

Nuclear, Missile & Space Digest

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A Fortnightly Newsletter from the MP-IDSA

December 31, 2023

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- Australia to create navy nuclear safety watchdog for AUKUS

A. India

Indian unit reaches construction milestone

World Nuclear News, December 1, 2023

Hot conditioning of unit 7 at the Rajasthan Atomic Power Plant has been completed, Nuclear Power Corporation of India Ltd has announced. The unit is the third in a series of indigenously designed 700 MWe pressurised heavy water reactors. "Unit 7 of Rajasthan Atomic Power Project 7&8 ... achieved a major milestone of successful completion of Hot Conditioning of the Primary Heat Transport (PHT) system on November 30, 2023," NPCIL said. "Hot conditioning is a commissioning process to develop an adherent protective layer of magnetite in inner surfaces of carbon steel piping of the PHT system. Hot conditioning was achieved by circulating light water of controlled chemistry through the PHT system, maintaining a temperature around 256°C and pressure of about 100 kg/cm²."

<https://www.world-nuclear-news.org/Articles/Indian-unit-reaches-construction-milestone>

Aatmanirbhar Bharat: iDEX-DIO signs 300th contract for Defence Innovation in the niche field of Design and Development of Advanced Gallium Nitride Semiconductors

PIB, December 1, 2023

Innovations for Defence Excellence (iDEX), the flagship initiative of the Department of Defence Production, has reached a milestone with the signing of its 300th contract. The contract relates to the design and development of advanced Gallium Nitride Semiconductors which is essential for the next generation of wireless transmitters in defence applications ranging from radars to EW (Electronics Warfare) jammers. Currently, almost all GaN components are imported being a sensitive and cutting-edge technology whose export is controlled and restricted by many countries. The proposal aims to design, develop and manufacture GaN components for defence in India using completely indigenous GaN technology.

This would significantly enhance the indigenous design & development capability, paving way for immense potential in the defence sector including exports.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1981593>

Union minister R K Singh advocates nuclear power amid storage challenges

Hindustan Times, December 2, 2023

India has the potential to generate upto 100 Giga Watts of power using nuclear source, Union minister for power, new and renewable Energy, R K Singh, said on Friday emphasising the need to build a suitable ecosystem in response to current challenges in storing renewable energy. India, at the 26th session of the United Nations Framework Convention on Climate Change (COP 26) in November 2021, announced its target to achieve net zero carbon emissions by 2070. "To achieve net zero, we need round the clock energy from clean energy sources, but storage capacity challenges persist worldwide. So, we need nuclear power," Singh told reporters on the sidelines of a conference on 'Energy Transition in India - Road Travelled and Opportunities Ahead' in Gujarat's Gandhinagar.

<https://www.hindustantimes.com/india-news/union-minister-r-k-singh-advocates-nuclear-power-amid-storage-challenges-101701518072026.html>

Government is working on new technologies such as Small Nuclear Reactors to make clean energy transition

PIB, December 6, 2023

The Government today informed that it is working on new technologies such as Small Nuclear Reactors to make clean energy transition. In a written reply to a question in the Lok Sabha today, Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions,

Atomic Energy and Space, Dr Jitendra Singh said, nuclear power is considered as one of the most promising clean energy options for power generation. There is a thrust world over for a strategy to use nuclear power that could reduce reliance on fossil fuels over the coming years. Small capacity atomic power plants, popularly called Small Modular Reactors (SMRs), with their unique features of modularity, scalability, small footprint and improved safety present themselves as an attractive option for repurposing of retiring coal-based thermal power station sites.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1982958>

Domestic defence industries must bolster technological capabilities to address traditional & future challenges: Chief of Defence Staff at Avionics Expo 2023

PIB, December 7, 2023

Chief of Defence Staff General Anil Chauhan has called upon the domestic defence industries to bolster technological capabilities to address traditional and future challenges. Inaugurating the Avionics Exposition 2023 organised by Hindustan Aeronautics Limited (HAL) in New Delhi on December 07, 2023, General Anil Chauhan urged the industry to understand the requirement of services, and evolve solutions that fit country's terrain, climate & operational requirements. "India's challenges must be resolved with Indian solutions as a series of contemporary events have exposed the vulnerability of global supply chains," he said.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1983513>

Climate Change in Mind, India Masters Unique Breeder Nuclear Reactors

NDTV, December 7, 2023

As the world tries to find solutions for curbing carbon emissions that are blamed for causing climate change, the Conference of Parties (COP-28) taking place at Dubai is

debating how to control use of fossil fuels, the main culprit for causing climate change, today the deployment of atomic energy which is source of carbon free electricity is finding more acceptability.

India already has a highly advanced atomic energy programme and in an effort to control carbon emissions the plan is to triple generation of carbon free nuclear energy to 22,000 megawatts by 2032 up from the nearly 7000 megawatts at present.

<https://www.ndtv.com/india-news/climate-change-in-mind-india-masters-unique-breeder-nuclear-reactors-4642803>

Successful training launch of Short-Range Ballistic Missile 'Agni-1'

PIB, December 7, 2023

Training launch of Short-Range Ballistic Missile 'Agni-1' was carried out successfully from APJ Abdul Kalam Island, Odisha on December 07, 2023. Agni-1 is a proven very high precision missile system. The user training launch, carried out under the aegis of the Strategic Forces Command, successfully validated all operational and technical parameters.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1983750>

Keel laying of fourth ship (BY 526, Malpe) and fifth ship (BY 527, Mulki) of ASW SWC Project At CSL, Kochi on 08 Dec 23

PIB, December 8, 2023

Keel Laying of the fourth ship (BY 526, Malpe) and fifth ship (BY 527, Mulki) of Anti-Submarine Warfare Shallow Water Craft (ASW SWC) (CSL) project was presided by RAdm Jaswinder Singh, Chief of Staff, Southern Naval Command and RAdm Subir Mukherjee, Admiral Superintendent, NSRY(Koc) respectively on 08 Dec 23, in the presence of Shri Madhu S Nair, CMD, Cochin Shipyard Limited and other senior officials of Indian Navy and shipyard at CSL, Kochi. With

all major and auxiliary equipment/systems sourced from indigenous manufacturers, these ships are the proud flag bearer of "Aatmanirbhar Bharat" initiative. The event, in short succession after the launching of the first three ASW SWC ships in CSL on 30 Nov 23, showcases the 'Make in India' capability of the Indian Shipyards.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1983960>

Breakthrough Nutraceutical 'AKTOCYTE' by the Department of Atomic Energy Set to Transform Cancer Care

PIB, December 13, 2023

In a breakthrough towards enhancing the quality of life for cancer patients undergoing radiotherapy, scientists from Department of Atomic Energy and M/s. IDRS Labs Pvt. Ltd. Bengaluru have joined hands to develop AKTOCYTE tablets. Experts from Bhabha Atomic Research Centre, Mumbai; Tata Memorial Hospital, Mumbai; Advanced Centre for Training Research and Education in Cancer, Navi Mumbai collaborated with the IDRS Labs with a primary aim of minimizing the side effects of radiotherapy.

The AKTOCYTE tablets have shown remarkable results, particularly in pelvic cancer patients suffering from radiotherapy-induced Cystitis (Blood in urine).

