

# Nuclear, Missile & Space Digest

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A Fortnightly Newsletter from the Indian Pugwash Society

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## A. India

### India's nuclear regulator completes forty years

*CNBC TV18, November 16, 2023*

India's nuclear regulator, Atomic Energy Regulatory Board (AERB), celebrated its ruby jubilee anniversary on November 15 to mark 40 years of its existence. It was on this day that the national regulatory authority was constituted in 1983 to enforce nuclear and radiation safety regulations in the country.

Stalwarts of the Indian nuclear fraternity including Dr A.K. Mohanty, Chairman of Atomic Energy Commission, and Vivek Bhasin, Director of Bhabha Atomic Research Centre (BERC), among others, came together to extend their wishes to AERB on this momentous occasion.

<https://www.cnbctv18.com/india/indias-nuclear-regulator-completes-forty-years-18343231.htm>

### Launch of 'AMINI', fourth ship of ASW SWC (GRSE) Project on 16 NOV 23 at M/s L&T, Kattupalli

*PIB, November 16, 2023*

'Amini', the 4th of 08 x ASW Shallow Water Craft (SWC) Project being built by M/s GRSE for Indian Navy, was launched on 16 Nov 23 at M/s L&T, Kattupalli. The Launch Ceremony was presided over by VAdm Sandeep Naithani, Chief of Materiel. In keeping with maritime tradition, Mrs Manju Naithani launched the ship to the invocation from Atharva Veda. The ship has been named Amini to signify the strategic maritime importance accorded to the island of *Amini* at Lakshadweep, located about 400 Km west of Kochi. The contract for building eight ASW SWC ships was signed between MoD and Garden Reach Shipbuilders & Engineers (GRSE), Kolkata on 29 Apr 19. As per the build strategy, four ships are being built at GRSE, Kolkata and balance four ships sub-contracted to M/s L&T Shipbuilding, Kattupalli for hull and part outfitting.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1977458>

### Kerala utility seeks nod for thorium-based nuclear plant

*Times of India, November 19, 2023*

The power utility in Left-governed Kerala has sought the Centre's permission to set up a thorium-based power nuclear plant in the state. Thorium is a radioactive metal and Kerala's coasts are estimated to have two lakh tonnes of such deposits.

A proposal submitted to Union power minister RK Singh says abundant thorium offers the possibility of generating power at lower costs. Government sources claimed, however, that the proposal was a suggestion by the Kerala State Electricity Board (KSEB) and the government had not discussed it yet. The argument, though, is that the state desperately needs to explore alternative energy sources to bring down power shortfalls. One option being weighed is to make land at an NTPC unit near the Chavara coast at Kayamkulam in Kollam available for the proposed power plant.

<https://timesofindia.indiatimes.com/?from=mdr&back=1>

### Launch of missile cum ammunition (MCA) Barge, LSAM 10 (Yard 78)

*PIB, November 20, 2023*

The launch of 'Missile Cum Ammunition Barge, LSAM 10 (Yard 78)', the fourth Barge of 08 x Missile Cum Ammunition Barge project, built by MSME Shipyard, M/s SECON Engineering Projects Pvt Ltd (SEPPL), Visakhapatnam for Indian Navy, was undertaken on 20 Nov 23 at Guttenadeevi, East Godavari, Andhra Pradesh (launch site of M/s SEPPL). The launching Ceremony was presided over by Cmde Shanmugam Sabesan, CRO (East).

The contract for building 08 x Missile Cum Ammunition Barge was signed between MoD and M/s SECON Engineering Projects Pvt Ltd, Visakhapatnam on 19 Feb 21. The availability of these Barges would provide impetus to operational commitments of IN by facilitating Transportation, Embarkation and



Disembarkation of articles/ ammunition to IN Ships both alongside jetties and at outer harbours.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1978310>

### **Delivery Of missile cum ammunition (MCA) Barge, LSAM 9 (Yard 77)**

*PIB, November 22, 2023*

The delivery of 'Missile Cum Ammunition Barge, LSAM 9 (Yard 77)', the third Barge of 08 x Missile Cum Ammunition Barge project, built by MSME Shipyard, M/s SECON Engineering Projects Pvt Ltd, Visakhapatnam for Indian Navy, was undertaken on 22 Nov 23 at Naval Dockyard, Mumbai for INS Tunir. The induction ceremony was presided over by Cmde Ashish Sehgal Command Refit Officer, Western Naval Command.

The contract for building 08 x Missile Cum Ammunition Barge was signed between MoD and M/s SECON Engineering Projects Pvt Ltd, Visakhapatnam on 19 Feb 21. Induction of these Barges would provide impetus to operational commitments of IN by facilitating Transportation, Embarkation and Disembarkation of articles/ ammunition to IN Ships both alongside jetties and at outer harbours.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1978836>

### **India's Space economy is on the rise, particularly in the last nearly ten years and more so in the last 5 years under PM Modi, says Dr Jitendra Singh**

*PIB, November 22, 2023*

India's Space economy is on the rise, particularly in the last nearly ten years and more so in the last five years under the dynamic leadership of Prime Minister Shri Narendra Modi, Union Minister Dr Jitendra Singh said today. Due to opening up of the Space sector, emergence of Space Startups and Industry linkages, India's Space

economy could skyrocket to \$100 Billion in the years to come, as projected by foreign trade experts who are amazed by India's quantum leap, he said. "Last ten years have been a watershed period in the scientific transformation in India's journey since Independence. And as far as the Space & Geospace and the entire ecosystem is concerned, it is even more visible, more so in the last five years," he said.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1978861>

### **Finland, India discuss hydrogen electrolyzer production in India**

*Mint, November 23, 2023*

India and Finland have discussed manufacturing of green hydrogen electrolyzers in India, said Finnish minister for international trade Ville Tavio in an interview with Mint, amid Indian hopes to develop itself as a green hydrogen hub. The matter came up during Tavio's meeting with power minister R.K. Singh. India announced a Production Linked Incentive (PLI) scheme this year for green hydrogen production and for manufacturing electrolyzers. Tavio told Mint that Finland is also keen to expand nuclear research and technology collaboration with India, given Finland's expertise in the field.

<https://www.livemint.com/news/india/finland-india-discuss-hydrogen-electrolyzer-production-in-india-11700748605327.html>

### **The Diamond Jubilee of India's first sounding rocket launch from Thumba in Kerala providentially coincides with the year 2023 which saw the historic twin feats of Chandrayaan-3 and Aditya-L1 missions, says Dr Jitendra Singh**

*PIB, November 25, 2023*

The Diamond Jubilee of India's first sounding rocket launch from Thumba in Kerala providentially coincides with the

year 2023 which saw the historic twin feats of Chandrayaan-3 and Aditya-L1 missions, said the Union Minister of State for Space, Dr. Jitendra Singh today. The year 2023 will also go down in history as the year when the Prime Minister Shri Narendra Modi declared 23rd of August, the day Chandrayaan-3 landed on the Moon, as 'National Space Day', he said.

Dr Jitendra Singh, who is also the Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, and Atomic Energy, was addressing the Commemoration of the 60th year of the First Sounding Rocket Launch at a function at the Vikram Sarabhai Space Centre, Thumba Equatorial Rocket Launch Station (TERLS).

<https://pib.gov.in/PressReleasePage.aspx?PRID=1979742>

### **NASA chief calls on Dr Jitendra Singh, discusses launching joint Satellite with ISRO**

PIB, November 28, 2023

India and the US will launch the joint microwave remote sensing satellite for Earth observation, named NASA-ISRO Synthetic Aperture Radar (NISAR) in the first quarter of next year, said Union Minister Dr Jitendra Singh during a meeting with a high-level delegation of NASA led by its Administrator Mr Bill Nelson who called on him in New Delhi today. NISAR is targeted for launch onboard India's GSLV. Data from NISAR will be highly suitable for studying the land ecosystems, deformation of solid earth, mountain & polar cryosphere, sea ice and coastal oceans in regional to global scale.

It was informed that ISRO's S-band SAR was integrated with NASA's L-band SAR at JPL/NASA and integrated L & S band SAR is currently undergoing testing with the satellite at URSC, Bangalore with participation of NASA/JPL officials.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1980421>

### **Raksha Mantri Shri Rajnath Singh unveils crest of Project 15B stealth guided missile destroyer Yard 12706 (Imphal)**

PIB, November 28, 2023

The crest of Yard 12706 (*Imphal*), the third amongst the four Project 15B stealth guided missile destroyers, was unveiled by Raksha Mantri Shri Rajnath Singh, in the presence of Manipur Chief Minister Shri N Biren Singh, in New Delhi on November 28, 2023. The unveiling of *Imphal's* crest, adorned with the Kangla Palace and 'Kangla-Sa' is a befitting tribute to the sacrifice made by the people of Manipur towards India's independence, sovereignty and security.

The crest design depicts the Kangla Palace on the left and 'Kangla-Sa' on the right. The Kangla Palace is an important historical and archaeological site of Manipur, and was the traditional seat of the past kingdom. With a dragon's head and lion's body, the 'Kangla-Sa' is a mythical being from Manipur history, and is symbolic as the guardian/protector of its people. 'Kangla-Sa' is also the state emblem of Manipur.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1980365>

### **EDF agreements with Canadian, Czech and Indian firms**

*World Nuclear News*, November 29, 2023

French energy company EDF signed cooperation agreements relating to the potential deployment of its technology, and the involvement of local supply chains, in Canada, the Czech Republic and India on the first day of World Nuclear Exhibition 2023 in Paris. A memorandum of cooperation between EDF and India's BHEL to "collaborate with an intent to maximise the local content of the Jaitapur project", which is proposed to be a six EPR-unit one at the site in the state of Maharashtra. EDF and BHEL "will

also explore larger collaboration for the EPRs" and for EDF's Nuward small modular reactor.

<https://www.world-nuclear-news.org/Articles/EDF-agreements-with-Canadian,-Czech-and-Indian-fir>

## Russia Steps Up Presence in Indian Ocean

*VOA News, November 30, 2023*

Russia docked warships in Bangladesh for the first time in five decades earlier this month and held its first joint naval exercises with Myanmar as Moscow eyes a greater role in the Indian Ocean region and looks to bolster ties with smaller countries in Asia.

Analysts say India is not averse to Russia, its old ally and largest supplier of defense equipment, stepping up its presence in its maritime neighborhood despite New Delhi's deepening partnership with the United States, Japan and Australia to counter China's expanding footprint in the strategic waters.

Ignoring pressure from its Western partners, New Delhi has maintained its decades-long relationship with Moscow and taken a neutral stand on the war in Ukraine.

<https://www.voanews.com/a/russia-steps-up-presence-in-indian-ocean-/7378276.html>

## Defence Acquisition Council approves capital acquisition proposals worth Rs 2.23 lakh crore to enhance the operational capabilities of the Armed Forces

*PIB, November 30, 2023*

The Defence Acquisition Council (DAC), under the chairmanship of Raksha Mantri Shri Rajnath Singh on November 30, 2023, accorded approval in respect of Acceptance of Necessity (AoNs) for various Capital Acquisition Proposals amounting to Rs 2.23 lakh crore, of which, acquisition worth Rs 2.20 lakh crore (98% of total AoN amount) will be sourced from domestic industries. This will give a substantial boost to the Indian

Defence Industry towards the aim of achieving the goal of 'Aatmanirbharta'.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1981135>

## B. Russia

### With great power comes great responsibility: Kremlin comments on nuclear capability

*TASS, November 17, 2023*

Allegations about Moscow's readiness to start a nuclear war are absolutely ludicrous as Russia does not take its nuclear capabilities lightly, Kremlin Spokesman Dmitry Peskov said.

