>

Iran withheld launchers for missiles sent to Russia

Asharq Al-Awsat, September 21, 2024

Iran did not include mobile launchers with the close-range ballistic missiles that Washington last week accused Tehran of delivering to Russia for use against Ukraine, according to three sources with knowledge of the matter, reported Reuters. The sources - a European diplomat, a European intelligence official and a US official - said it was not clear why Iran did not supply launchers with the Fath-360 missiles, raising questions about when and if the weapons will be operational. The US official, who like the other sources spoke on condition of anonymity, said Iran had not delivered the launchers at the time of the US announcement about Iran's delivery of the weapons. The European intelligence official said without elaborating that they did not expect Iran to provide launchers. Two experts told Reuters there could be several reasons why the launchers were not sent. One is that Russia may plan to modify trucks

to carry the missiles, as Iran has done. Another is that by withholding the launchers, Iran is allowing space for new talks with Western powers on easing tensions.

<https://english.aawsat.com/world/5063218-report-iran-withheld-launchers-missiles-sent-russia>

Iran reveals ballistic missile, suicide drone amid rising regional tensions

Asharq Al Awsat, September 22, 2024

Iran's Revolutionary Guard unveiled on Saturday a new ballistic missile and drone during its annual military parade commemorating the Iran-Iraq War, attended by President Masoud Pezeshkian. Units from the regular army and the Revolutionary Guard showcased various military equipment, including 23 ballistic missiles, on a highway near the grave of the first Iranian Supreme Leader, south of Tehran. The display also featured naval vessels from both the Iranian army and the IRGC in the Strait of Hormuz. Iranian news agencies reported that the suicide drone, "Shahed-136B" is the latest version of the "Shahed-136" manufactured by the IRGC. Additionally, the Guard's missile unit revealed the "Jihad"; missile, which uses liquid fuel and has an operational range of 1,000 kilometers, equipped with a highly explosive warhead, according to the Tasnim news agency.

<https://english.aawsat.com/world/5063473-iran-reveals-ballistic-missile-suicide-drone-amid-rising-regional-tensions>

Iran ready for nuclear talks at UN "if other parties willing", FM Says

Asharq Al Awsat, September 23, 2024

Iran is ready to start nuclear negotiations on the sidelines of the UN General Assembly in New York if "other parties are willing", Foreign Minister Abbas Araqchi said on Monday in a video published on his Telegram channel. The US, under then-President Donald Trump, withdrew in 2018 from a nuclear accord

signed in 2015 by Iran and six world powers under which Tehran curbed its disputed nuclear programme in return for a lifting of international sanctions. Indirect talks between Washington and Tehran to revive the deal have stalled. Iran is still formally part of the deal but has scaled back commitments to honor it due to US sanctions reimposed on the Islamic Republic. "I will stay in New York for a few more days than the president and will have more meetings with various foreign ministers. We will focus our efforts on starting a new round of talks regarding the nuclear pact," Araqchi said, Reuters reported.

<https://english.aawsat.com/world/5063838-iran-ready-nuclear-talks-un-if-other-parties-willing-fm-says>

Iran, Oman kick off first joint ground military maneuver

Islamic Republic News Agency, September 30, 2024

The first joint ground exercise between the ground force of the Islamic Republic of Iran and the Sultanate of Oman, which is called "Mountain Falcons 1" (Saqour al-Jabal 1) began on Monday in Jebel Al-Khader province of Oman. This exercise is being held with the participation of the ground force of the Islamic Republic of Iran Army and the ground force of Sultanate of Oman army, as well as the support of the Air Force and the Royal Oman Police, with the aim of sharing experiences, joint combat training and improving the level of combat and operational readiness.