<https://pib.gov.in/PressReleasePage.aspx?PRID=1985981>

IIT Madras and European Researchers Explore Unforeseen Reactions Induced by Energetic Radiation

The Weather Channel, December 13, 2023

Scientists at the Indian Institute of Technology (IIT) Madras have collaborated with their counterparts in Europe to investigate hitherto unforeseen secondary reactions that are induced by energetic radiation. The research teams including from Denmark, Germany and the Indian Institute of Science Education and Research (IISER), Pune, emphasised the potential significance

of the findings in advancing radiotherapies and understanding fundamental interactions at the molecular level. When materials are exposed to radiation, additional chemical, nuclear, or biological processes are triggered by the initial interaction of high-energy radiation with matter. These secondary reactions can result in the formation of reactive species, such as free radicals, which may further interact with surrounding molecules, leading to a cascade of molecular transformations.

<https://weather.com/en-IN/india/science/news/2023-12-13-iit-madras-and-european-researchers-explore-unforeseen-reactions-to>

Over the last three years, ISRO has been steadily leveraging Artificial Intelligence and Machine Learning in Space domain, says Union Minister Dr Jitendra Singh

PIB, December 14, 2023

Over the last three years, ISRO has been steadily leveraging Artificial Intelligence and Machine Learning in Space domain, adapting with fast-paced technological developments in these areas, Union Minister Dr Jitendra Singh said today. Artificial Intelligence and Machine Learning solutions are being developed for Launch Vehicles, Spacecraft Operations, Big Data Analytics, Space Robotics, Space Traffic Management, among others, he said. The Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, said this in a written reply in the Rajya Sabha.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1986390>

The number of Space Start-Ups have gone up from just 1 in 2014 to 189 in 2023, says Union Minister Dr Jitendra Singh

PIB, December 14, 2023

The number of Space Start-Ups have gone up from just 1 in 2014 to 189 in 2023 as

per DPIIT Start-Up India Portal, Union Minister Dr Jitendra Singh said today. The investment in Indian Space Start-Ups has increased to \$ 124.7 Million, he said.

The Union Minister of State (Independent Charge) Science & Technology; MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, said this in a written reply in the Rajya Sabha.

Dr Jitendra Singh said, the government has announced the Indian Space Policy 2023, which enables end-to-end participation of Non-Governmental Entities (NGEs) in all domain of Space activities.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1986393>

Space Technology Incubational Centres

PIB, December 14, 2023

Space Technology Incubation Centre (S-TIC) has been set-up to attract and nurture the young academia with innovative ideas/research aptitude for carrying out research, motivating and encouraging them to initiate the start-ups and business in the field of Space technology & applications and developing the Academia-Industry ecosystem for Space Technology.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1986395>

Indian regulator gives go-ahead for reactor start-up

World Nuclear News, December 14, 2023

The Atomic Energy Regulatory Board (AERB) has given its permission for the first approach to criticality of unit 4 at the Kakrapar nuclear power plant. The unit is the second of two Indian-designed 700 MWe pressurised heavy water reactors (PHWRs) being built at the site in Gujarat. "Based on the satisfactory Safety and Security reviews ... permission is hereby issued for First Approach to Criticality (FAC) and Low-Power Physics Experiments (LPPE) or Kakrapar Atomic Power Project Unit 4," the AERB said in an announcement dated 11 December. The permission is valid until 30

April 2024. The AERB gave permission for the start of fuel loading at Kakrapar 4 - also referred to as KAPP-4 - in October.

<https://www.world-nuclear-news.org/Articles/Indian-regulator-gives-go-ahead-for-reactor-start>

Aatmanirbharta in Ammunition Manufacturing: MoD inks Rs 5,336.25 crore contract with BEL for procurement of Electronic Fuzes for Indian Army for 10 years

PIB, December 15, 2023

The Ministry of Defence, on December 15, 2023, signed a landmark contract with Bharat Electronics Limited (BEL), Pune for procurement of Electronic Fuzes for the Indian Army for a period of 10 years, at a total cost of Rs 5,336.25 crore. As part of the 'Aatmanirbhar Bharat' vision, this contract has been signed for ammunition procurement under 'Manufacture of Ammunition for Indian Army by Indian Industry', a Government initiative for long term requirement of 10 years. The aim of the project is to build up ammunition stocks to minimise imports, achieve self-sufficiency in ammunition manufacturing, obtain critical technologies and secure stock affected by supply chain disruption.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1986590>

DRDO carries out successful flight trial of Autonomous Flying Wing Technology Demonstrator, an indigenous high-speed flying-wing UAV

PIB, December 15, 2023

Defence Research and Development Organisation (DRDO) has successfully carried out a flight trial of Autonomous Flying Wing Technology Demonstrator, an indigenous high-speed flying-wing Unmanned Aerial Vehicle (UAV) from the Aeronautical Test Range, Chitradurga in Karnataka. The successful flying demonstration of this autonomous stealth

UAV is a testimony to maturity in the technology readiness levels in the country. With this flight in the tailless configuration, India has joined the elite club of countries to have mastered the controls for the flying wing technology.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1986788>

B. Russia

Zaporozhye NPP's external power supply line to be restored by December 5

TASS, December 3, 2023

A 330kV external power supply line on the Zaporozhye Nuclear Power Plant (ZNPP), which was knocked out of operation on Friday night, is expected to be restored by December 5, said Renat Karchaa, the advisor to the CEO of Russia's state nuclear power corporation Rosenergoatom.

According to the official, the 330kV power supply line disconnected at 10:26 p.m. Moscow time [7:26 p.m. GMT] on Friday. Five hours later, at 3:32 a.m. Moscow time [12:32 a.m. GMT] on Saturday, a 750kV power supply line was also shut down, and the plant's staff had to switch to diesel generators. By 08:08 a.m. Moscow time [5:08 a.m. GMT], the 750kV line was restored.

<https://tass.com/emergencies/1715215>

Russia's rivals tried to ruin its nuclear industry, Rosatom saved it – Kremlin official

TASS, December 3, 2023

Russia's rivals tried to ruin Russia's nuclear industry, which was saved by President Vladimir Putin's decision to create state-run nuclear corporation Rosatom, said Sergey Kiriyyenko, the first deputy chief of staff of the Russian Presidential Administration.

"Our global rivals set the task of making it so that Russia's nuclear industry ceased to exist," he told the Rossiya-24 TV channel, adding that the creation of Rosatom "saved

the country's nuclear industry, first of all, and, secondly, gave Russia unique competitive advantages."

<https://tass.com/politics/1715231>

Attempts to hamper Paks-2 NPP project prompted by competition with Rosatom – ambassador

TASS, December 4, 2023

The West's attempts to prevent the construction of the Paks-2 nuclear power plant in Hungary are unfair competition with the use of a political component aimed against Russia, Russian Ambassador to Hungary Evgeny Stanislavov said in conversation with TASS.

When asked if Western sanctions threaten the construction of two new power units at Paks and whether construction will be completed, he said that "the Paks-2 is rightfully considered a flagship project" in relations between the two countries.

As for attempts to prevent its implementation, they are not a surprise for the Russian side, the diplomat noted.

<https://tass.com/politics/1715585>

Hungary ahead of the curve in recognizing folly of sanctions – Russian envoy

TASS, December 4, 2023

Hungary, unlike other EU countries, realized early on that sanctions against Russia were not producing results, Russian Ambassador to Hungary Evgeny Stanislavov said in a conversation with TASS.