"Unfortunately, we are increasingly hearing such irresponsible nuclear rhetoric and absolutely ludicrous accusations that Russia is allegedly starting a nuclear war. I believe that this is just plain lunacy and completely unacceptable," he said in an interview with the MGIMO 360 student news outlet, when asked to comment on the panic triggered by talk of nuclear war.

<https://tass.com/politics/1707651>

### Russia to complete its CTBTO monitoring segment this year

*TASS, November 17, 2023*

Russia will complete its segment of the International monitoring system of the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) by the end of 2023, the Defense Ministry said.

The coordinating committee of the Russian government and the preparatory commission of the organization was held in Yuzhno-Sakhalinsk to discuss the operation of the Russian segment.

"Head of the Russian delegation Colonel Alexey Astakhov said the creation of the Russian segment of the international monitoring system would be completed this year. The completion of the segment is an indisputable confirmation of the Russian adherence to the non-proliferation of nuclear weapons and



strengthening of strategic stability in the world," it said.

<https://tass.com/politics/1707713>

### **Slovakia not to back sanctions against Russia's nuclear fuel - foreign minister**

*TASS, November 18, 2023*

Slovakia plans to object to putting fuel for nuclear power plants on the EU's 12th package of sanctions against Russia, as it is a red line for the Direction - Social Democracy party, which is the largest in the government coalition, Slovak Foreign Minister Juraj Blanar said.

"It is the red line for us that there should be no nuclear fuel (in the sanctions package - TASS). Our nuclear power plants cannot yet switch to the fuel alternative [to Russian]. This definitely cannot be there (in the list of restrictions - TASS)," he said on Slovak television.

According to the foreign minister, the European Union will heed Slovakia's opinion. Provided that Russian nuclear fuel is added to the next sanctions package, Bratislava will veto this clause, he said.

<https://tass.com/world/1708245>

### **Russia uses AI in combat drones**

*TASS, November 20, 2023*

Russia is using artificial intelligence (AI) technologies in combat drones, scientific head of the Russian Federal Nuclear Center - Pan-Russian Research Institute of Experimental Physics Vyacheslav Solovyov said.

"We are using Ai technologies... in military purposes, to identify objects, equip unmanned aerial vehicles with the software that identifies targets for destruction," he told TASS.

"We have designs and software that we install on drones. We have tested them at ranges and are now supplying to the troops," he said.

<https://tass.com/defense/1708657>

### **Ukraine tries to launch 70-150 weekly strikes on Zaporozhye NPP, Energodar - Russian envoy**

*TASS, November 21, 2023*

The Ukrainian armed forces shell the Zaporozhye Nuclear Power Plant (ZNPP) and Energodar 70-150 times per week in an effort to cause a radiation accident at hazardous facilities, Rodion Miroshnik, the Russian Foreign Ministry's special envoy on the crimes of the Kiev regime, told TASS.

"The effort to cause a radiation accident is a standalone matter for the Kiev regime, as the Ukrainian military and other special services have repeatedly made simultaneous attempts to attack three nuclear facilities under Russia's jurisdiction," Miroshnik said.

<https://tass.com/politics/1709159>

### **Hungary won't abandon energy cooperation with Russia because of Ukraine - MFA**

*TASS, November 21, 2023*

Hungary is not going to abandon energy cooperation with Russia because of the conflict in Ukraine and will continue such interaction, guided by practical rather than political considerations, Minister of Foreign Affairs and External Economic Relations of Hungary, Peter Szijjarto, reiterated at a press conference.

"I would like to underscore that we do not want to get rid of any sources that currently ensure Hungary's energy security. At the same time, we would like to attract additional sources, preferably carbon-neutral energy sources," the Foreign Minister said responding to a relevant question.

<https://tass.com/economy/1709623>

## Russia interested in cooperating with Tajikistan in uranium mining – Putin

*TASS, November 21, 2023*

Russian companies is interested in cooperating with their Tajik counterparts in exploration and mining of uranium, lithium and rare-earth metals, President Vladimir Putin said in the statement for mass media after talks with leader of Tajikistan Emomali Rakhmon.

“We see good prospects in the mining sector. Russian companies are interested in exploration and mining of uranium together with Tajik partners, and metals of rare and rare-earth group, including lithium,” the Russian President said.

<https://tass.com/economy/1709691>

## Another Yars ICBM loaded into silo in Russia

*TASS, November 22, 2023*

Another RS-24 Yars solid-fuel intercontinental ballistic missile (ICBM) has been loaded into a silo launcher at Russia’s Kozelsk missile unit, the Russian Defense Ministry said on Wednesday.

The ministry published a video of the process, which takes several hours.

“An intercontinental ballistic missile is being loaded into the silo launcher by the hydraulic mechanism of a special transport and loading unit. Technological operations take several hours,” the ministry said.

The ministry also informed that it had created infrastructure for training and recreation of the personnel.

<https://tass.com/defense/1709883>

## IAEA ready to use Russian labs to analyze water from Fukushima-1 NPP – diplomat

*TASS, November 22, 2023*

The International Atomic Energy Agency (IAEA) has confirmed its readiness to use

Russian laboratories in 2024 to analyze samples after the discharge of spent water from the Fukushima-1 Nuclear Power Plant, Russian Foreign Ministry Spokeswoman Maria Zakharova said at a briefing.

“Russia has submitted to the agency’s Secretariat a list of laboratories that can be involved in the analysis of samples taken by the agency in the area of the discharge [of water]. The IAEA has confirmed its readiness to involve Russian laboratories for these purposes from 2024,” Zakharova said.

<https://tass.com/politics/1710275>

## IAEA Sees Operational Safety Commitment at Beloyarsk Nuclear Power Plant in Russia, Encourages Continued Improvement

*IAEA, November 23, 2023*

An International Atomic Energy Agency (IAEA) team of experts said that the operator of the Beloyarsk Nuclear Power Plant (NPP) in the Russian Federation has shown a commitment to enhancing operational safety. The team also encouraged the operator to further improve safety in areas including accident management and safety assessments.

Requested by the Government of Russian Federation, the Operational Safety Review Team (OSART) mission ran from 6 to 23 November. The Team reviewed operational safety in Unit 4 of the Beloyarsk NPP.

OSART missions independently assesses safety performance against the IAEA’s safety standards. The aim is to advance operational safety by proposing recommendations and, where appropriate, suggestions for improvement. Safety is an essential element during commissioning and the subsequent safe operation of a nuclear power plant.

<https://www.iaea.org/newscenter/pressreleases/iaea-sees-operational-safety-commitment-at-beloyarsk-nuclear-power-plant-in-russia-encourages-continued-improvement>

## Russia ready to cooperate with Africa in peaceful nuclear development – diplomat

*TASS, November 28, 2023*

Moscow is ready to cooperate with Africa not only in traditional areas, but also in the fields of peaceful nuclear development, digital technologies, Russian President's Special Representative for the Middle East and Africa, Deputy Foreign Minister Mikhail Bogdanov told the Primakov Readings forum.

"Considering the demands of African friends, Russia's goal is to use its natural competitive advantages in the areas where it is objectively one of the best in the world. They include education, healthcare, agriculture and food security governance, military and military-technical cooperation. That said, we are ready to cooperate not only in traditional areas, but also on new promising trends, including peaceful atom, space exploration, digital technologies," he said.

<https://tass.com/politics/1712849>

## Russia monitoring situation concerning potential US nuclear test in Nevada, diplomat says

*TASS, November 28, 2023*

Moscow is closely monitoring developments regarding a potential US nuclear weapons test at proving grounds in Nevada and will respond in a reciprocal manner if such tests are confirmed, Russian Foreign Ministry Spokeswoman Maria Zakharova said in an interview with Russia Today on Tuesday.

"We will certainly be monitoring how this situation develops," she said. "I would like to reiterate our principled position on nuclear weapons and their use, which has been repeatedly stated by the President of Russia [Vladimir Putin] and is enshrined and documented in our relevant doctrines."

<https://tass.com/politics/1712831>

## Russia notifies Japan on withdrawal from agreement on reduction of nuclear weapons

*TASS, November 28, 2023*

Moscow notified Tokyo about its withdrawal from the agreement on reduction of nuclear weapons, which will expire on May 21, 2024, the Russian Foreign Ministry said in a statement.

"In accordance with the decree of the government of the Russian Federation [...], the Russian Foreign Ministry notified the Japanese side on its intention to end the Agreement between the government of the Russian Federation and the government of Japan on Cooperation to assist the destruction of nuclear weapons reduced in the Russian Federation and establishment of a committee on cooperation in this area, signed on October 13, 1993," the Ministry said. "The agreement will expire in six months since the date of notification, on May 21, 2024."

<https://tass.com/politics/1713147>

## Russia, Iran to develop research equipment together – Kurchatov Institute

*TASS, November 29, 2023*

Russia's national research center Kurchatov Institute and Iranian organizations will team up for a cooperation program, which will include plans for creating equipment for joint research, Alexander Blagov, the institute's deputy president has said.

"We are now working on a research program that will cover a wide range of areas, from biology and genetics to nuclear medicine, materials science and the development of new research equipment. It is very important that we are at the stage of setting up facilities and therefore we can complementarily use the technologies <...> available in Iran and in Russia and form a new experimental base for joint research,"

he told TASS on the sidelines of the 3rd Congress of Young Scientists.

<https://tass.com/science/1713731>

### C. China

#### Construction begins on Unit 1 of China's Xudapu Nuclear Power Plant

CGTN, November 16, 2023

Construction started for Unit 1 of China's northernmost nuclear power plant, Xudapu Nuclear Power Plant. With a designed lifespan of 60 years, the plant has a capacity of 1,290 megawatts and is expected to be completed by 2028. It adopts a homegrown pressurized water reactor with third-generation technology, whose safety system reaches international standards. Located in Xingcheng City, northeast China's Liaoning Province, the nuclear plant will be able to provide electricity to neighboring cities and it is close to Beijing, Tianjin and Hebei Province.

<https://news.cgtn.com/news/2023-11-16/Construction-begins-on-Unit-1-of-China-s-XudapuNuclear-Power-Plant-1oM2ijlODza/index.html>

#### Measures taken by China against dumping of nuclear-contaminated water by Japan are entirely reasonable and necessary: FM

Embassy of the People's Republic of China in the United States of America, November 17, 2023

During his meeting with Japanese Prime Minister Fumio Kishida, President Xi Jinping noted that the discharge of Fukushima nuclear-contaminated water bears on the health of all humanity, the global marine environment and the international public interest. Japan should take seriously the legitimate concerns both from at home and abroad and properly handle this in a responsible and constructive manner. I need to stress that the precautionary measures taken by China and some other countries in response to Japan's move to protect food safety and people's health are entirely

legitimate, reasonable and necessary. We hope that the Japanese side will work with China to find an appropriate way to resolve the issue of the discharge of Fukushima nuclear-contaminated water through consultation and negotiation in a constructive manner.