<https://en.irna.ir/news/85613527/Iran-Oman-kick-off-first-joint-ground-military-maneuver>

H. Iraq

South Korean firm to supply Iraq with surface-to-air missile defense system

Anadolu Agency, September 20, 2024

South Korean defence company LIG Nex1 said Friday it has secured a deal with Iraq's Defence Ministry to supply its Cheongung-II medium-range surface-to-air missile

defence system, local media reported. The contract, valued at approximately 3.7 trillion won (\$2.78 billion), marks the third export of the Cheongung-II system, Seoul-based Yonhap News Agency reported. The system, central to South Korea's missile defense strategy, is designed to intercept incoming missiles and aircraft. It has previously been exported to the United Arab Emirates and Saudi Arabia. LIG Nex1 CEO Shin Ick-hyun expressed the company's commitment to enhancing the Korean defense industry's global presence and supporting smaller defense firms in international markets.

<https://www.aa.com.tr/en/asia-pacific/south-korean-firm-to-supply-iraq-with-surface-to-air-missile-defense-system/3336050>

I. Israel

IDF reveals: Hezbollah rockets, launchers hidden in civilian homes

Israel National News, September 25, 2024

The IDF on Wednesday evening published documentation showing the rockets and weapons that had been placed in civilian homes in Lebanon by the Hezbollah terrorist organization. "The Hezbollah terrorist organization in Lebanon is continuing to fire missiles and rockets at civilians across Israel, forcing millions of Israelis into bomb shelters. The weapons used in these attacks - including advanced, strategic missiles and UAVs - have been systematically embedded by Hezbollah inside Lebanese civilian areas and homes over the years," the IDF said in a statement. The IDF is conducting precise, intelligence-based strikes against Hezbollah's weapons and terrorist infrastructure in Lebanon in order to remove these threats to Israeli civilians and enable the residents of the north to return home in safety and security. "In images collected in recent days, remnants of the weapons that Hezbollah had hidden in civilian homes in the heart of Lebanese villages can be seen," the IDF stated.

<https://www.israelnationalnews.com/news/396744>

Israel likely used US-made bombs in Nasrallah strike

Israel National News, September 30, 2024

Israel likely used US-made 2,000-pound bombs in its strike that killed Hezbollah leader Hassan Nasrallah, The Washington Post reported on Sunday, based on an analysis of visuals shared by the IDF. Analysts who reviewed footage of the strike and its aftermath, at the request of The Post, concluded that the damage aligns with the use of multiple 2,000-pound bombs. Three analysts who examined a video released by the Israeli air force on Saturday noted that it depicted fighter jets equipped with several 2,000-pound-class bombs, some of which were identified as US-made BLU-109 bombs and JDAM guidance kits. In the video, eight F-15 jets, carrying at least 16 of these bombs, are seen taking off. Additional photos from the IDF showed individual jets armed with three to six BLU-109 bombs each, according to The Post. Maj. Gen. Patrick Ryder, a Pentagon spokesperson, redirected inquiries about the operation to the IDF. An IDF spokesperson told The Post, "Dozens of munitions hit the target within seconds with very high precision, and this is part of what is required to hit underground sites at this depth." They declined to offer further details about the strike.

<https://www.israelnationalnews.com/news/396939>

J. Kuwait

Kuwait, IAEA celebrate 60 years of diplomatic ties

Kuwait news agency, September 19, 2024

Kuwait and the International Atomic Energy Agency (IAEA) are celebrating 60 years of diplomatic relations Thursday at the IAEA headquarters in Vienna. This event, hosted by IAEA Director General Rafael Grossi and Kuwait's Ambassador to Austria Talal Al-Fasam, coincides with the 68th annual IAEA General Conference, which began on Monday at the United Nations Office in Vienna and will conclude tomorrow, Friday. The celebration, scheduled for Thursday afternoon, will

highlight the achievements of the past six decades, covering all areas of technical cooperation. Kuwait has held prominent positions within IAEA, including chairing the IAEA Board of Governors, the second-highest authority in the agency, in 2003, and presiding over the 65th General Conference in 2021. The event, attended by numerous Arab and foreign ambassadors and international officials, will begin with a welcoming speech from Al-Fasam, followed by addresses from Grossi and Acting Director General of the Kuwait Institute for Scientific Research (KISR) Dr. Mashaan Al-Otaibi, and National Liaison Officer (NLO) for IAEA Dr. Nader Al-Awadi, will give a brief presentation on the long-standing cooperation between Kuwait and the agency.