"In Hungary, perhaps earlier than in many other European countries, they realized that sanctions against Russia were not having the desired result, but, on the contrary, harming their initiators. Moscow warned about this from the very beginning, but the Europeans did not believe us. Now this is becoming obvious to everyone, but European capitals cannot

yet abandon the sanctions regime," the diplomat said.

<https://tass.com/politics/1715653>

Rosatom ends practice of temporary storage of radioactive waste

TASS, December 4, 2023

Rosatom has begun eliminating temporary storage facilities for radioactive waste. According to the nuclear industry newspaper Strana Rosatom, from now on the waste will go straight to permanent isolation facilities for the entire period it will remain a potential hazard.

For many decades, the newspaper writes, radioactive waste was a deferred problem. Storing them safely and securely was the paramount task, while disposing them once and for all would be the business of future generations, it was generally believed.

<https://tass.com/economy/1715805>

Russia, Turkey having many interesting joint projects – Putin

TASS, December 4, 2023

Russian President Vladimir Putin expects many new interesting projects with Turkey.

"We have plenty of other interesting projects, joint initiatives, including in the sphere of trade and the sphere of high technologies," the head of state said during the foreign ambassadors' credentials presentation ceremony.

Putin cited energy cooperation between the two countries as an example of projects already underway. The interaction in this sphere "is indeed the strategic one by its nature," he noted.

<https://tass.com/politics/1715815>

Putin to hold talks in UAE, Saudi Arabia on December 6 – Kremlin aide

TASS, December 5, 2023

Russian President Vladimir Putin will meet with Saudi Crown Prince Mohammed bin

Salman al Saud and President of the United Arab Emirates Mohammed bin Zayed Al Nahyan during his working visits on December 6, Russian Presidential Aide Yury Ushakov told reporters. "The meetings will kick off in the UAE, after the official meeting at the airport and the meeting at the palace. There will be talks between the delegations. Afterwards, there will be a one-on-one dialogue between Putin and Mohammed Al Nahyan," Ushakov said.

<https://tass.com/politics/1716305>

Russia has advantage on nuclear energy in space – Roscosmos CEO

TASS, December 12, 2023

The Russian Federation has an edge in developing nuclear energy in space, namely with its project to create a nuclear tug, Yury Borisov, CEO of Russian state aerospace corporation Roscosmos, said.

"One of the real breakthrough projects for us is creating a nuclear-fueled transport-energy module. Currently, we have an advantage in this area," he said during a general meeting on the role of the Russian Academy of Sciences in advancing Russia's scientific and technological development.

The Roscosmos CEO noted that the world is not sitting still and any delay would "quickly eat up" Russia's advantage.

<https://tass.com/science/1719657>

Putin unveils new Russian nuclear submarines to flex naval muscle beyond Ukraine

France 24, December 13, 2023

Amid freezing temperatures in the northern city of Severodvinsk, Putin extolled the virtues of the Russian navy's two new nuclear-powered submarines on Monday. "With such vessels and such weapons, Russia will feel that it is safe," Putin told officials and naval officers at the inauguration ceremony. Fresh out of production, the submarines – named Krasnoyarsk and Emperor

Alexander III – represent the pinnacle of Russian maritime power, each serving a specific purpose.

The Krasnoyarsk belongs to the Yasen-M class of attack submarines capable of launching both cruise missiles and hypersonic missiles (which travel at speeds exceeding Mach-5, or 6,125 km/h). Its primary purpose is “to strike targets on land or hunt other submarines at sea,” says Basil Germond, a specialist in maritime military security at Lancaster University in the UK.

<https://www.france24.com/en/europe/20231213-putin-unveils-new-russian-nuclear-submarines-to-flex-naval-muscle-beyond-ukraine>

Rosatom, China Atomic Energy Authority discuss future plans

TASS, December 14, 2023

General Director of the Rosatom state corporation Alexey Likhachev held negotiations with Head of the China Atomic Energy Authority Zhang Kejian at the construction site of the Xudapu nuclear power plant, located in Liaoning province, the press service of the state corporation reported.

“Alexey Likhachev and Zhang Kejian discussed all the main issues of bilateral cooperation, including interaction on the construction of power units 7 and 8 of the Tianwan NPP and power units 3 and 4 of the Xudapu NPP and the supply of equipment for the Chinese fast-neutron demonstration reactor CFR600, as well as promising topics,” the statement said.

<https://tass.com/politics/1720441>

Russia completes its segment of global system to detect nuclear tests – CTBTO

TASS, December 14, 2023

The Comprehensive Nuclear-Test-Ban Treaty Organization has said Russia has completed its segment of the International Monitoring System that aims to detect any nuclear tests.

“Russia’s segment of the International Monitoring System is now complete! The

final station, AS92, has been certified and is now transmitting crucial data,” the organization said on X, formerly known as Twitter.

CTBTO’s Executive Secretary Robert Floyd in a separate statement congratulated the country and the organization’s staff for their “dedication to this monumental achievement.”

<https://tass.com/defense/1721169>

Russia prepared for reciprocal measures if US moves to resume nuclear tests – diplomat

TASS, December 15, 2023

Washington will receive a tit-for-tat response from Moscow in case it moves to resume nuclear weapons tests, Russian Deputy Foreign Minister Sergey Ryabkov said.

“As far as nuclear tests are concerned, I can say that if the US resumes them, it will receive a tit-for-tat response from us. It has certainly sent signals recently that it has no plans to do that and is ready to be more transparent about its testing ground. However, even if there are no such plans today, tomorrow could be a different story,” he noted in an interview with the International Affairs magazine.

<https://tass.com/politics/1721935>

C. China

Chinese commercial reusable rocket conducts second vertical liftoff and landing test

CGTN, December 11, 2023

Another successful vertical liftoff and landing (VTVL) test was conducted for the full-sized first stage of China’s commercial reusable Hyperbola-2Y rocket (coded as SQX-2Y), according to the Beijing-based aerospace company Interstellar Glory. Developed by Interstellar Glory, also known as iSpace, the rocket completed its first VTVL test on November 2, reaching a height of 178 meters above the ground. The test team then conducted the reuse

maintenance and testing within 20 days for the second consecutive flight mission. The company noted that the completion of the two consecutive VTVL missions by the same rocket signifies a significant breakthrough in the reusable technologies of China's commercial liquid-propellant launch vehicles.

<https://news.cgtn.com/news/2023-12-11/Chinese-commercial-reusable-rocket-successfully-conducts-second-flight-1przHrVWL6AE/index.html>

Long March rockets mark their 500th spaceflight

China Daily, December 11, 2023

China used a Long March 2D carrier rocket on December 10 morning to send several remotesensing satellites into space, marking the 500th launch of the Long March family. The rocket blasted off from the Xichang Satellite Launch Center in Southwest China's Sichuan province, spitting red-orange flames and soaring into bright skies, which was caught on video published by the Shanghai Academy of Spaceflight Technology, the maker of the Long March 2D series. It was China's 59th rocket launch this year and the 13th flight of the Long March 2D model in 2023. The overall success rate of the Long March fleet is around 97 percent. Of the 500 liftoffs, 297 were carried out by models developed by the China Academy of Launch Vehicle Technology in Beijing and 203 by the Shanghai Academy of Spaceflight Technology.