[http://us.china-embassy.gov.cn/eng/fyrth/202311/t20231117\\_11182472.htm](http://us.china-embassy.gov.cn/eng/fyrth/202311/t20231117_11182472.htm)

#### China's cosmic ray observatory releases energy spectrum for highest-energy gamma ray

CGTN, November 17, 2023

China's Large High Altitude Air Shower Observatory (LHAASO), a high-altitude cosmic ray observatory, has released the precise energy spectrum for the highest-energy gamma-ray radiation from the brightest gamma-ray burst (GRB) observed to date. The study, conducted by the LHAASO collaboration team, was led by the Institute of High Energy Physics (IHEP) of the Chinese Academy of Sciences, and the findings were published recently in the journal *Science Advances*. GRBs are immensely energetic explosions that have been observed in distant galaxies. They are the most energetic and luminous electromagnetic events since the Big Bang.

<https://news.cgtn.com/news/2023-11-17/China-releases-energy-spectrum-for-highest-energygamma-ray-1oNuYYUgPba/index.html>

#### China's nuclear arms are behind U.S.'s but meet needs, expert says

Toru Tsunashima

Nikkei Asia, November 18, 2023

As Nikkei reported earlier this month, China evidently is procuring Western technologies in order to advance its development of nuclear weapons. How should we look at the risks of the potential use of nuclear arms, especially in East Asia, where both China and North Korea are building up their arsenals? Nikkei recently conducted a written interview with Hans Kristensen, a nuclear disarmament expert who oversees projects on nuclear



information at the Federation of American Scientists.

<https://asia.nikkei.com/Politics/Defense/China-s-nuclear-arms-are-behind-U.S.-s-but-meetneeds-expert-says2>

## **China-Pakistan Sea Guardian 2023 joint maritime exercise concludes**

*China Military Online, November 19, 2023*

The seven-day China-Pakistan Sea Guardian 2023 joint maritime exercise concluded in Karachi, Pakistan, on November 17, 2023. Participating troops of the two countries worked together to complete all the scheduled training subjects, achieving the expected purpose. The exercise was launched on November 11 and has been carried out in two phases, featured with shore-based exchanges and maritime joint operations respectively. During the first phase, the two sides conducted professional exchanges, mutual visits, among others. On November 14, the exercise began the second phase of maritime joint operations, focusing on more than 10 subjects, including helicopter cross-deck landing, joint search and rescue, and anti-submarine operations, in the northern waters and airspace of the Arabian Sea.

[http://eng.chinamil.com.cn/CHINA\\_209163/TopStories\\_209189/16267833.html](http://eng.chinamil.com.cn/CHINA_209163/TopStories_209189/16267833.html)

## **The Era of total U.S. submarine dominance over China is ending**

*Alastair Gale*

*The Wall Street Journal, November 20, 2023*

For decades, the U.S. hasn't had to worry much about China's submarines. They were noisy and easy to track. The Chinese military, meanwhile, struggled to detect America's ultraquiet submarines. Now, China is narrowing one of the biggest gaps separating the U.S. and Chinese militaries as it makes advances in its submarine technology and undersea detection capabilities, with major implications for American military planning for a potential conflict over Taiwan. Early this year, China put to sea a nuclear-powered attack

submarine with a pump-jet propulsion system instead of a propeller, satellite imagery showed. It was the first time noise-reducing technology used on the latest American submarines had been seen on a Chinese submarine.

<https://www.wsj.com/world/china/us-submarine-dominance-shift-china-8db10a0d>

## **Fifth force: is China adding hypersonic 'near-space command' to its military for 'precise and merciless' attacks?**

*Stephen Chen*

*South China Morning Post, November 20, 2023*

In what is believed to be a world first, China has established a near-space command equipped with a professional hypersonic weapons force that reports directly to the highest level of the military, according to a recently published paper. The new force joins the People's Liberation Army's army, air force, navy and rocket branches. "The near-space combat force is in the process of rapid development. The establishment of relevant units is not yet mature, and combat operations have not been standardised. The understanding of near-space combat command needs to be deepened," said the researchers from the National University of Defence Technology.

<https://www.scmp.com/news/china/science/article/3241059/fifth-force-china-adding-hypersonicnear-space-command-its-military-precise-and-merciless-attacks>

## **The role of nuclear weapons in a Taiwan crisis**

*Gregory Weaver*

*Atlantic Council, November 22, 2023*

The potential for a conflict over Taiwan is increasing due to China's nuclear and conventional military buildup and the threat of two simultaneous conflicts with China and Russia, which would severely stress the ability of US and allied

conventional forces to win in both theaters. Nuclear weapons will cast a long shadow over a Taiwan conflict and could play multiple roles in the deterrence and warfighting strategies and operations of both the United States and the People's Republic of China (PRC). A conflict over Taiwan has a number of attributes that will shape those roles. Those attributes make the potential for limited nuclear escalation real and uncontrolled nuclear escalation possible.

<https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/the-role-of-nuclear-weapons-in-a-taiwan-crisis/>

### **China delays payments to IAEA amid Fukushima water release**

*Takayuki Tanaka*

*Nikkei Asia, November 23, 2023*

China has been delaying its contributions to the International Atomic Energy Agency this year, having withheld all payments as of September and delivering only half as of early November. Some Western diplomatic sources in Vienna, home to the IAEA, see the move as an attempt by China to apply pressure to oppose Japan's release of treated wastewater from the Fukushima Daiichi nuclear plant, which the IAEA approved in July. The IAEA, a United Nations organization responsible for preventing the proliferation of nuclear weapons and promoting peaceful uses of nuclear energy, is funded by euro and U.S. dollar contributions from member countries.

<https://asia.nikkei.com/Politics/International-relations/China-delays-payments-to-IAEA-amid-Fukushima-water-release2>

### **Chinese envoy calls for nuclear-weapon-free zone in Middle East**

*China Military Online, November 23, 2023*

A Chinese envoy called for more efforts to support the establishment of a Middle East zone free of nuclear weapons and other weapons of mass destruction (WMDs). "The Middle East should not be threatened by nuclear weapons. This is the common call from countries in the region," Li Song,

China's permanent representative to the International Atomic Energy Agency (IAEA), told a meeting of the agency's board of governors. Li said China has been actively supporting the region's efforts to establish a Middle East zone free of nuclear weapons and other WMDs.

<http://eng.chinamil.com.cn/SIDEBAR/MostViewed/16268666.html>

### **China's position against Fukushima nuclear wastewater discharge clear, unchanged: FM spokesperson**

*Xinhua, November 23, 2023*

China's position against Japan's discharge of Fukushima nuclear-contaminated water into the ocean is clear and unchanged, a Chinese foreign ministry spokesperson said. Mao said that China is opposed to Japan's discharge of Fukushima nuclear-contaminated water into the ocean. "This is our clear position and has not changed," Mao said, pointing out that the ocean discharge bears on the health of all humanity, the global marine environment and the international public interest. "Japan needs to take seriously the legitimate concerns both from home and abroad and properly handle this in a responsible and constructive manner," said Mao.

<https://english.news.cn/20231123/692193a4a9414b5d9d07b5288ba43382/c.html>

### **Can China achieve its nuclear energy ambitions?**

*Chermaine Lee*

*Voice of America, November 24, 2023*

Organizers of the coming COP28 climate conference, believing nuclear energy must play a role in weaning the world off fossil fuels, are likely to be comfortable with Chinese plans to make nuclear power a major part of its energy future. While high-profile accidents at Three Mile Island, Chernobyl and Fukushima have tarnished the image of nuclear power in much of the world, China – the world's biggest carbon

emitter — is pressing ahead with ambitious plans for new nuclear construction. Beijing has approved at least 21 new power units since 2021, and each year, six to eight new nuclear units are expected to be greenlit, according to a September report in Xinhua, the state-controlled news agency.

<https://www.voanews.com/a/can-china-achieve-its-nuclear-energy-ambitions-/7368281.html>

### **Chinese envoy calls for intergovernmental talks to address AUKUS-related risks**

*Xinhua, November 25, 2023*

A Chinese envoy called for intergovernmental discussions at the International Atomic Energy Agency (IAEA) to address the proliferation risks posed by the AUKUS nuclear submarine deal. Li Song, China's permanent representative to the IAEA, told a meeting of the IAEA board of governors that the AUKUS collaboration has a serious impact on the security of the world and the Asia-Pacific region, and poses grave challenges to the international non-proliferation regime and the IAEA safeguards system. "Such cooperation runs counter to the purpose and objectives of the NPT (the Treaty on the Non-Proliferation of Nuclear Weapons) and is a typical act of double standard," Li said. Under the trilateral AUKUS alliance, which was announced in September 2021, Australia will be able to build nuclear-powered submarines with technology provided by the United States and the United Kingdom.

<https://english.news.cn/20231125/73350ede61154e588d4a84937bffbfff/c.html>

### **China's new stealth aircraft can find and kill the B-21 'Raider' with hypersonic missiles, computer simulation suggests**

*Stephen Chen*

*South China Morning Post, November 27, 2023*

As the race heats up between China and the US to develop the next-generation stealth

aircraft armed with the latest weapons, a Chinese research team has staged a virtual duel between the two rivals to see what it would take to win a future air battle. The results suggested that, with a combination of advanced hardware and new tactics, China could detect the opponents first. In one war game, a B-21-like stealth platform and its companion drone were both shot down by China's air-to-air missiles, which can reach a top speed of Mach 6.

<https://www.scmp.com/news/china/science/article/3242527/chinas-new-stealth-aircraft-can-findand-kill-b-21-raider-hypersonic-missiles-computer-simulation>

### **China breaks ground in nuclear energy heating**

*Zheng Xin*

*China Daily, November 27, 2023*

China's first nuclear energy heating project that covers multiple prefecture-level cities, operated by the State Power Investment Corp, was put into operation in East China's Shandong province. The project, which is also the third phase of "Warm Nuclear No 1", a commercial nuclear energy heating project in China, provides green heating to Shandong province's Haiyang and Rushan with a 23-kilometer main transport pipe.

<https://global.chinadaily.com.cn/a/202311/27/WS65640932a31090682a5f0384.html>

### **US potential intermediate-range missiles deployment 'big provocation' to China**

*Zhang Han*

*Global Times, November 27, 2023*

The US military is reportedly planning to deploy new land-based intermediate-range missiles in the Asia-Pacific region to "defend" the island of Taiwan, a move that "has limited tactical impact" at present but fully demonstrates the US' determination to interfere in the Taiwan question, observers said. The US is to send medium-range missiles including the Standard Missile 6 (SM6) and Tomahawk

to the Asia-Pacific, US military news website Defense One reported, citing remarks by US Army General Charles Flynn made during the annual Halifax International Security Forum. Flynn said the US has tested these missiles and plans to deploy them in 2024. He did not disclose the specific timing or location of the deployment, only saying “we will deploy them.”