<https://www.kuna.net.kw/ArticleDetails.aspx?id=3183074&Language=en>

K. Lebanon

Eight killed, hundreds injured in pager sets explosions in Lebanon

Syrian Arab News Agency, September 17, 2024

Lebanese Health Ministry announced on Tuesday that eight people were killed and nearly 3000 were wounded, including 200 critical cases, in explosion of Pager communication sets in several Lebanese areas. Lebanese National News Agency reported earlier that with high-tech, pager sets were exploded, leaving dozens of people injured in several Lebanese areas, noting that ambulance teams are working to transport the wounded to hospitals. The Lebanese Health Ministry called on all health staff to urgently head to their workplaces for providing emergency treatment to the massive numbers of injured as a result of pager explosion incidents. The ministry also called all Lebanese who own pagers to stay away from them until the reasons about the explosions is revealed.

<https://sana.sy/en/?p=338461>

L. Oman

Indian air force successfully completes exercise eastern bridge viiat rafo masirah

Ministry of Defence, September 21, 2024

The Indian Air Force (IAF) has successfully completed Exercise Eastern Bridge VII with the Royal Air Force of Oman (RAFO) at the RAFO airbase in Masirah. The IAF contingent has returned to India after participating in a comprehensive series of training missions, which featured the participation of MiG-29 and Jaguar aircraft from IAF, F-16 and Hawk from RAFO. This exercise significantly enhanced strategic relations with Oman besides operational coordination and tactical skills between the two air forces. Exercise Eastern Bridge VII was aimed to strengthen military cooperation and enhance the interoperability of both forces. The exercise included complex air operations, air-to-air combat drills, and mission scenarios designed to improve strategic and tactical capabilities. The IAF contingent gained valuable insights into RAFO tactics and operational philosophies, enriching combat strategies.

<https://pib.gov.in/PressReleasePage.aspx?PRID=2057325>

M. The United Arab Emirates

UAE-India defence industry forum discusses boosting strategic partnership

Emirates News Agency, September 18, 2024

The UAE-India Defence Industries Cooperation Forum, co-organised by the Emirates Defence Companies Council (EDCC) and the Society of Indian Defence Manufacturers (SIDM), was held today in Abu Dhabi. The event brought together a distinguished group of experts, specialists, and business leaders from the two countries to explore opportunities for collaboration and future partnerships. The forum was attended by senior government and military officials from the Defence Ministries of the UAE and India, along with representatives

from the Indian Embassy in the UAE. During the Forum, defence industry companies discussed ways to enhance cooperation and expand partnership horizons in this vital sector, while a series of bilateral meetings focused on exchanging expertise, and insights, and identifying future collaboration opportunities.

<https://www.wam.ae/en/article/b58zbpd-uae-india-defence-industry-forum-discusses>

UAE's defence conglomeration EDGE looks to space with new FADA entity

Breaking Defense, September 23, 2024

In its first large stride in the space domain, the United Arab Emirate's defense giant EDGE Group launched today a new company dubbed FADA to spur the country's defense-related space sector, the company announced today in a statement. "EDGE is fully committed to advancing the UAE's strategic interests in defence and advanced technology, and FADA's mission is to develop sovereign space capabilities and homegrown technologies in the UAE," according to the statement. Named FADA, the Arabic word for space, the new entity is expected to help build a national space sector to support the country's requirements and will expand international partnerships to benefit from Transfer of Technology (ToT) and transfer of Knowledge (ToK). "FADA will establish state-of-the-art facilities for the development, manufacturing, assembly, integration, and testing of various satellite systems and subsystems, serving as a one-stop shop for all space-related activities and providing end-to-end solutions and services to local and international customers, including: Synthetic Aperture Radar (SAR), Optical (EO) and Infrared (IR) payloads, as well as satellite platforms, and satellite cybersecurity and protection services in addition to other space activities," according to the statement.