<https://www.chinadaily.com.cn/a/202312/11/WS6576537ba31040ac301a70ee.html>

China's CGN halts funding for UK's Hinkley nuclear plant

Bloomberg, December 13, 2023

China General Nuclear Power Corp. has halted funding for the UK's Hinkley Point C nuclear station in a fresh sign of tension between London and Beijing. CGN skipped several installments in recent months, according to people familiar with the matter. That means Electricite de France SA, which was building the £32.7 billion (\$41 billion) plant with CGN, may have to pay for its

completion alone, they said, asking not to be identified discussing private information. The withdrawal comes after the UK took over CGN's stake in a similar nuclear project in Sizewell last year amid national security concerns. Back then, the government didn't rule out intervening in other cases of Chinese involvement in energy supply. CGN's plan to build another atomic plant in southeast England is also up in the air.

<https://www.bloomberg.com/news/articles/2023-12-13/hinkley-point-nuclear-plant-in-uk-stops-getting-funding-from-china-s-cgn>

China brings world's first Generation IV nuclear reactor online

New Atlas, December 13, 2023

China claims to have brought the world's first Generation IV commercial nuclear reactor online. The Shidao Bay Nuclear Power Plant HTR-PM high-temperature gas-cooled (HTGR) pebble-bed reactor in Shidao Bay, Shandong Province, reportedly went into service this month. Generation IV reactors are the latest, long-anticipated nuclear power plants that promise to be cheaper, safer, and more efficient than the current reactors. They're called Generation IV because Generation I were the first experimental reactors, Generation II were the first commercial reactors, Generation III were improved versions of Gen II, and Generation IV are the future reactors that incorporate new technologies, fuels, and basic designs.

<https://newatlas.com/energy/china-brings-worlds-first-generation-iv-nuclear-reactor-online/>

China launches reusable test spacecraft

Xinhua, December 14, 2023

China successfully launched a reusable test spacecraft by a Long March-2F carrier rocket from the Jiuquan Satellite Launch Center in northwest China. The reusable test spacecraft will operate in orbit for some time before returning to the

scheduled landing site in China. During the in-orbit operation, the spacecraft will conduct verifications for reusable technologies and space science experiments to provide technical support for the peaceful use of space.

<https://english.news.cn/20231214/013eca02d3824dc095e6e84a08d9b6a5/c.html>

Chinese, Russian militaries hold 7th joint aerial strategic patrol

Global Times, December 15, 2023

The Chinese and Russian militaries held their second joint aerial strategic patrol of the year, the seventh in total since 2019, reportedly adding electronic warfare and reconnaissance aircraft to a group of bombers and fighters, in a move experts said was aimed at safeguarding peace and stability in the region. In accordance with an annual cooperation plan between the Chinese and Russian militaries, the two sides organized and carried out the seventh joint aerial strategic patrol over the Sea of Japan and the East China Sea, China's Ministry of National Defense said in a press release. The Chinese military aircraft were carrying out routine and conventional flight activities in international air space in compliance with international law, said Mao Ning, a spokesperson at China's Ministry of Foreign Affairs, at a regular press conference.

<https://www.globaltimes.cn/page/202312/1303700.shtml>

China's next generation artificial sun opens for global shared research and use in cooperation with ITER

Global Times, December 15, 2023

The China National Nuclear Corporation (CNNC) announced the global opening of the next generation artificial sun, "China Circulation-3," after the group's affiliated Southwestern Institute of Physics signed an agreement with the International Thermonuclear Experimental Reactor (ITER). The initiative invites scientists worldwide to come to China and collaborate toward the shared goal of

pursuing "artificial sun energy." The "China Circulation-3" is currently China's most advanced and largest-scale nuclear fusion device, also referred to as China's next generation "artificial sun." In August this year, it successfully achieved high-constraint operation mode under a plasma current of 1 million amperes, marking a significant advancement in China's magnetic confinement nuclear fusion device, propelling it to the forefront of international research.

<https://www.globaltimes.cn/page/202312/1303719.shtml>

D. Pakistan

Pakistan nuclear weapons plan was always India-centric, says 'secret' 1980 US cable

Times of India, December 7, 2023

Pakistan's nuclear weapons programme has always been India-centric and "geared mainly to assuring that this nation will not suffer any strategic disadvantage" vis-a-vis its neighbour, the American embassy in Islamabad reported to the state department in a confidential four-decades-old cable released on Wednesday night.

The March 30, 1980 cable, bearing the number "2933" and titled "Non-Proliferation Policy Assessment", was released along with several others by the Washington-based National Security Archive under the Freedom of Information Act. "We are not sanguine that the fundamental conflict over nuclear issues between the USG (United States government) and the GOP (government of Pakistan) will diminish," the cable states.

<https://timesofindia.indiatimes.com/india/pakistan-nuclear-weapons-plan-was-always-india-centric-says-secret-1980-us-cable/articleshow/105820627.cms?from=mdr>

Pakistan needs to reap the dividends of nuclear energy

Arab News Pakistan, December 13, 2023

The United Nations Climate Summit COP28 was concluded in Dubai on Dec.

12, with promises of speeding up processes to limit global warming to 1.5 degrees celsius. The remarkable enterprise was a pledge by the global nuclear industry to triple nuclear energy by 2050. Nuclear energy is acknowledged as an essential source of clean energy, and the pledge by 22 countries to triple nuclear energy capacity drew attention to the vitality of nuclear fusion. On Dec. 5, US climate envoy John Kerry said that the Biden administration would work with other governments to speed up efforts to make nuclear fusion a new carbon-free energy source.

<https://www.arabnews.pk/node/2424906>

E. Sri Lanka

Sri Lankan government to cooperate with Russia to build nuke plant – newspaper

TASS, December 12, 2023

Sri Lankan authorities plan to work with Russia to build a nuclear power plant (NPP) on the basis of an intergovernmental agreement between the two countries, Daily Mirror newspaper reported. “Russia which has already invested in nuclear power generation in Bangladesh and India in the region has shown a keener interest in putting up a plant in Sri Lanka,” the newspaper said. A high-level delegation from Russia recently visited Sri Lanka to discuss the proposed cooperation in the nuclear energy sector with authorities, it reported.

<https://tass.com/economy/1719569>

F. Europe

More investment in nuclear deterrence will not make Europe safer

SIPRI, December 5, 2023

Russia’s invasion of Ukraine in February 2022 and the nuclear threats it has made since have driven a new wave of militarization in Europe. In addition to pushing Finland and Sweden to seek membership in NATO, the perception of an increasingly unpredictable and revanchist

Russia has led the alliance to boost its deterrence capabilities. These efforts have focused mainly on conventional forces, but arguments are currently also being made for strengthening nuclear deterrence. The loudest calls are coming from Poland, whose leaders have indicated that their country would like to host nuclear weapons from the United States. More specifically, Poland would like to enter NATO’s ‘nuclear sharing’ arrangements, thus joining Belgium, Germany, Italy, the Netherlands and Türkiye, which host US non-strategic B-61 nuclear bombs and operate dual-capable aircraft (DCA) that can carry them. While Polish interest in nuclear sharing predates February 2022, it has received more serious consideration since the invasion and the March 2023 announcement by Russia that it, too, would engage in nuclear sharing with Belarus, where it claims to have already deployed nuclear weapons.