<https://www.globaltimes.cn/page/202311/1302569.shtml>

### **Japan should address relevant stakeholders’ legitimate demands for damage assessment and compensation for toxic water dumping: Chinese FM**

*Ministry of Foreign Affairs, the People’s Republic of China, November 28, 2023*

The ocean discharge of Japan’s Fukushima nuclear-contaminated water bears on the health of all humanity, the global marine environment and the international public interest. Japan needs to take seriously domestic and international concerns in the same manner, especially strong concerns of neighboring countries, communicate with stakeholders with a responsible and constructive attitude and address seriously the legitimate demand for damage identification and compensation from stakeholders.

[https://www.fmprc.gov.cn/eng/xwfw\\_665399/s2510\\_665401/2511\\_665403/202311/t20231128\\_11188496.html](https://www.fmprc.gov.cn/eng/xwfw_665399/s2510_665401/2511_665403/202311/t20231128_11188496.html)

### **Indo-Pacific to see huge missile buildup by 2030s, Carnegie analyst says**

*Ken Moriyasu*

*Nikkei Asia, November 28, 2023*

The danger, Panda told Nikkei Asia, is the “intersection between advanced conventional missile systems and the risk of nuclear war.” The greatest fear is that countries such as China and North Korea may be more likely to resort to nuclear use if these conventional missiles are perceived to target their national leadership, he said. The

missile buildup in the region began when the Intermediate-Range Nuclear Forces Treaty expired in 2019 after the U.S. and Russia withdrew, he said. The treaty signed in 1987 between the U.S. and the Soviet Union banned all ground-based missiles with a range of 500 to 5,500 kilometers, but became an obstacle as China, who was not part of the treaty, had a free hand to develop its own arsenal.

<https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/Indo-Pacific-to-see-hugemissile-buildup-by-2030s-Carnegie-analyst-says>

### **China is building nuclear reactors faster than any other country**

*The Economist, November 30, 2023*

To wean their country off imported oil and gas, and in the hope of retiring dirty coal-fired power stations, China’s leaders have poured money into wind and solar energy. But they are also turning to one of the most sustainable forms of non-renewable power. Over the past decade China has added 37 nuclear reactors, for a total of 55, according to the International Atomic Energy Agency, a UN body. During that same period America, which leads the world with 93 reactors, added two.

<https://www.economist.com/china/2023/11/30/china-is-building-nuclear-reactors-faster-thanany-other-country>

### **China’s Sea-Based Nuclear Deterrent: Organizational, Operational, and Strategic Implications**

*David C. Logan*

*CMSI China Maritime Reports, U.S. Naval War College, November 30, 2023*

China’s development of a credible sea-based deterrent has important implications for the PLAN, for China’s nuclear strategy, and for U.S.-China strategic stability. For the PLAN, the need to protect the SSBN force may divert resources away from other missions; it may also provide justification for further



expansion of the PLAN fleet size. For China's nuclear strategy and operations, the SSBN force may increase operational and bureaucratic pressures for adopting a more forward-leaning nuclear strategy. For U.S.-China strategic stability, the SSBN force will have complex effects, decreasing risks that Chinese decisionmakers confront use-or-lose escalation pressures, making China less susceptible to U.S. nuclear threats and intimidation and therefore perceiving lower costs to conventional aggression, and potentially introducing escalation risks from conventional-nuclear entanglement to the maritime domain.

<https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=1032&context=cmsi-maritimereports>

#### **D. Pakistan**

### **Energizing Pakistan: A Possible Nuclear Energy Renaissance?**

*The Nation, November 18, 2023*

Nuclear Energy has always been seen as a double edged sword in terms of energy generation but could Nuclear Energy be the answer to Pakistan's energy woes? Nuclear Technology has far more applications beyond low carbon energy generation, in fields of space and medicine yet due to Chernobyl and Fukushima nuclear incidents, nuclear energy and technology gained a bad rapport globally. But this did not stop the advances of nuclear energy generation as Nuclear Energy accounts for 10% of global energy generation in 2023 with France leading the world in nuclear energy generation. Pakistan is one of those nations that despite challenges faced by its geo-strategic location ventured on its investment in nuclear energy generation. Pakistan became an icon in the Muslim world by being the first Islamic majority nation in the world to construct and operate civil nuclear power plants.

<https://www.nation.com.pk/18-Nov-2023/energizing-pakistan-a-possible-nuclear-energy-renaissance>

#### **E. Europe**

### **IAEA Concludes Long Term Operational Safety Review at Sweden's Forsmark Nuclear Power Plant**

*IAEA, November 20, 2023*

An International Atomic Energy Agency (IAEA) team of experts last week completed a review of long term operational safety at the Forsmark Nuclear Power Plant (NPP) in Sweden.

Unit 1 and 2 at Forsmark NPP went into commercial operation in 1980 and 1981, respectively. They were designed with an initial operational life of 40 years and entered their long term operation (LTO) phase in 2020 and 2021. Vattenfall AB, the operator, has decided to extend their operational life to 60 years.

Swedish NPP licenses are not time-limited, but regulatory consent to operate is subject to a periodic safety review every ten years.

<https://www.iaea.org/newscenter/pressreleases/iaea-concludes-long-term-operational-safety-review-at-swedens-forsmark-nuclear-power-plant-1>

### **Nuclear arms in Belarus guarantee security in region – Lukashenko**

*TASS, November 23, 2023*

Belarusian President Alexander Lukashenko has asserted that keeping nuclear weapons in his country ensures security in the region and authority on the international stage.

"Reproaches about deploying Russian tactical nuclear arms in our country, on our soil, are simply absurd. I am repeating for the hundredth time, we are not threatening anyone. We are simply learning the so-called diplomatic etiquette from those who turned the language of force into a global trend," he said at a meeting of the CSTO Collective Security Council.

According to the Belarusian leader, “this is the modern reality - only the presence of potent weapons guarantees security in the region and grants authority on the international stage.”

<https://tass.com/world/1710929>

### **Hungarian authorities permit using alternative fuel at Russian-built Paks NPP**

*TASS, November 24, 2023*

Hungary’s national parliament supported an amendment, which allows using nuclear fuel from alternative sources for the Russian-built Paks nuclear power plant (NPP), instead of Russian-made fuel.

The country’s only nuclear power plant, Paks, was built by Russia and currently uses nuclear fuel supplied by Russia’s state-run nuclear corporation Rosatom. At the same time, in order to ensure the facility’s long-term safety and functioning, the Hungarian government decided to look for potential alternatives, keeping in mind the European Union’s sanctions against the Russian corporation.

<https://tass.com/russia/1711135>

### **French Nuclear Startup Seeks •150 Million for Reactor Model**

*Bloomberg, November 28, 2023*

Naarea, a three-year-old French nuclear startup, is looking to raise •150 million (\$164 million) as it seeks to develop a small reactor that would meet growing industrial decarbonization needs from the start of the next decade.

The company, which already raised •50 million from a handful of French family offices such as Eren Groupe SA and •10 million from the government, is reaching out to venture capital, industrial and institutional investors, and sovereign wealth funds for a Series A funding round with the help of Rothschild & Co., co-founder Jean-Luc Alexandre said in an interview in Paris

Friday. He hopes to close the fundraising in the first quarter next year.

<https://www.bloomberg.com/news/articles/2023-11-27/french-nuclear-startup-seeks-150-million-for-reactor-prototype>

### **EDF Is Selling Europe’s First Green Bond For Nuclear Energy**

*Bloomberg, November 28, 2023*

Electricite de France SA is selling the first green bond in Europe that can be used to finance nuclear energy projects.

EDF is seeking to raise at least •500 million (\$548 million) from the notes, which mature in 2027, according to a person familiar with the matter, who asked not to be identified because they’re not authorized to speak about it. Initial price discussions are around 105 to 110 basis points over mid-swaps.

<https://www.bloomberg.com/news/articles/2023-11-28/edf-is-selling-europe-s-first-green-bond-for-nuclear-energy>

### **MEPs Back Small-Scale Nuclear Reactors**

*The European Conservative, November 28, 2023*

The European Parliament’s Industry, Research, and Energy (ITRE) Committee has adopted a resolution to support the development of small nuclear reactors (SMRs) across the EU in order to help countries further reduce their dependence on fossil fuels, complement existing nuclear and renewable power plants, and contribute to Europe’s future energy security. The resolution calls on the Commission to create and finance a specific industrial strategy for SMR development, while asking the Council to “demonstrate a firm commitment” to the technology’s successful deployment in the EU. The report was adopted by 40 votes in favor, 9 against, and 6 abstentions. As expected, all opposition came from the left side of the chamber, despite the

EPP's report making a clear case to demonstrate nuclear energy's overall safety and environmental sustainability.

<https://europeanconservative.com/articles/news/meps-back-small-scale-nuclear-reactors/>

## Russia to continue helping Minsk with fuel for nuclear plant – PM

*TASS, November 29, 2023*

Moscow will continue helping Minsk with support of operations of the Belarusian Nuclear Power Plant, including providing it with fuel, Russian Prime Minister Mikhail Mishustin said at the meeting of the Union State's Council of Ministers.

"We are proactively cooperating in the energy sphere. A milestone event took place at the start of the month. The acceptance certificate of the second unit of the Belarusian Nuclear Power Plant was signed on November 1. This is our largest common project, designed for the strategic perspective," Mishustin said. "Russia will continue providing required assistance in operation and fuel supplies," the Prime Minister said.

<https://tass.com/economy/1713611>

## EDF/French Power Giant Signs Nuclear Agreements To Help Secure Supply Chains For Reactor Projects Worldwide

*Nucnet, November 29, 2023*

France's state energy company and nuclear operator EDF has signed several cooperation agreements involving Canadian, Czech, French and Indian, partners as it seeks to secure the local supply chains it needs for large-scale and small modular nuclear reactor projects in Europe and worldwide. The company said the agreements are aimed at the successful delivery of future EPR-technology-based and Nuward SMR projects. The EPR is France's large-scale reactor technology and the Nuward is an SMR technology under development by EDF subsidiary Nuward. The Nuward SMR is in the basic design phase, which is expected to be completed at the end of 2026 or in early

2027. The agreements, signed by EDF on the inaugural day of the World Nuclear Exhibition 2023 in Paris on 28 November, include a memorandum of cooperation between EDF and India's state-owned Bharat Heavy Electricals Limited (BHEL) on local content for the Jaitapur nuclear power station project.

<https://www.nucnet.org/news/french-power-giant-signs-nuclear-agreements-to-help-secure-supply-chains-for-reactor-projects-worldwide-11-3-2023>

## Hungary authorises use of diverse nuclear fuel sources

*Nuclear Engineering International, November 29, 2023*

The possibility of using nuclear fuel from suppliers other than Russia's TVEL at the Paks NPP has been legally enshrined in Hungary's legislation. Members of the national parliament supported an amendment to the nuclear energy strategy proposed by the government. State Secretary at the Ministry of Energy Attila Steiner noted that Paks, Hungary's only NPP currently uses nuclear fuel supplied by Rosatom enterprises. However, to ensure the safety and reliability of its operation in the long term, and also taking into account the ongoing attempts by the European Union to impose sanctions against Rosatom, the government decided to provide options for replacing Russian fuel, if necessary, he explained.