<https://breakingdefense.com/2024/09/uaes-defence-conglomeration-edge-looks-to-space-with-new-fada-entity/>

N. East Asia

US and Japan near deal to curb chip technology exports to China

Financial Times, September 17, 2024

The US and Japan are close to a deal to curb tech exports to China's chip industry despite alarm in Tokyo about Beijing's threat to retaliate against Japanese companies. The White House wants to unveil new export controls before November's presidential election, including a measure forcing non-US companies to get licences to sell products to China that would help its tech sector. Biden administration officials have spent months in intense talks with their counterparts in Japan — and the Netherlands — to establish complementary export control regimes that would mean Japanese and Dutch companies are not targeted by the US "foreign direct product rule".

<https://www.ft.com/content/3fa44901-33e4-4ab4-9f7b-efe1575a6553>

China and Japan reach agreement on ocean discharge of Fukushima nuclear-contaminated water

Ministry of Foreign Affairs, the People's Republic of China, September 20, 2024

On August 24, 2023, the Japanese government unilaterally started the discharge of nuclear-contaminated water from the Fukushima Daiichi Nuclear Power Station into the ocean. As one of the most important stakeholders, China is firmly opposed to this irresponsible move. At the same time, China has urged Japan to seriously address concerns in and outside Japan, to earnestly fulfill its obligations, to give full cooperation in the establishment of an independent and effective long-term international monitoring arrangement in which stakeholders can participate substantively, and to accept independent sampling and monitoring by China. The competent departments of China and Japan have recently conducted multiple rounds of consultations on the discharge of nuclear-contaminated water from the Fukushima

Daiichi Nuclear Power Station into the ocean, and reached the following agreement.

https://www.fmprc.gov.cn/mfa_eng/xw/wjbxw/202409/t20240920_11493511.html

North Korea has enough uranium to build a 'double-digit' number of bombs, Seoul's spy agency says

AP, September 26, 2024

North Korea has likely enriched enough uranium to build a "double-digit" number of bombs and is making progress in its efforts to develop more powerful and accurate missiles targeting rival South Korea, Seoul's spy agency told lawmakers on Thursday.

The closed-door parliamentary briefing by the National Intelligence Service came after North Korea offered a rare glimpse into a secretive facility to produce weapons-grade uranium earlier this month as leader Kim Jong Un reiterated his goal to "exponentially" increase his stock of nuclear weapons.

The South Korean agency assessed that Kim's disclosure of the facility was likely a statement of defiance toward Washington ahead of the U.S. presidential election and meant to domestically showcase his military accomplishments amid deepening economic struggles, according to Lee Seong-kweun, one of the lawmakers who attended the briefing.

<https://apnews.com/article/north-korea-uranium-enrichment-bombs-nuclear-kim-3b9f06f490790abb9458264557e3d603>

North Korea criticizes US deployment of nuclear assets in South Korea

Voice of America, September 30, 2024

North Korea's Defense Ministry denounced the United States' deployment of nuclear strategic assets in South Korea, state media KCNA reported on Tuesday, as Seoul was gearing up for a rare military parade marking Armed Forces Day.

Kim Kang Il, North Korea's vice defense minister, accused Washington of running a "reckless military bluff" and stoking tension by sending a nuclear-powered submarine recently to South Korea and again flying a B-1B bomber for the planned parade.

South Korean media reported a B-1B bomber would join the parade set for Tuesday afternoon, flying over Seoul alongside allied fighter jets and other aircraft.

South Korea's military and U.S. Forces Korea have not confirmed the bomber's participation, but Seoul's Defense Ministry said the parade was partly intended to show off its military might as a deterrent to the North.

Kim said the U.S. show of force highlighted its strategic disadvantage on the Korean peninsula over North Korea, as well as South Korea's "chronic nuclear phobia." He called for fresh measures in response.