<https://www.sipri.org/commentary/essay/2023/more-investment-nuclear-deterrence-will-not-make-europe-safer>

Germany / Political Parties Call For Immediate Restart Of Nuclear Power Plants

Nucnet, December 7, 2023

Three German political parties have called for a reversal of the country’s anti-nuclear policy with leading members of the Christian Democratic Union (CDU) and Christian Social Union (CSU) alliance and the liberal Free Democratic Party (FDP) saying they want to restart decommissioned reactors and build new ones, the Frankfurter Allgemeine Zeitung reported.

<https://www.nucnet.org/news/political-parties-call-for-immediate-restart-of-nuclear-power-plants-12-4-2023>

Erdogan says Turkey, Greece could cooperate on nuclear energy

Reuters, December 8, 2023

Turkey wants to develop cooperation with Greece on nuclear energy, Turkish

President Tayyip Erdogan was cited as saying on Friday after meetings in Athens, adding he hoped his visit would help improve ties between the NATO allies, but historic rivals.

Turkey and Greece agreed during a landmark visit by Erdogan on Thursday to establish a roadmap designed to usher in a new era of closer relations.

Speaking to reporters on his flight back from Greece, where he met Prime Minister Kyriakos Mitsotakis and several ministers, Erdogan said the meetings were held in a "very positive" atmosphere. "We are trying to expand, develop this cooperation not just to energy, but all areas including nuclear energy. For example, we may provide an opportunity to Greece from the nuclear power plant we will build in Sinop," Erdogan said, without elaborating, according to his office.

<https://www.reuters.com/world/europe/erdogan-says-turkey-greece-could-cooperate-nuclear-energy-2023-12-08/>

Hungary secures that new EU sanctions package does not target oil, Paks-2 – MFA

TASS, December 11, 2023

Hungary has secured that the 12th package of the EU sanctions against Russia won't include a ban on oil supplies through the Druzhba pipeline and restrictions against nuclear energy, Hungary's Minister of Foreign Affairs and External Economic Relations, Peter Szijarto announced on Monday.

"We have rejected efforts aimed at preventing us from buying Russian oil supplied through the Druzhba oil pipeline," the foreign minister told Hungarian journalists during a break in a meeting with colleagues from EU countries in Brussels.

<https://tass.com/world/1719161>

Nuclear included in NZIA by European Council

World Nuclear News, December 11, 2023

The European Council has adopted its position on the proposed Net-Zero Industry Act (NZIA), which is intended to bolster Europe's manufacturing output in technologies needed for decarbonisation. As with the European Parliament's position, issued last month, nuclear power has been included in the list of "strategic" technologies. The NZIA - proposed by the European Commission in March - sets a target for Europe to produce 40% of its annual deployment needs in net-zero technologies by 2030 and to capture 25% of the global market value for these technologies. The legislation - part of the EU's Green Deal Industrial Plan and seen as a response to the USA's Inflation Reduction Act - also intends to deal with the challenges in scaling up manufacturing capacities in these technologies.

<https://www.world-nuclear-news.org/Articles/Nuclear-included-in-NZIA-by-European-Council>

Radioactive substances could be smuggled out of Ukraine during invasion turmoil and end up being used in 'dirty bombs' on UK streets if border controls are not stepped up across NATO countries, nuclear expert warns

Daily Mail, December 12, 2023

Radioactive substances could be smuggled out of Ukraine's besieged nuclear power plants and end up being used to create 'dirty bombs' for terror attacks in the UK if border security is not tightened across NATO territory, a nuclear expert has warned. Dr Bahram Ghiassaei, a nuclear scientist, warned that the 'unprecedented' aerial attacks on Ukrainian nuclear power plants by Russian soldiers during the war have

'severely' undermined the facilities' security. Dr Ghiasee, an Associate Fellow at the Henry Jackson Society think tank, said this increases the risk of terrorists, proxy groups acting for 'hostile states' and organised crime syndicates gaining access to the radioactive substances.

<https://www.dailymail.co.uk/news/article-12850085/Radioactive-substances-smuggled-Ukraine-invasion-turmoil-end-used-dirty-bombs-UK-streets-border-controls-not-stepped-NATO-countries-nuclear-expert-warns.html>

COP28: ENEC signs three more SMR agreements

Nuclear Engineering International, December 12, 2023

The Emirates Nuclear Energy Corporation (ENEC) has signed three more memorandums of understanding (MOUs) related to small modular reactors at the 28th Conference of the Parties to the original 1992 United Nations Framework Convention on Climate Change (COP28) in Dubai. The latest agreements are with US-based small modular reactor (SMR) developers X-energy and Ultra Safe Nuclear Corporation (USNC) as well as with UK-based developer of molten salt nuclear technology MoltexFLEX.

Earlier at COP28 ENEC signed three agreements with US SMR and micro-reactor vendors – GE Hitachi Nuclear Energy (GEH), TerraPower and Westinghouse Electric. The agreements came after ENEC launched its ADVANCE programme, in the run up to CO28, aimed at leveraging the UAE's experience in successfully delivering the four-unit Barakah NPP, constructed in Abu Dhabi by a South Korean consortium.

<https://www.neimagazine.com/news/newscop28-enec-signs-three-more-smr-agreements-11365120>

France unveils plan to up investments in nuclear fusion, natural hydrogen

Euractiv, December 12, 2023

Macron visited the premises of European aviation giant Airbus in Toulouse on

Monday to mark the second anniversary of France's €54 billion investment plan for 2030.

He used the occasion to make new announcements on energy and industrial decarbonisation, saying the government will aim to "move faster and stronger in the beginning of the year [2024]" with "a French strategy and the reform of our European strategy".

"We need to speed up our breakthrough innovations," the French President said, citing the need to "explore" fusion technology as well as the development of small nuclear reactors (SMR) such as EDF's Nuward project.

"In addition to SMRs, which we have promoted extensively, fusion and superconducting magnets will be two vertical areas that we will strongly promote with France 2030 and on which I want us to redouble our efforts," Macron announced.

<https://www.euractiv.com/section/energy/news/france-unveils-plan-to-up-investments-in-nuclear-fusion-natural-hydrogen/>

Nuclear bosses accuse SNP minister of spreading 'shocking' falsehoods

Telegraph, December 13, 2023

Nuclear bosses have accused the SNP's energy secretary of spreading "shocking" falsehoods about the industry as the Cop28 summit backed "accelerating" the energy source to reduce the world's climate emissions.

<https://www.telegraph.co.uk/news/2023/12/13/nuclear-bosses-accuse-snp-minister-of-spreading-falsehoods/>

Europe / Bloc 'Needs New Strategy' On Russian Nuclear Fuel, But Investment Required

Nucnet, December 13, 2023

As demand for new nuclear power in Europe increases, the pressure for

alternatives to Russian nuclear fuel for VVER reactors is also increasing, nuclear power executives said at a London conference.

The increased demand for advanced and small modular reactors across Europe over the next five to 10 years also points to the need for a new global strategy for diversified fuel supply from companies like Urenco, Westinghouse and Framatome, which have the potential to produce sufficient amounts of nuclear fuel for the European industry, according to their own estimates.

Debbie Breasley, director of government affairs at Urenco, said that “some companies self-sanction, but there is no fuel tender yet that specifically excludes Russia. Seeing more and more tenders that specify no Russian fuel might be the next step.”