<https://www.neimagazine.com/news/newshungary-authorises-use-of-diverse-nuclear-fuel-sources-11335610>

## France 'omits' renewable energy target in 2030 energy-climate plan

*Euractiv, November 29, 2023*

France's draft national energy and climate plan (NECP), recently handed into the European Commission, fails to mention a renewable energy objective for 2030, referring instead to a "decarbonised" energy target incorporating nuclear power, contradicting the EU's renewable energy directive. By June 2023, EU

countries had to submit their updated draft NECPs for the 2021-2030 period to the European Commission. After some delay, most EU countries, including France, have now done so. In these plans, each member state must define its strategy for achieving the EU's 2030 climate and energy objectives, including when it comes to renewable energies.

<https://www.euractiv.com/section/energy-environment/news/paris-forgets-renewable-targets-in-its-2030-energy-climate-plan/>

### **Swedish parliament clears way for possible nuclear energy expansion**

*Reuters, November 29, 2023*

Sweden's parliament approved on Wednesday a bill allowing more nuclear reactors to be built than previously planned, scrapping the previous cap of 10, as the Nordic country seeks to boost power generation and energy security.

The new law will also allow construction of nuclear reactors at sites other than the current plants - Ringhals, Forsmark and Oskarshamn - where Sweden's fleet of six reactors is located. "The Riksdag shares the government's assessment that fossil-free nuclear power will continue to play a central role in the Swedish energy mix," the parliament said in a statement.

"The main reasons for this are an expected greater demand for electricity in combination with the need to phase out fossil fuels, not least for climate reasons," it added.

<https://www.reuters.com/world/europe/swedish-parliament-clears-way-possible-nuclear-energy-expansion-2023-11-29/>

### **Canada signs deal to refurbish nuclear reactor in Romania**

*Xinhua, November 29, 2023*

The Canadian government on Tuesday signed a contract to refurbish Canada's pressurized heavy-water reactor at a nuclear power plant in Romania.

Minister of Export Promotion, International Trade and Economic Development Mary Ng announced in a news release the signing of the deal of 750 million Canadian dollars (553 million U.S. dollars) at the World Nuclear Exhibition in Paris.

According to the release, the three-way contract is between the Canadian Commercial Corporation, Societatea Naională Nuclearelectrica SA and AtkinsRéalis to support the work to extend the life of the Unit 1 Canada deuterium uranium (CANDU) reactor at the Cernavoda Nuclear Power Plant in Romania.

<https://english.news.cn/europe/20231129/7134c0f0012544cebe5423bd2819fd76/c.html>

### **Nuclearelectrica and Framatome in lutetium-177 agreement**

*World Nuclear News, November 30, 2023*

Romania's Nuclearelectrica and France's Framatome have signed a cooperation agreement on exploring the production of the medical isotope lutetium-177 at the Cernavoda nuclear power plant. The agreement was signed at World Nuclear Exhibition in Paris. Framatome CEO Bernard Fontana, left, with Teodor Chirica, Nuclearelectrica chairman (Image: Nuclearelectrica)none. A technical feasibility study will be conducted, based on Framatome's work on isotope production in Canada. The agreement will look at how to "maximise the existing infrastructure to convert target into medical isotopes". Lutetium-177 is a beta-emitting radioisotope used in targeted radionuclide therapy to treat prostate cancer by destroying cancer cells while leaving healthy cells unaffected.

<https://www.world-nuclear-news.org/Articles/Nuclearelectrica-and-Framatome-in-Lutetium-177-agr>



## F. Ukraine

### Update 194 - IAEA Director General Statement on Situation in Ukraine

*IAEA, November 17, 2023*

A reactor unit of Ukraine's Zaporizhzhya Nuclear Power Plant (ZNPP) temporarily lost power earlier this week, forcing it to rely on an emergency diesel generator for the electricity it needs for cooling and other vital functions, Director General Rafael Mariano Grossi of the International Atomic Energy Agency (IAEA) said today.

The ZNPP is investigating the cause of the 90-minute power outage that occurred late on Wednesday at reactor unit 6. The IAEA experts at the site are also gathering information to make their own independent assessment. The affected unit is in cold shutdown, but still needs access to power. None of the ZNPP's five other reactors lost power, three of which are also in cold shutdown, while two are in hot shutdown to generate steam and heating.

<https://www.iaea.org/newscenter/pressreleases/update-194-iaea-director-general-statement-on-situation-in-ukraine>

### Update 195 - IAEA Director General Statement on Situation in Ukraine

*IAEA, November 21, 2023*

Ukraine's Zaporizhzhya Nuclear Power Plant (ZNPP) is transitioning its reactor unit 5 to cold from hot shutdown and intends to determine the cause of boron detected in a cooling circuit, still leaving one of the plant's six reactors in hot shutdown to produce steam and heating, Director General Rafael Mariano Grossi of the International Atomic Energy Agency (IAEA) said today.

The unit's transition to cold shutdown began yesterday and is expected to be completed later today, according to the ZNPP. Unit 4 will remain in hot shutdown. There are currently no plans to bring a second unit into hot shutdown to replace unit 5, the plant said.

Once in cold shutdown, the ZNPP will carry out tests to identify why low levels of boron

were found in the secondary cooling circuit of one of the unit's steam generators.

<https://www.iaea.org/newscenter/pressreleases/update-195-iaea-director-general-statement-on-situation-in-ukraine>

### Update 196 - IAEA Director General Statement on Situation in Ukraine

*IAEA, November 24, 2023*

International Atomic Energy Agency (IAEA) experts observed an emergency exercise conducted at Ukraine's Zaporizhzhya Nuclear Power Plant (ZNPP) this week, the latest such drill in the country's nuclear facilities during the military conflict, Director General Rafael Mariano Grossi said today. Thursday's exercise focused on actions that should be taken in response to a hypothetical break of a pipe containing radioactive wastewater and the disconnection of power from one reactor unit. The IAEA experts followed the two-hour exercise from the ZNPP's temporary emergency centre, observing the coordination of emergency response actions. They also observed field activities during the exercise, including radiation and contamination monitoring as well as preparations for the evacuation of some plant staff. After the exercise was completed, the IAEA team observed the standard debriefing. Overall, the IAEA experts said the exercise scenario was carried out as planned.

<https://www.iaea.org/newscenter/pressreleases/update-196-iaea-director-general-statement-on-situation-in-ukraine>

### Update 197 - IAEA Director General Statement on Situation in Ukraine

*IAEA, November 26, 2023*

Ukraine's Zaporizhzhya Nuclear Power Plant (ZNPP) lost the connection to its main off-site power line today, forcing it to rely on back-up electricity for reactor cooling in the latest incident underlining

the precarious nuclear safety and security situation at the site during the ongoing military conflict, Director General Rafael Mariano Grossi said.

Separately today, the IAEA experts present at the ZNPP heard several rockets that appeared to have been fired from close to the plant. The IAEA team did not see the projectiles because of clouds but the distinctive sound indicated they were fired from a Multiple Launch Rocket System (MLRS) nearby.

<https://www.iaea.org/newscenter/pressreleases/update-197-iaea-director-general-statement-on-situation-in-ukraine>

### **Update 198 - IAEA Director General Statement on Situation in Ukraine**

*IAEA, November 28, 2023*

The main power line supplying electricity to Ukraine's Zaporizhzhya Nuclear Power Plant (ZNPP) has been restored after a sudden cut in the connection during the weekend, the latest reminder of the fragile nuclear safety and security situation at the site during the ongoing military conflict, Director General Rafael Mariano Grossi said today.

Underlining the potential dangers Europe's biggest nuclear power plant is continuing to face, the IAEA experts present at the facility heard – for a second time in the past few days – the distinctive sound of several rockets that appeared to have been fired from close to the plant. Also today, the team heard multiple artillery rounds which also seemed to have been fired from near the ZNPP.

<https://www.iaea.org/newscenter/pressreleases/update-198-iaea-director-general-statement-on-situation-in-ukraine>

### **Update 199 - IAEA Director General Statement on Situation in Ukraine**

*IAEA, November 29, 2023*

International Atomic Energy Agency (IAEA) experts based in Ukraine reported

about military activity overnight that once again underlined potential nuclear safety and security dangers during the armed conflict, and not just at the Zaporizhzhya Nuclear Power Plant (ZNPP), Director General Rafael Mariano Grossi said today.

In western Ukraine, an IAEA team monitoring the situation at the Khmelnytsky Nuclear Power Plant (NPP) reported hearing several explosions in close proximity, over a 20-minute period late last night while in their quarters.

<https://www.iaea.org/newscenter/pressreleases/update-199-iaea-director-general-statement-on-situation-in-ukraine>

### **G. United States of America**

#### **United States Signs Civil Nuclear Cooperation Agreement with the Philippines/**

*U.S. Department of State, November 16, 2023*

Today, on November 16, 2023, the United States and the Philippines signed a civil nuclear cooperation agreement, commonly known as a "123 Agreement," at the Asia-Pacific Economic Cooperation (APEC) Summit in San Francisco. Upon entry into force, the agreement will facilitate and enhance our cooperation on clean energy security and strengthen our alliance. This signing marks the successful culmination of the negotiation process launched by Vice President Kamala Harris during her historic trip to the Philippines in November 2022.

This agreement lays out a comprehensive framework for peaceful nuclear cooperation between the Philippines and United States based on a mutual commitment to nuclear nonproliferation and is required by U.S. law to allow for the transfer of nuclear equipment and material for peaceful uses.

<https://www.state.gov/united-states-signs-civil-nuclear-cooperation-agreement-with-the-philippines/>

## NuScale CEO remains upbeat after CFPP cancellation

*World Nuclear News, November 16, 2023*

The termination of the project that had been expected to be the first operational NuScale SMR reactor was “very disappointing” but the company remains bullish about the future, according to the company’s CEO. Speaking in a special update to the 2023 ANS Winter Conference and Expo, hosted by the American Nuclear Society (ANS), John Hopkins said the mutual decision to cancel the Carbon Free Power Project (CFPP) project at a site at Idaho National Laboratory was reached after it became clear that customer Utah Associated Municipal Power Systems (UAMPS) - a nonprofit made up of 50 municipalities from across seven states - would be unable to obtain the amount of subscriptions needed to move the project forward.

<https://www.world-nuclear-news.org/Articles/NuScale-CEO-remains-upbeat-after-CFPP-cancellation>

## US interested in discussing nuclear issues with Russia – senior diplomat

*TASS, November 28, 2023*

The US administration is interested in discussing nuclear issues with Russia and assumes that Moscow knows Washington’s position, US Under Secretary of State for Arms Control and International Security Bonnie Jenkins told TASS.

Speaking to a TASS correspondent, she commented on Russian Deputy Foreign Minister Sergey Ryabkov’s statement that the dialogue on strategic stability between Moscow and Washington is unlikely to resume in its previous form in the foreseeable future. “I’m not sure because I’ve heard him say that before. <...> I’m not sure how to respond to that,” Jenkins pointed out.

<https://tass.com/world/1712735>

## Orano’s TN Eagle Nuclear Packaging Approved by the American Safety Authority

*Yahoo Finance, November 28, 2023*

Orano has obtained transport approval from the American safety authority, the Nuclear Regulatory Commission (NRC). This approval is an essential step for continued commercial and industrial developments for the benefit of our customers in the United States.