<https://www.voanews.com/a/north-korea-criticizes-us-deployment-of-nuclear-assets-in-south-korea/7805641.html>

O. Southeast Asia

Southeast Asia untroubled by China's nuclear modernization efforts

The Japan Times, September 18, 2024

In a world marching ever closer to some form of nuclear conflict, the Nuclear Non-Proliferation Treaty should be an essential tool in efforts to reduce the risk and dangers of conflict. And yet, the NPT is moribund, too often an afterthought as the dangers multiply and become more immediate.

For sure, the NPT has its limits, but writing it off is a mistake. Its effectiveness depends on all signatories being accountable for their commitments. Selective enforcement — which is what seems to be the case — will ensure its demise.

In essence, the NPT consists of two bargains. The first is an agreement by the nuclear weapon states (NWS) — China, France,

Russia, the United Kingdom and the United States — to reduce and eventually eliminate their arsenals in exchange for a pledge by the nonnuclear weapon states — every other country, except India, Israel and Pakistan, which did not sign the treaty — to not acquire those weapons of mass destruction.

The second bargain builds upon the first. In addition to foregoing acquisition of nuclear weapons, those same nonnuclear states are to be provided with technology so that they can pursue the peaceful use of nuclear energy.

With very rare exceptions, the nonnuclear weapon states have honored their part of the bargains. The same cannot be said for the NWS. There has been little reduction of their weapons stockpiles and disarmament remains a laughable fantasy.

<https://www.japantimes.co.jp/commentary/2024/09/18/world/chinas-nuclear-modernization-efforts/>

Indonesia Officially Part of UN Nuclear Weapon Ban Treaty

Jakarta Globe, September 25, 2024

Indonesia has officially become a part of the world's anti-nuclear pact after Foreign Affairs Minister Retno Marsudi presented the country's ratified document to the UN Secretariat on Tuesday local time.

Retno is currently in New York — home to the UN — for a series of sessions held by the international organization. Indonesia's handover of the UN Treaty on the Prohibition of Nuclear Weapons (TPNW) is one of the main outcomes of Retno's overseas trip. The UN Secretary-General is the depositary of this treaty.

The Indonesian House of Representatives passed the TPNW document into law last year after the country signed the nuclear ban treaty back in 2017. Jakarta was also among the early state parties of the nuclear weapon ban treaty back then.

The term "state party" refers to countries that have accepted and ratified an

international instrument. By becoming a state party, Indonesia – alongside other countries – promised to never develop or possess nuclear weapons under any circumstances.

<https://jakartaglobe.id/news/indonesia-officially-part-of-un-nuclear-weapon-ban-treaty>

Singapore commissions two new submarines as Asia's undersea rivalry grows

Reuters, September 24, 2024

Singapore commissioned two new advanced submarines on Tuesday, vessels its navy says are meant to protect sea lines of communication, and which experts said would range beyond the waters of the tiny city-state to keep tabs on the region.

The country's fifth and sixth submarines, the Invincible and the Impeccable, were ordered from Germany's ThyssenKrupp Marine Systems in 2013 in a 1-billion-euro deal, and join older Archer- and Challenger-class boats.

<https://www.reuters.com/world/asia-pacific/singapore-commissions-two-new-submarines-asias-undersea-rivalry-grows-2024-09-24/>

Indonesia Officially Submits Instrument of Ratification of the Treaty on the Prohibition of Nuclear Weapons

Ministry of Foreign Affairs of the Republic of Indonesia, September 24, 2024

The Indonesian Minister of Foreign Affairs has submitted the Instrument of Ratification of the Treaty on the Prohibition on Nuclear Weapons (TPNW) to the Secretariat General of the United Nations (UN) at the Treaty Event in New York on 24 September 2024. The submission of this Instrument confirms Indonesia's active role in maintaining international peace and security through disarmament. Previously on 21 November 2023, the Plenary Meeting of the House of Representatives of the Republic of Indonesia passed the Draft Law (RUU) on the Ratification of the TPNW into Law Number

22 of 2023, which came into force on 20 December 2023.