<https://www.nucnet.org/news/europe-bloc-needs-new-strategy-on-russian-nuclear-fuel-but-investment-required-12-3-2023>

COP28 deal – Reactions from Germany and Europe

Clean Energy Wire, December 13, 2023

German and European politicians, scientists, businesses and civil society have overwhelmingly welcomed the key message of this year’s UN climate change conference COP28 in Dubai: the agreement to “transition away” from fossil fuels. The German government said the deal sends the historic signal that international cooperation is still possible in times of geopolitical tensions. While researchers pointed out that the agreement was still insufficient to tackle the climate crisis, politicians and industry emphasised that it should send a signal to the market that the future is not in fossil fuels. But NGOs and activists criticised that the final text leaves too much wriggle room for the continued use of fossil fuels, and is too vague on other topics.

<https://www.cleanenergywire.org/news/cop28-deal-reactions-germany-and-europe>

Tractebel, Laurentis Energy and Hatch join forces on SMRs

Nuclear Engineering International, December 13, 2023

Energy services provider Laurentis Energy Partners is joining forces with global engineering & consulting company Tractebel, and global management, consulting & engineering services company Hatch to develop a one-stop shop to support industrial small modular reactor (SMR) clients worldwide. The three companies will leverage their combined skills, expertise, and experience to support clients looking to develop SMR projects. The partnership approach aims to help streamline processes, significantly reducing risks, and ensuring lessons learned are transferred from one project to the next. The alliance builds on Hatch and Tractebel’s previous cooperation agreement by including Laurentis, which has been leading the development of SMR projects across North America and Europe, forging partnerships with industry and other organisations.

<https://www.neimagazine.com/news/newstractebel-laurentis-energy-and-hatch-join-forces-on-smrs-11369804>

MEP urges swift action on Sellafield nuclear threat

Dublin People, December 14, 2023

Europe’s most hazardous nuclear site, Sellafield, holds 140 tons of plutonium and poses a significant threat to Ireland’s safety.

This is according to Fianna Fáil MEP for Dublin, Barry Andrews, who has expressed his unease with a threat posed by the Sellafield nuclear plant in the UK. The nuclear facility, which started operating in 2001, is located less than 100 miles off the east coast of Dublin. Andrews says that last Monday, December 11, at a plenary session of the European Parliament in Strasbourg, he called on the EU Commissioner for Energy, Kadri Simson, to use her office to engage with

UK counterparts and address the alarming findings reported recently in The Guardian newspaper. The investigation by The Guardian uncovered a myriad of issues, including cyber-attacks, vulnerability to sleeper malware, and a toxic workplace culture. The year-long probe emphasised the potential for “potentially significant consequences” if these problems persist.

<https://dublinpeople.com/news/dublin/articles/2023/12/14/mep-urges-swift-action-on-sellafield-nuclear-threat/>

Parliament backs EU push for small nuclear reactors

Euractiv, December 14, 2023

Tabled by Slovenian EPP MEP Franc Bogovič, the European Parliament’s initiative report on “small modular reactors” was adopted with 409 votes in favour, 173 against and 31 abstentions on Tuesday (12 December). “For the first time under this mandate, the European Parliament is voting in favour of a text that is 100% dedicated to nuclear energy”, said French centrist MEP and nuclear backer Christophe Grudler after the vote. Reacting on X, EU energy chief Kadri Simson said the European Commission “will continue close cooperation with the co-legislators to finalise in the nearest future the legislative initiatives relevant for SMR technology and nuclear power production at large”. In the report, the European Parliament acknowledges that “nuclear power can help to improve energy security in Europe” and offer “a possible means of achieving the Union’s energy and climate objectives”.

<https://www.euractiv.com/section/energy-environment/news/parliament-backs-eu-push-for-small-nuclear-reactors/>

SMR shortlist explored

Nuclear Engineering International, December 14, 2023

Six small modular reactor (SMR) designs have been selected to progress to the next stage of a UK competition that forms a key

part of government ambitions for up to a quarter of the country’s electricity to come from nuclear power by 2050. The designs chosen by Great British Nuclear – the government-backed body driving nuclear projects across the UK – are those considered most able to deliver operating reactors by the mid-2030s and support the UK’s ambitions to reach 24 GW of nuclear capacity by 2050. Gwen Parry-Jones, CEO of Great British Nuclear, explained: “Our priority in this process has been to prioritise reliable and sustainable power to the grid early, and that’s why we have focused our first step on the technologies that we viewed as most likely to meet the objective of a final investment decision in 2029.”

<https://www.neimagazine.com/features/featuresmr-shortlist-explored-11370078/>

EU clinches deal on electricity market reform, leaves options open for coal and nuclear

Euractiv, December 14, 2023

The European Union reached a political agreement on Thursday (14 December) to reform the bloc’s electricity market, ending months of protracted talks between the European Parliament and EU member states on how to finance new low-carbon generation capacity. “Today, the Council and the Parliament reached a provisional agreement to reform the EU’s electricity market design (EMD),” said a statement released by the presidency of the Council of the EU, currently held by Spain. The EU’s plans, tabled by the European Commission in March, are aimed at making the market less vulnerable to volatility and were presented as a response to Russia’s invasion of Ukraine, which sent energy prices spiralling for consumers and businesses last year.

<https://www.euractiv.com/section/electricity/news/eu-clinches-deal-on-electricity-market-reform-leaves-options-open-for-coal-and-nuclear/>

G. United States of America

The United States Joins Multinational Declaration to Triple Nuclear Energy Capacity by 2050 to Support Global Climate and Energy Security Goals

U.S. Department of State, December 2, 2023

Today, U.S. Special Presidential Envoy for Climate John Kerry joined leaders and ministers from four continents to announce the Declaration to Triple Nuclear Energy at the U.N. Climate Change Conference in Dubai, United Arab Emirates (COP28). The Declaration recognizes the key role of nuclear energy in achieving global net-zero greenhouse gas emissions by 2050 and keeping the 1.5-degree Celsius goal within reach. The Declaration also highlights the need for secure supply chains and encourages shareholders of the World Bank, international financial institutions, and regional development banks to include nuclear energy in their lending policies. Endorsing countries include Armenia, Bulgaria, Canada, Croatia, Czech Republic, Finland, France, Ghana, Hungary, Jamaica, Japan, Moldova, Mongolia, Morocco, The Netherlands, Poland, Republic of Korea, Romania, Slovakia, Slovenia, Sweden, Ukraine, United Arab Emirates, United Kingdom, and the United States.

<https://www.state.gov/the-united-states-joins-multinational-declaration-to-triple-nuclear-energy-capacity-by-2050-to-support-global-climate-and-energy-security-goals/>

Space Development Agency Providing Capability to Warfighters

U.S. Department of Defense, December 7, 2023

Derek M. Tournear, director of the Space Development Agency, or SDA, who is tasked in partnership with industry, with getting those satellites in orbit, spoke virtually today at a National Security Space Association event. SDA has two capabilities it promises to deliver to warfighters, he said. The first is beyond

line-of-sight targeting for moving targets, he said. For example, if there's a hostile ship or mobile missile launcher, it needs to be detected and tracked and a shooter needs to calculate a fire-control solution. It all needs to happen in near real time from space. The second capability is very similar to that of the first capability, but the targets are different. Instead of mobile missile launchers or ships, an adversary's hypersonic glide vehicle or advanced missile needs to be detected in flight and tracked, and a fire-control solution calculated and executed in near-real time, Tournear said.