The TN Eagle is Orano’s latest generation packaging model, for the transport and dry storage of spent fuel for nuclear power plants around the world (Europe, United States, Asia). With an innovative design and modular structure, this packaging meets the different needs of power plant operators by improving safety and competitiveness.

<https://finance.yahoo.com/news/orano-tn-eagle-nuclear-packaging-080800090.html>

## Westinghouse Sees US Demand for New Large Nuclear Power Plants

*Bloomberg, November 29, 2023*

Utilities in talks for Westinghouse AP1000 reactors, CEO says Demand growing for nuclear in clean-energy transition. New large-scale atomic power plants are still in demand in the US as utilities brace for growing calls to provide low-carbon energy generation, according to the head of nuclear-technology giant Westinghouse Electric Co. New nuclear energy projects have been expanding in China, and are making a comeback in Europe, Canada and other regions as the technology is increasingly seen as an important part of the fight to curb climate change.

<https://www.bloomberg.com/news/articles/2023-11-29/westinghouse-sees-us-demand-for-new-large-nuclear-power-plants>

## **DOD Chemical, Biological Defense Program Adapts to Emerging Threats as it Marks 30-Year Anniversary**

*U.S. Department of Defense, November 30, 2023*

Deputy Assistant Secretary of Defense for Chemical and Biological Defense Ian Watson said that threat landscape has evolved significantly since the creation of the Pentagon's program responsible for arming the joint force against chemical and biological risks in the wake of the Gulf War. Technological advances have enabled near peer competitors to potentially engineer a broad range of agents at a speed and scale unlike decades before, he said. And those threats are now less detectable. "The capabilities across high-performance computing, [artificial intelligence], material science and near peer competition far exceed anything that we were dealing with [in prior conflicts]," Watson said.

<https://www.defense.gov/News/Feature-Stories/Story/Article/3603047/dod-chemical-biological-defense-program-adapts-to-emerging-threats-as-it-marks/>

### **West Asia**

#### **H. Iran**

## **Iran Unveils Indigenous Hypersonic Cruise Missile**

*Fars News Agency, November 19, 2023*

Iran showcased defensive achievements, including the "Fattah-2" hypersonic cruise missile and "Mehran" mobile defense system, at an aerospace exhibition attended by Supreme Leader Ayatollah Khamenei. The exhibition highlighted the IRGC Aerospace Force's advancements, unveiling upgraded systems and drones. The "Fattah" hypersonic ballistic missile, previously revealed, has a range of 1,400 kilometers and a speed of Mach 13-15, making it immune to current defense systems. Iran, now among four nations with

hypersonic missile technology, emphasizes its defensive military doctrine, asserting capabilities are solely for protection.

<https://www.farsnews.ir/en/news/14020828000630/Iran-Unveils-Indigenous-Hypersonic-Cruise-Missile>

## **Construction of new nuclear power plant underway in Iran**

*Tehran Times, November 22, 2023*

Iran is progressing with the construction of the Karoon Nuclear Power Plant in southern Iran, announced Mohammad Eslami, head of the Atomic Energy Organization of Iran. The facility, located in Darokhvein, Khuzistan Province, will be Iran's first domestically designed and built nuclear power plant with a 300-megawatt pressurized water reactor. The project, inaugurated last year, is anticipated to take eight years to complete. Eslami emphasized Iran's compliance with nuclear enrichment laws and called on the International Atomic Energy Agency (IAEA) to act independently, disputing recent claims about barring IAEA inspectors and underscoring Iran's extensive nuclear facility inspections.

<https://www.tehrantimes.com/news/491720/Construction-of-new-nuclear-power-plant-underway-in-Iran>

## **Nuclear Chief: IAEA Should Refrain from Politicizing Iran's Dossier**

*Fars News Agency, November 23, 2023*

Iran's Head of the Atomic Energy Organization, Mohammad Eslami, has urged the International Atomic Energy Agency (IAEA) to avoid politicizing Iran's nuclear file. He clarified that Iran has approved 120 IAEA inspectors and asserted its right to accept or reject inspectors introduced by the agency. Eslami highlighted that Iran's nuclear activities adhere to the Safeguards



Agreement and are supervised by the IAEA. In related statements, he emphasized that Western countries use sanctions and political leverage to pressure Iran through the IAEA, rejecting politically-motivated actions and urging IAEA Director General Rafael Grossi to maintain impartiality and professionalism.

<https://www.farsnews.ir/en/news/14020902000278/Nclear-Chief-IAEA-Shld-Refrain-Frm-pliicizing-Iran's-Dssier>

### **Navy Commander: Iran to Hold 2 Joint Naval Drills in Sea of Oman Soon**

*Fars News Agency, November 25, 2023*

Iran's Head of the Atomic Energy Organization, Mohammad Eslami, has urged the International Atomic Energy Agency (IAEA) to avoid politicizing Iran's nuclear file. He clarified that Iran has approved 120 IAEA inspectors and asserted its right to accept or reject inspectors introduced by the agency. Eslami highlighted that Iran's nuclear activities adhere to the Safeguards Agreement and are supervised by the IAEA. In related statements, he emphasized that Western countries use sanctions and political leverage to pressure Iran through the IAEA, rejecting politically motivated actions and urging IAEA Director General Rafael Grossi to maintain impartiality and professionalism.

<https://www.farsnews.ir/en/news/14020904000578/Navy-Cmmander-Iran-Hld-2-Jin-Naval-Drills-in-Sea-f-Oman-Sn>

### **IRGC Navy Develops New Indigenous Air-Launched Cruise Missiles**

*Fars News Agency, November 26, 2023*

The Islamic Revolution Guards Corps Navy has developed and manufactured two air-launched cruise missiles intended to target and destroy hostile drones and guided missiles, IRGC Navy Commander Rear Admiral Alireza Tangsiri announced. "The two indigenous standoff weapons have a range of virtually four and 17 kilometres,"

Admiral Tangsiri said at a ceremony in the Southwestern city of Arvandkenar, 50 kilometres (31 miles) south of Abadan, on Saturday. He said the two new missiles have already been manufactured and will be unveiled in future.

<https://www.farsnews.ir/en/news/14020905000510/IRGC-Navy-Develps-New-Indigens-Air-Launched-Crise-Missiles>

### **During Israel-Hamas Ceasefire, Iran Reveals New Warship**

*Israel Defense, November 28, 2023*

Iran revealed its latest warship, the Deylaman, this week, marking the latest addition to its domestically built naval fleet. The vessel, unveiled in the port of Anzali, enhances Iran's presence in the Caspian Sea. According to IRNA, the Deylaman incorporates advanced naval technology, featuring domestically manufactured defense systems and equipment. Notably, its radar system is equipped to detect and track various targets, including aircraft, drones, helicopters, surface vessels, and missiles. Iran's Armed Forces Chief of Staff, Mohammad Hossein Baqeri, emphasized the destroyer's exceptional capabilities during the unveiling, asserting that it rivals the world's leading destroyers.

<https://www.israeldefense.co.il/en/node/60434>

### **Deputy DM: Iran to Purchase Russian Military Aircraft**

*Fars News Agency, November 29, 2023*

Iran has finalized arrangements for the acquisition of Russian-made Sukhoi Su-35 fighter jets and Mil Mi-28 attack helicopters, marking an enhancement in military relations between Tehran and Moscow. According to Deputy Defense Minister Brigadier General Mehdi Farahi, the delivery process for the advanced military aircraft is underway, with plans for them to join Iran's Army combat units. The move comes as part of increased cooperation between the two nations, with recent agreements covering economic, trade, energy, and military collaboration.

Iranian military officials emphasize the defensive nature of the country's armed capability amid external pressures and sanctions.

<https://www.farsnews.ir/en/news/14020908000106/Depy-DM-Iran-Prchase-Rssian-Military-Aircraf>

### **Iran's Navy Intercepts US Aircraft Carrier in Sea of Oman**

*Fars News Agency, November 29, 2023*

Iran's Navy and naval forces successfully tracked and identified a US aircraft carrier group in the Sea of Oman and Gulf of Aden. The intelligence systems mounted on drones of the Iranian Navy, including drones operating over regional waters, successfully intercepted the USS Eisenhower aircraft carrier group in the Gulf of Aden and the Sea of Oman. The interception was made possible through exchange of information between the Navy and naval forces of the Islamic Revolution Guard Corps (IRGC) in the strategic Strait of Hormuz.

<https://www.farsnews.ir/en/news/14020908000185/Iran's-Navy-Inerceps-US-Aircrraf-Carrier-in-Sea-f-Oman>

### **I. Iraq**

#### **Experimental test of Locally manufactured cannon embarked on: DIC**

*Iraqi News Agency, November 29, 2023*

The Defense Industries Commission (DIC) announced the initiation of experimental testing for the Iraqi-made 122mm cannon. In line with Prime Minister Muhammad Shia Al-Sudani's guidance, DIC Head Mustafa Ati Hassan emphasized the commitment to manufacturing and enhancing military products for national development. The test, conducted with live ammunition by the Anbar Operations Division's Artillery Directorate, was attended by Army Chief of Staff Lt. Gen. Abdul Amir Yarallah and other military leaders. Yarallah stressed the significance of such tests in advancing military industries, addressing Iraqi armed forces' needs and

fortifying defense capabilities. The DIC highlighted the commitment to developing Iraq's military industries with the support of military commanders.

<https://ina.iq/eng/30051-experimental-test-of-locally-manufactured-cannon-embarked-on-dic.html>

### **J. Israel**

#### **Assessment: Israeli Navy Uses Elbit's "Seagull" During Current War**

*Israel Defense, November 16, 2023*

As part of the ongoing War of Attrition, the Israeli Navy is utilizing Elbit's "Seagull," an unmanned surface vessel designed to detect naval mines, subsea infrastructure, and submarines. The Seagull, introduced several years ago, enhances the Navy's capabilities in dealing with Hamas' underwater and submersible attack vessels. It serves as a complementary tool, enabling high-risk operations like mine detection while minimizing risks to soldiers.

<https://www.israeldefense.co.il/en/node/60339>

#### **US to Supply IDF with 175 Joint Light Tactical Vehicles**

*Israel Defense, November 19, 2023*

The US will supply Israel with 75 Joint Light Tactical Vehicles (JLTV) from Oshkosh Defense as part of a military aid package. The armor for these vehicles, valued at about \$30 million, is produced by Israeli company Plasan through its subsidiary, Plasan North America. The IDF previously decided to purchase a version from AM GENERAL, the original Humvee manufacturer, with both versions relying on Plasan for armor development. Oshkosh's JLTV features a 6,600cc turbo diesel engine, automatic six-speed transmission, and a maximum speed of 110 km/h, capable of being armed with a machine gun and anti-tank missiles.

<https://www.israeldefense.co.il/en/node/60356>

## Eutrophy Produces Dozens of Trophy Systems Each Month

*Israel Defense, November 19, 2023*

EuroTrophy's Managing Director, Dan Kalfus, disclosed production and delivery details for the Trophy active protection system (APS) at the FAVS 2023 conference in London. The joint venture of Israeli company Rafael, German KMW, and General Dynamics Land Systems Europe is producing 40 Trophy APSs and 500 countermeasures monthly. The system is supplied to the Israel Defense Forces (IDF), Germany, and Norway. Germany has received one Trophy system for Leopard 2A4 integration tests, with 23 qualified and in service on Leopard 2A7A1s. An additional 23 and 54 systems have been ordered for Leopard 2A8s by Germany and Norway.