<https://kemlu.go.id/portal/en/read/6273/berita/indonesia-officially-submits-instrument-of-ratification-of-the-treaty-on-the-prohibition-of-nuclear-weapons>

Philippines unveils nuclear energy roadmap at largest annual gathering of stakeholders of atomic energy

Department of Energy, Republic of the Philippines, September 25, 2024

The Philippines unveiled its Nuclear Energy Roadmap at the 68th International Atomic Energy Agency (IAEA) General Conference (GC), held from 16 - 20 September 2024 in Vienna, Austria. During the high-level General Debate of the IAEA GC, Department of Energy (DOE) Undersecretary Sharon Garin described 2024 as a landmark year for the Philippines with the release of its nuclear roadmap, which outlines the country's path forward using the IAEA's Milestones Approach to develop a nuclear program. "We aim to have commercially operational nuclear power plants by 2032, with at least 1,200 MW initially entering the country's power mix, gradually increasing to 4,800 MW by 2050," said Undersecretary Garin.

<https://doe.gov.ph/press-releases/philippines-unveils-nuclear-energy-roadmap-largest-annual-gathering-stakeholders>

Indonesia, Solomon Islands join countries banning nuclear weapons, putting Australia at odds with neighbours

ABC News, September 29, 2024

Indonesia, a country of 275 million and one of Australia's closest neighbours, is stepping up efforts to enforce a global ban on nuclear weapons.

This week, it officially joined the United Nations Treaty on the Prohibition of Nuclear Weapons – confirming its

ratification of the pact along with Solomon Islands and Sierra Leone.

Indonesia's Ministry of Foreign Affairs said in a statement it would put "moral and political pressure on nuclear weapon states to stop their development".

The treaty, which came into force in 2021, now boasts almost 100 signatories.

But it has thus far failed to secure Australia or the big nuclear powers: China, the US, Russia, India, the UK and France.

Amid rising tensions in the Asia-Pacific, many smaller nations want the bomb banned before it's too late.

<https://www.abc.net.au/news/2024-09-29/indonesia-ratifying-nuclear-pact-what-it-means-for-australia/104401610>

Myanmar Junta Receives Six More Chinese Warplanes Amid Deadly Airstrikes on Civilians

The Irrawaddy, September 30, 2024

Six more FTC-2000G midrange fighter jets purchased from China arrived in Myanmar in August, amid the junta's escalating aerial bombardment of towns lost to ethnic armies, The Irrawaddy has learnt. The warplanes were among a batch ordered in 2020, but delivery and pilot training were delayed due to the COVID-19 pandemic and China's strict containment policy. The regime took delivery of six warplanes in November 2022, before the second batch arrived in August this year. The new planes have been deployed to Namhsan airbase in southern Shan State, where pilots are undergoing familiarization training, said a former sergeant who deserted from the Air Force after the 2021 coup.

<https://www.irrawaddy.com/news/burma/myanmar-junta-receives-six-more-chinese-warplanes-amid-deadly-airstrikes-on-civilians.html>

P. Africa

Minister Kgosientsho Ramokgopa leads South Africa's participation at IAEA 68th General Conference in Vienna, 16 to 17 Sept

Republic of South Africa, September 17, 2024

Dr. Kgosientsho Ramokgopa, the Minister of Energy and Electricity of the Republic of South Africa will on 16 -17 September 2024, lead South Africa's participation at the International Atomic Energy Agency's (IAEA) 68th General Conference in Vienna, Austria. The IAEA is an international organization established in 1957 as an autonomous body within the United Nations system that promotes the peaceful use of nuclear energy and technology while preventing the proliferation of nuclear weapons. South Africa's participation, led by Minister Ramokgopa is in-line with South Africa's position as one of the 35 IAEA's board members and importantly underscores government's commitment and endeavor towards safe, reliable and sustainable energy security and sovereignty.

<https://www.gov.za/news/media-advisories/visits-foreign-countries/minister-kgosientsho-ramokgopa-leads-south-africa%E2%80%99s>

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