<https://www.defense.gov/News/News-Stories/Article/Article/3611153/space-development-agency-providing-capability-to-warfighters/>

US nuclear start-ups battle funding challenge in race to curb emissions

Financial Times, December 12, 2023

US plans to build up its nuclear industry face big funding and regulatory challenges which could delay a new generation of smaller, more efficient reactors touted by advocates as critical to fighting climate change.

Industry experts told the Financial Times a declaration signed last week by Washington and 21 other nations at the COP 28 climate summit to triple the amount of installed nuclear energy by 2050 was a step forward, given the sector's ability to provide emissions-free power. But a sharp fall in market support for start-ups developing so-called small modular reactors and other advanced nuclear facilities threaten US ambitions, they said.

<https://www.ft.com/content/c0700a01-c1e8-4e5e-8300-ac264bd25293>

Taking stock of global nuclear output and potential

Reuters, December 13, 2023

More than 20 nations vowed to triple nuclear capacity by 2050 at the COP28

summit in Dubai last week, triggering renewed interest and financing in an industry that has been recently overshadowed by renewables in discussions about clean power development. However, in addition to the capacity pledge - signed by the U.S., France, South Korea and others - the nuclear sector also got a boost from a U.S.-led plan to promote and develop nuclear fusion, which has the “potential to revolutionize our world,” according to U.S. special climate envoy John Kerry. These high profile calls for more growth and investment in nuclear power contrast with the relatively subdued tone of the industry in recent years and the steady loss of nuclear’s share of the global electricity mix since 2000.

<https://www.reuters.com/business/energy/taking-stock-global-nuclear-output-potential-maguire-2023-12-13/>

DOD Prioritizing Cooperation With Allies in Space

U.S. Department of Defense, December 14, 2023

Cooperation among allies is critical as global competitors increasingly look to space as the next frontier of warfare, the Pentagon’s top space policy official said, yesterday. Dr. John F. Plumb, assistant secretary of defense for space policy, said space capabilities have become integral to everyday life and a crucial component underpinning the United States’ economic prosperity and national security.

“There is broad recognition that space capabilities are critical to overall military effectiveness,” Plumb said during a keynote speech at the Space Enterprise Council’s Global Space Summit in Washington, D.C.

<https://www.defense.gov/News/News-Stories/Article/Article/3617707/dod-prioritizing-cooperation-with-allies-in-space/>

US Approves New Kind of Nuclear Reactor for First Time in 50 Years

Bloomberg, December 15, 2023

For the first time in more than 50 years the US granted permission for a new type of

nuclear reactor, a sign regulators are becoming more open to different approaches to producing power from splitting the atom. California startup Kairos Power LLC received a construction permit from the Nuclear Regulatory Commission to build its Hermes demonstration reactor in Tennessee. While commercial reactors in use today are cooled by water, the Kairos technology uses molten fluoride salt as a coolant.

<https://www.bloomberg.com/news/articles/2023-12-13/us-approves-new-kind-of-nuclear-reactor-for-first-time-in-50-years>

US nuclear-fusion lab enters new era: achieving ‘ignition’ over and over

Nature, December 15, 2023

In December 2022, after more than a decade of effort and frustration, scientists at the US National Ignition Facility (NIF) announced that they had set a world record by producing a fusion reaction that released more energy than it consumed – a phenomenon known as ignition. They have now proved that the feat was no accident by replicating it again and again, and the administration of US President Joe Biden is looking to build on this success by establishing a trio of US research centres to help advance the science. The stadium-sized laser facility, housed at the Lawrence Livermore National Laboratory (LLNL) in California, has unequivocally achieved its goal of ignition in four out of its last six attempts, creating a reaction that generates pressures and temperatures greater than those that occur inside the Sun.

“I’m feeling pretty good,” says Richard Town, a physicist who heads the lab’s inertial-confinement fusion science programme at the LLNL. “I think we should all be proud of the achievement.”

<https://www.nature.com/articles/d41586-023-04045-8>

West Asia

H. Iran

Iran space industry on right track: minister

Tehran Times, December 1, 2023

Iran's Minister of Information and Communication Technology, Issa Zarepour, has highlighted the positive trajectory of the country's space industry. The 10-year development document for the space industry, approved last year, outlines plan for satellite construction, infrastructure, ground station, and launches. Zarepour mentioned progress in stabilizing launchers and building satellites, anticipating the launch of five satellites by the end of the year. He emphasized the coordination of space activities by the Supermen Space Council and expressed confidence in Iran achieving its rightful status through empathy, coordination, and cooperation.

<https://www.tehrantimes.com/news/492039/Iran-space-industry-on-right-track-minister>

Iran rebuts European claims on Fattah-2 missile development

Tehran Times, December 1, 2023

Iran's Foreign Ministry spokesman, Nasser Kanaani, dismissed recent statements from France, Germany, and the UK regarding Iran's Faattah-2 missile program. He caeled the European claims misleading, politically motivated, and lacking legal grounding. Iran insistes its missile program is for peaceful purposes and aligns wih international law. Kanaani urges fair dialogue, emphasizing Iran's commitment to peaceful and defensive measures. He clarified that, according to the 2015 nuclear deal timetable, all missile restrictions on Iran should have been lifted by October 17, 2023. The European allies' sanctions, citing Iran's noncompliance, include restrictions on ballistic missile development and asset freezes linked to nuclear and missile programs.

<https://www.tehrantimes.com/news/492036/Iran-rebuts-European-claims-on-Fattah-2-missile-development>

Iranian Navy pursuing defense diplomacy at highest level: Navy chief

Tehran Times, December 1, 2023

Iran's Navy Chief, Rear Admiral Shahram Irani, emphasizes the significance of defense diplomacy and international relations. The Iranian Navy's progress, attributed to diplomatic knowledge and human resources, is showcased in the Caspian Sea with the Deylaman destroyer. Admiral Irani highlights global flag presence, mentioning security efforts in the Gulf of Aden and Red Sea. He praises Iranian youth for contributing to national strength and emphasizes the Navy's role in securing the sea-based economy.

<https://www.tehrantimes.com/news/492038/Iranian-Navy-pursuing-defense-diplomacy-at-highest-level-Navy>

Emphasizing the resumption of nuclear negotiations

Tehran Times, December 2, 2023

In recent commentaries, Shargh addressed Rafael Grossi's call for nuclear negotiations, emphasizing the failure of Iranophobic efforts and political propaganda against Iran's peaceful nuclear program. Grossi urged a minimum international consensus, stating JCPOA framework might not be sufficient. Iran, having fulfilled commitments post-US withdrawal, faces claims based on questionable Israeli documents. Meanwhile, Iran newspaper discussed de-Americanization in the region. Ham Mihan analysed Iran's stance on Gaza war, highlighting controlled tensions with the U.S. and Israel. Arman-e-Melli covered the British Royal Navy's deployment, rejected by Iran, citing it as a security measure against a perceived unstable world.

<https://www.tehrantimes.com/news/492073/Emphasizing-the-resumption-of-nuclear-negotiations>

Iran builds drones for underwater operations.