<https://www.israeldefense.co.il/en/node/60359>

## Two Israel Shipyards Shaldag MK5 Vessels Arrive in The Philippines

*Israel Defense, November 22, 2023*

Two Shaldag MK5 vessels from Israel Shipyards have arrived in the Philippines as part of a deal to supply eight fast patrol ships to the Philippine Navy, valued at \$195 million. These vessels, the fifth and sixth in the series, are undergoing tests and adjustments before entering full operational service by the end of the year. Israel Shipyards was awarded the contract in 2019, and the project includes the integration of Rafael's weapon systems. The remaining two ships will be constructed in the Philippines, highlighting the collaborative effort between the two nations.

<https://www.israeldefense.co.il/en/node/60385>

## Elta North America Secures Contract for \$30 Million in Iron Dome Radar Production

*Israel Defense, November 22, 2023*

Two Shaldag MK5 vessels from Israel Shipyards have arrived in the Philippines as

part of a deal to supply eight fast patrol ships to the Philippine Navy, valued at \$195 million. These vessels, the fifth and sixth in the series, are undergoing tests and adjustments before entering full operational service by the end of the year. Israel Shipyards was awarded the contract in 2019, and the project includes the integration of Rafael's weapon systems. The remaining two ships will be constructed in the Philippines, highlighting the collaborative effort between the two nations.

<https://www.israeldefense.co.il/en/node/60386>

## IDF Captures Badr-3 Rockets in Gaza Strip

*Israel Defense, November 22, 2023*

During the recent conflict in the Gaza Strip, IDF forces raided a Palestinian Islamic Jihad (PIJ) post and captured long-range Badr 3 rockets. The Badr 3 is a surface-to-surface rocket produced by the al-Quds battalions of the PIJ, initially supplied by Iran. It has a range of 160 km, potentially extending to 250 km, and is equipped with a warhead weighing 250 kg, containing explosive armament and an anti-personnel spray of 1,400 shrapnel. The IDF's capture of these rockets indicates their presence and potential use during the conflict.

<https://www.israeldefense.co.il/en/node/60387>

## Rafael Competing in Romanian Air Defense Systems Tender

*Israel Defense, November 26, 2023*

The Romanian army's \$4.2 billion tender for the purchase of 41 short- and medium-range air defense systems has progressed, with Israeli company Rafael Systems and its Spyder system among the main competitors. Other contenders include the NASAMS system by Raytheon, Diehl Defense's Iris-T system, the VL Mica system from MBDA, and the M-SAM system from Hanwha. The outcome of the tender, crucial for Romania's air defense

strategy, will be determined in the coming months, impacting not only national security but also regional defense dynamics in Eastern Europe.

<https://www.israeldefense.co.il/en/node/60401>

### **IAI Signs Agreements Valued at \$145M to Deliver Long-Range Loitering Munitions**

*Israel Defense, November 26, 2023*

Israel Aerospace Industries (IAI) has secured two contracts valued at \$145 million to deliver long-range loitering munitions to two countries. This follows a previous contract signed earlier this year, highlighting the growing global demand for IAI's long-range loitering munition family, which includes Harpy NG, Harop, and Mini Harpy. IAI President and CEO Boaz Levy emphasized the critical role of loitering munitions in achieving operational success on the battlefield, citing their flexibility and precision as strategic advantages. The orders underscore the trust in IAI's loitering munitions to provide crucial advantages to the respective countries.

<https://www.israeldefense.co.il/en/node/60402>

### **IAI to Deliver 3 Air-Defense Barak MX Systems to Slovakia**

*Israel Defense, November 27, 2023*

Israel Aerospace Industries (IAI) is set to deliver three Barak MX medium-range air defense launchers equipped with eight missiles each to Slovakia. The deal, valued at over \$128 million, was awarded by the Slovak Ministry of Defense. The Barak MX system provides multi-mission capabilities, including countering threats like fighters, sea-skimming and cruise missiles, tactical ballistic missiles, UAVs, helicopters, and gliding bombs. The system's features make it suitable for various settings, such as point defense, area defense, and ballistic missile defense in both naval and land-based deployments. Rafael, with the SPYDER system, competed with IAI for the contract.

<https://www.israeldefense.co.il/en/node/60420>

### **Israeli Artillery Corps Fires Over 100,000 Shells During the War**

*Israel Defense, November 29, 2023*

The IDF Artillery Corps played a significant role in the ongoing conflict, firing over 100,000 shells, with more than 90,000 directed at the Gaza Strip for engaging targets and supporting maneuvering forces. UAV operators from Units 5252 and 5353 utilized Hermes 450 UAVs for targeted attacks, observations, and advanced technological support. Rocket battalions employed MLRS launchers to launch over 200 precision rockets. Recent reports indicate U.S. assistance, with Israel receiving 57,000 155mm high-power fragmentation artillery shells originally stored in Israel for the U.S. Army European Command and now returned to meet the demands of the Gaza conflict.

<https://www.israeldefense.co.il/en/node/60445>

### **K. Saudi Arabia**

### **Saudi Arabia Military Industries joins forces with Embraer on defense cooperation, C-390**

*Breaking Defense, November 29, 2023*

Saudi Arabia Military Industries (SAMI) has announced collaboration with Brazilian defense company Embraer, focusing on defense and security aerospace endeavors, particularly Embraer's C-390 Millennium transporter. The partnership aims to expand operational capabilities in Saudi Arabia, emphasizing the C-390 Millennium aircraft's potential and providing support to the Saudi Ministry of Defense. The agreement also includes plans for a maintenance facility for Embraer aircraft in Saudi Arabia, aligning with the country's Vision 2030 initiative to localize 50% of defense production. Additionally, both companies will explore a Regional Maintenance, Repair, and Overhaul (MRO) Hub, a final assembly line for the C-390, and mission system integration. Training activities will further enhance opportunities in the aerospace



sector for SAMI and Embraer in the Kingdom and the region. SAMI's CEO, Walid Abukhaled, sees this collaboration as a significant step in supporting Saudi Vision 2030's goals

<https://breakingdefense.com/2023/11/saudi-arabia-military-industries-joins-forces-with-embraer-on-defense-cooperation-c-390/>

### *L. Turkiye*

#### **Turkish weapons factory strengthened with new investments**

*Sabah, November 16, 2023*

Turkiye's Machinery and Chemical Industry Corporation (MKE), which operates to meet the Turkish Armed Forces (TSK) needs for weapons, ammunition and explosives through domestic manufacturing capabilities, is strengthening its abilities and making new investments to add new products and technologies to its existing production. It also plans to increase its quality and capacity. A modernization project will be carried out at the Çankırý Weapon Factory, which is involved in the production of weapons and ammunition, and holds an important place in MKE's activities. The capability and capacity of the Çankırý Weapon Factory, which is involved in the production of medium-caliber weapon systems in the Turkish defense industry, will be increased with the modernization work.

<https://www.dailysabah.com/business/defense/turkish-weapons-factory-strengthened-with-new-investments>

#### **Roketsan, EDGE to explore partnerships in smart weapons solutions**

*Daily Sabah, November 17, 2023*

The leading Turkish missile developer Roketsan signed an agreement with EDGE Group, the largest defense and aerospace company group in the United Arab Emirates (UAE), to explore potential partnerships in the smart weapons domain. Under the agreement, signed at the Dubai

Airshow 2023, the two companies will work together to explore opportunities in the joint development of new and advanced smart weapon technologies.

<https://www.dailysabah.com/business/defense/roketan-edge-to-explore-partnerships-in-smart-weapons-solutions>

#### **Türkiye plans to buy 40 Eurofighter Typhoon jets: Defense Minister**

*Daily Sabah, November 17, 2023*

Defense Minister Ya'ar Güler announced Thursday that Türkiye is considering purchasing 40 Eurofighter Typhoon jets, though Germany appeared to object to the idea, he said. President Recep Tayyip Erdoğan is set to visit Germany for a one-day working visit on Friday for talks with his counterpart, Chancellor Olaf Scholz. "We want to buy Eurofighters. It is a very effective aircraft. These aircraft are related to the U.K., Germany and Spain," the minister told a parliamentary hearing in Ankara. "Both the U.K. and Spain say 'yes,' and now they are making efforts to persuade Germany. The U.K. and Spain say: 'We will solve that problem.' If solved, we plan to purchase 40 Eurofighter jets," Anadolu Agency (AA) reported Güler as saying. The Eurofighter Typhoon is a European multinational twin-engine, canard delta wing, multirole fighter manufactured by a consortium of Airbus, BAE Systems and Leonardo.

<https://www.dailysabah.com/business/defense/turkiye-plans-to-buy-40-eurofighter-typhoon-jets-defense-minister>

#### **'Türkiye has alternatives if Germany doesn't sell Eurofighters'**

*Daily Sabah, November 17, 2023*

Speaking in a joint news conference with Chancellor Olaf Scholz, Erdoğan said Germany is not the only country that makes fighter jets.

"Türkiye has alternatives if Germany blocks Eurofighter sales," he said.

Defense Minister Ya'ar Güler announced Thursday that Türkiye is considering purchasing 40 Eurofighter Typhoon jets, though Germany appeared to oppose the idea.

The Eurofighter Typhoon is a European multinational twin-engine, canard delta wing, multirole fighter manufactured by a consortium of Airbus, BAE Systems and Leonardo.

<https://www.dailysabah.com/business/defense/turkiye-has-alternatives-if-germany-doesnt-sell-eurofighters>

### **New Turkish frigate, offshore patrol vessels gear up for naval duties**

*Daily Sabah, November 20, 2023*

The countdown to the commencement of duty for the Turkish Naval Forces' new fleet has officially begun.

The TCG Istanbul frigate is set to be delivered to the Naval Forces Command in December while the offshore patrol vessels (OPVs) TCG Akhisar and Koçhisar are on schedule for delivery in 2024, further enhancing the naval capabilities and strength of the Turkish Naval Forces.

The provisional delivery of TCG Piri Reis, the first of the new type of submarines developed domestically, is meanwhile expected to be made in February 2024, the local media reported Monday.

<https://www.dailysabah.com/business/defense/new-turkish-frigate-offshore-patrol-vessels-gear-up-for-naval-duties>

### **Türkiye sought Eurofighters after uncertainty over F-16 sale: Source**

*Daily Sabah, November 23, 2023*

Türkiye has launched discussions to buy 40 Eurofighter Typhoon jets from European states after it saw that its request for F-16 jets from the United States may not work out, a Turkish Defense Ministry source said Thursday.

Defense Minister Ya'ar Güler said last week that Türkiye was in talks with Britain and

Spain to buy Eurofighter Typhoon jets, though Germany objected to the idea.

Güler was holding talks on the issue with his British counterpart Grant Shapps in Ankara on Thursday, the source said. Türkiye wants to buy the most advanced, newly built version of the Eurofighter, he added.

<https://www.dailysabah.com/business/defense/turkiye-sought-eurofighters-after-uncertainty-over-f-16-sale-source>

### **'UK to work on persuading Germany for Turkish Eurofighter sales'**

*Daily Sabah, November 30, 2023*

National Defense Ministry sources announced Thursday that Türkiye's Eurofighter sale was discussed in the last meeting of Defense Minister Ya'ar Güler with his British counterpart last week, the local media reported citing Britain reiterated it would work on persuading Germany for the sales.

The source recalled that Türkiye has launched discussions to procure 40 Eurofighter aircraft, 20 of which during the first stage and 20 later.

Minister Güler, confirmed earlier this month the country's intention to acquire 40 Typhoon fighter jets, with approvals already obtained from the United Kingdom and Spain. On the other hand, Germany appeared to object to the sale.

<https://www.dailysabah.com/business/defense/uk-to-work-on-persuading-germany-for-turkish-eurofighter-sales>

*M. East Asia*

### **US and Philippines sign a nuclear cooperation pact allowing US investment and technologies**

*AP News, November 17, 2023*

The United States and the Philippines have signed a nuclear cooperation pact under which U.S. investment and

technologies are to help the Southeast Asian nation transition to cleaner energy and bolster its power supply. Philippine President Ferdinand Marcos Jr. witnessed the signing of the deal by his energy secretary and U.S. Secretary of State Antony Blinken on Thursday on the sidelines of the Asia Pacific Economic Cooperation summit in San Francisco.

“We see nuclear energy becoming a part of the Philippines’ energy mix by 2032 and we are more than happy to pursue this path with the United States as one of our partners,” Marcos said at the signing ceremony.

<https://apnews.com/article/philippines-us-nuclear-energy-8d6056f5f5119e66c7e28f6ff6f242c6>

### **IAEA Mission Observes Commitment to Safety at Research Reactor in the Philippines, Recommends Further Improvement**

*IAEA, November 20, 2023*

An International Atomic Energy Agency (IAEA) team of experts said the Philippines is committed to the safe operation of the Philippine Research Reactor-1 (PRR-1) Subcritical Assembly for Training, Education and Research (SATER) facility, following completion of recent commissioning tests and the start of its utilization for training and education. The team also found the need for further improvement of the effectiveness of the reactor’s operational organization structure, its maintenance and operating procedures. The five-day Integrated Safety Assessment for Research Reactors (INSARR) mission to the PRR-1 SATER facility was conducted at the request of the Philippine Nuclear Research Institute (PNRI), part of the Department of Science and Technology. The mission team comprised three experts from China, the Netherlands and the United States of America, and one IAEA staff member.

<https://www.iaea.org/newscenter/pressreleases/iaea-mission-observes-commitment-to-safety-at-research-reactor-in-the-philippines-recommends-further-improvement>

### **Japan’s wastewater release could bring the region together/Opinion**

*The Japan Times, November 27, 2023*

The first rule of holes is: If you find yourself in one, stop digging. Viewed most charitably, China may finally be putting its shovel down and searching for a way to fix the mess created by banning the import of all marine products from Japan once it started releasing treated radioactive water from the Fukushima No. 1 nuclear power plant. Japanese Prime Minister Fumio Kishida and Chinese President Xi Jinping reportedly agreed on Nov. 17 in San Francisco, where they met at an Asia-Pacific Economic Cooperation forum, to “find ways to resolve the dispute through meetings and dialogue in a constructive manner.” Scientific experts will discuss the release but there is still no timetable for lifting the ban. Moreover, China is withholding overdue payments to the International Atomic Energy Agency (IAEA) in an apparent attempt to further pressure Japan.

<https://www.japantimes.co.jp/commentary/2023/11/27/japan/china-fukushima-release-opportunity/>

### **UN calls on North Korea to refrain from pursuing nuclear weapons**

*Anadolu Agency, November 27, 2023*

The UN has called on the Democratic People’s Republic of Korea (DPRK) to refrain from pursuing its nuclear weapons and ballistic missile programmes, a senior UN official said on Monday. “On 27 September, the DPRK adopted a constitutional amendment further enshrining its policy on nuclear forces in the Constitution. As such, the DPRK has consistently demonstrated its strong intention to continue pursuing its nuclear weapons and ballistic missile programmes, in violation of relevant Security Council resolutions. “We emphasize once again our call on the DPRK to refrain from

such actions,” Khaled Khiari, Assistant Secretary-General for the Middle East and Asia and the Pacific, told the UN Security Council meeting on non-proliferation/DPRK.

<https://www.aa.com.tr/en/asia-pacific/un-calls-on-north-korea-to-refrain-from-pursuing-nuclear-weapons/3066300>

## US: North Korea Trying to Advance Nuclear Program With Satellite Launch

*VOA News, November 27, 2023*

The United States accused North Korea on Monday of using the prohibited launch of a military spy satellite to try to advance its nuclear weapons program, a charge Pyongyang denied.

“The DPRK is unabashedly trying to advance its nuclear weapons delivery systems by testing ballistic missile technology in clear violation of this council’s resolutions,” U.S. Ambassador Linda Thomas-Greenfield told council members, using the abbreviation for North Korea’s formal name, the Democratic People’s Republic of Korea.

Pyongyang is prohibited by several Security Council resolutions from carrying out nuclear or ballistic missile activity. Thomas-Greenfield noted that North Korea has launched three Satellite Launch Vehicles this year and 29 ballistic missiles, including four intercontinental ones.

<https://www.voanews.com/a/us-north-korea-trying-to-advance-nuclear-program-with-satellite-launch/7372425.html>

## North Korea says satellite took photos of White House and Pentagon

*The Japan Times, November 28, 2023*

North Korea claimed Tuesday that its military spy satellite launched last week had taken photos of the White House, Pentagon and nearby U.S. naval bases — the latest in a series of assertions about its capabilities — though it has yet to release any images.

The claim came as Pyongyang’s ambassador to the United Nations clashed with his U.S. counterpart at a U.N. Security Council meeting in New York over the launch.

<https://www.japantimes.co.jp/news/2023/11/28/asia-pacific/politics/north-korea-satellite-launch-white-house-pentagon-united-nations/>

## Why is North Korea saying it’s watching the White House?

*BBC, November 29, 2023*

North Korea has declared it’s got the White House in its sights thanks to its new spy satellite - which the regime says is up and running, although the West has its doubts.

Still, leader Kim Jong Un has been crowing over his new surveillance toy; and he’s been happily sharing the alleged results.

Reports put out by state media on Tuesday trumpeted a list of targets the North says it’s seen: the White House, the Pentagon and air force bases along the US north-east coast and in its Pacific territory of Guam.

Closer to home, Pyongyang also listed South Korean military targets and its port city of Busan. Further afield and slightly more baffling: Rome.

<https://www.bbc.com/news/world-asia-67563543>

## Experts sceptical as North Korea claims new satellite has ‘detailed’ pictures of White House and Pentagon

*Independent, November 29, 2023*

North Korea has claimed its leader Kim Jong-un reviewed “detailed pictures” taken by its first spy satellite of the White House and military bases of other countries. However, North Korea has not released any imagery yet, leaving analysts and foreign governments to debate how capable the new satellite actually is.



While the existence of these images or their authenticity have not been independently confirmed, experts cast doubts over the usefulness of such pictures taken by the Malligyong-1 spy satellite launched last week. The images were taken by the satellite on Monday, according to the state-run KCNA news agency. Mr Kim, who oversaw the launch with his daughter, is said to have reviewed them on Tuesday.

<https://www.independent.co.uk/asia/east-asia/north-korea-satellite-pictures-experts-doubts-b2455418.html>

### **South Koreans want their own nukes. That could roil one of the world's most dangerous regions**

*AP News, November 30, 2023*

To the steady rat-tat-tat of machine guns and exploding bursts of smoke, amphibious tanks slice across a lake not far from the big green mountains that stand along the world's most heavily armed border.

Dozens of South Korean and U.S. combat engineers build a pontoon bridge to ferry tanks and armored vehicles across the water, all within easy range of North Korean artillery. For seven decades, the allies have staged annual drills like this recent one to deter aggression from North Korea, whose 1950 surprise invasion of South Korea started a war that has technically yet to end.

The alliance with the United States has allowed South Korea to build a powerful democracy, its citizens confident that Washington would protect them if Pyongyang ever acted on its dream of unifying the Korean Peninsula under its own rule.

<https://apnews.com/article/north-korea-south-korea-nuclear-arms-race-543e85e5e6832c50ba9dc26a91ef071b>

## *Oceania*

### *N. Australia*

### **Australia says AUKUS a response to arms race, not fuel for it**

*Reuters, November 28, 2023*

The Indo Pacific region is in the midst of a substantial arms race that Australia is responding to, not fuelling, with its planned acquisition of nuclear-powered submarines, Minister for Defence Industry Pat Conroy said on Tuesday.

The \$245 billion AUKUS project with Britain and the United States to build a new class of nuclear-powered and conventionally armed submarine has been criticised by China as having the potential to spark an arms race. In a speech in Canberra responding to domestic political criticism of the high cost and ambition of the program, which aims to build the submarines in Australia by 2040, Conroy said AUKUS was fundamental to Australia's defence.

[https://www.reuters.com/world/asia-pacific/australia-says-aucus-response-arms-race-not-fuel-it-2023-11-28/#:~:text=SYDNEY%2C%20Nov%2028%20\(Reuters\),Pat%20Conroy%20said%20on%20Tuesday.](https://www.reuters.com/world/asia-pacific/australia-says-aucus-response-arms-race-not-fuel-it-2023-11-28/#:~:text=SYDNEY%2C%20Nov%2028%20(Reuters),Pat%20Conroy%20said%20on%20Tuesday.)

### **Australia's Aukus nuclear submarines could fuel regional arms race despite assurance**

*South China Morning Post, November 28, 2023*

Australia may have asserted that its acquisition of nuclear-powered submarines under Aukus is not aggravating the "arms race", but the deal and the three-nation alliance could still fuel a defence build-up in the Asia-Pacific and heighten regional tensions, security analysts say.

At the national press club in Canberra on Tuesday, Australian Defence

Industry Minister Pat Conroy reiterated the importance of the submarines to the country's defence while debunking "myths" about the trilateral deal struck with Britain and the United States, which is largely seen as a countermeasure targeting China. "The arms race is the greatest it's been since 1945, and that is why I reject assertions ... that Australia is somehow fuelling that arms race," he said, adding that rising tensions in the Asia-Pacific had posed the most challenging strategic environment for Australia since World War II. "We are responding to it in a responsible and mature manner, like Australian governments should."

*<https://www.scmp.com/week-asia/politics/article/3243149/australias-aucus-nuclear-submarines-could-fuel-regional-arms-race-despite-assurance>*

## Contribute Articles

Indian Pugwash Society welcomes research articles from students, researchers and faculties on Space, Missile, nuclear technology, WMD proliferation, arms control, disarmament, export controls and other related issues. Articles should be crisply written and should address contemporary debates in the policy arena. Manuscripts submitted for the consideration of the Indian Pugwash Society should be original contributions and should not have been submitted for consideration anywhere else. For further assistance, please contact us at : indianpugwashsociety@gmail.com

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