Tehran Times, December 2, 2023

The Islamic Republic of Iran Navy showcased a range of locally designed and produced naval technologies, including a remotely operated vehicle (ROV) capable of independent naval activities and a vertical take-off and landing (VTOL) drone named Chamroshp-4. The drone, equipped with cost-effective technology, can operate on navy warship decks and perform designated duties. The ROV demonstrated the capability to identify, locate, and detonate naval mines, offering mine clearance support. An Iranian-made UUV with a 24-hour endurance and 200-meter descent capacity was also exhibited. The event featured seaborne weaponry, anti-ship missile systems, electronic warfare, and surveillance systems. Notable officials, including Army Commander Major General Abdolrahim Mousavi and Navy Commander Rear Admiral Shahram Irani, attended the exhibition, showcasing Iran's progress in defense capabilities despite sanctions. President Ebrahim Raisi emphasized self-sufficiency and border defense during the delivery of strategic missiles.

<https://www.tehrantimes.com/news/492075/Iran-builds-drones-for-underwater-operations>

Iran, Russia, China to stage joint naval drill in Persian Gulf

Tehran Times, December 2, 2023

Naval forces from Iran, Russia, and China are preparing for joint maritime exercises in the Persian Gulf as part of the 2024 Marine Security Belt naval war game, announced by Iranian Navy Commander Rear Admiral Shahram Irani. Military divisions will participate with observers invited from Pakistan, Brazil, Oman, India, South Africa, and Caspian Sea littoral states. The main phase will launch in Jask during the Ten-Day Dawn celebrations, featuring heavy-lift vessels deployed by the end of the Iranian calendar year in March 2024. Plans for an expanded maritime zone in Konark were discussed, and optimism surrounds the

Caspian Sea littoral states' response to the new 1,200-ton Daylaman destroyer, aimed at boosting Iran's commercial sector and showcasing military self-sufficiency.

<https://www.tehrantimes.com/news/492080/Iran-Russia-China-to-stage-joint-naval-drill-in-Persian-Gulf>

A powerful military alliance of Iran, Russia, China is being formed

Tehran Times, December 3, 2023

Kayhan's analysis delves into the upcoming joint military manoeuvres of Iran, Russia, and China in the Persian Gulf, characterizing their defence cooperation as a formidable military alliance and potentially forming a new anti-NATO coalition. The Iran newspaper addresses U.S. and Israel's provocation actions, highlighting resistance group's independent operations against American military bases while emphasizing Iran's non-involvement. Javan underscores the importance of de-escalation with Iran, suggesting a grand deal involving Saudi Arabia and regional cooperation. Hamshahri criticizes the West's hypocrisy, pointing out its focus on Iran's nuclear program amid Israel's military actions in Gaza, questioning the true motives behind diverting attention from the tragic events in Gaza.

<https://www.tehrantimes.com/news/492128/A-powerful-military-alliance-of-Iran-Russia-and-China-is-being>

Iran's Military Chief Calls on Iraq to fully Disarm Terrorists Along Common Borders

Fars News Agency, December 4, 2023

The Iranian Armed Forces, particularly the Islamic Revolution Guards Corps (IRGC), have conducted military operations against what they term as terrorist groups in Iraq's Kurdistan region. These actions were taken after armed teams linked with Kurdish terrorist groups illegally entered Iranian border cities. The operations aim

to eliminate anti-Iran separatist and terrorist outfits along the Northwestern border. The IRGC has warned of continued attacks until these groups surrender. The Iranian government has reached a security pact with Iraq to disarm and relocate such groups.

<https://www.farsnews.ir/en/news/14020913000227/Iran's-Military-Chief-Calls-n-Ira-Filly-Disarm-Terriss-Alng-Cmmn>

Iranian Navy chief in Baku to strengthen military links

Tehran Times, December 5, 2023

Rear Admiral Shahram Irani, Commander of the Iranian Navy, visited Azerbaijan to discuss strategies for enhancing military cooperation between the two nations. This follows a meeting of the Iran-Azerbaijan Joint Military Commission held in Baku in September. In August, Chief of Staff of the Iranian Armed Forces Major General Mohammad Hossein Baqeri praised the growing collaboration between the armed forces of Iran and Azerbaijan during a phone conversation with Azeri Defense Minister Colonel General Zakir Hasanov. The recent visit underscores the commitment to regional peace and security through cooperation between neighbouring countries. In a diplomatic exchange on November 18, both nations emphasized the importance of regional dialogue without the intervention of trans-regional countries.

<https://www.tehrantimes.com/news/492203/Iranian-Navy-chief-in-Baku-to-strengthen-military-links>

Iran successfully launches new bio-space capsule

Tehran Times, December 6, 2023

Iran achieved a significant milestone in its space program by successfully launching a 500-kilogram bio-space capsule into orbit. Launched 130 kilometres from Earth's surface, the capsule, developed by Iran's Aerospace Research Institute, aims to test various space technologies crucial for human missions. The indigenous launcher, named Salman, showcases advanced features in propulsion, aerodynamics, and control

fields. Suborbital tests of the bio-capsule are forthcoming, bringing Iran closer to its goal of sending humans into space. Despite Western sanctions, Iran continues to make substantial progress in its civilian space program.

<https://irannewsdaily.com/2023/12/iran-successfully-launches-new-bio-space-capsule/>

Iran integrates Karrar Drones into Army's Air Defense Force

Tehran Times, December 10, 2023

Iran achieves a major milestone with the integration of home-grown Karrar drones armed with air-to-air Majid missiles into its Army's Air Defense Force. The unveiling, led by Major General Seyyed Abdolrahim Mouvasi, marks a groundbreaking advancement for national defense capabilities. Brigadier General Alireza Sabahifard applauds the drones' deployment success, highlighting their economic advantages over manned aircraft. Recent exercises demonstrate the drones' exceptional tracking, interception, and destruction capabilities at a significantly lower cost, establishing Iran's global prominence in drone technology and showcasing military self-sufficiency.

<https://www.tehrantimes.com/news/492396/Iran-integrates-Karrar-Drones-into-Army-s-Air-Defense-Force>

IRGC Ground Force holds extensive drill in western Iran

Tehran Times, December 11, 2023

The IRGC Ground Force conducted a comprehensive drill along the Kermanshah border, focusing on countering anti-Iran terrorist plots. The exercise included electronic warfare training, testing indigenous radar and communication systems, and precise reconnaissance operations. Heliborne operations showcased the effectiveness of sophisticated weaponry. Brigadier General Mohammad Pakpour highlighted the need for a coordinated response to security threats, while Brigadier General Ali Shadmani addressed challenges from the

U.S., emphasizing Iran's commitment to defending its borders. The drill also featured public assistance initiatives, contributing to regional peace and tranquillity.

<https://www.tehrantimes.com/news/4922411/IRGC-Ground-Force-holds-extensive-drill-in-western-Iran>

Mass production of Yasin jet to kick off soon: defense chief

Tehran Times, December 12,2023

Iran's Defense Minister, Brigadier General Mohammad Reza Ashtiyani, visited Yasin jet's flight test stages, announcing the imminent mass production of this jet trainer fully supported by the Ministry of Defense. The Yasin's primary mission is to enhance pilot training, reducing duration and elevating quality. General Ashtiyani emphasized the significance of improving pilot training for mastery of various fighter planes and highlighted that Yasin-trained pilots would be proficient in flying new-generation fighters. The Yasin aircraft is equipped to use weapons with optical and thermal guidance, particularly in close air support missions.

<https://www.tehrantimes.com/news/492487/Mass-production-of-Yasin-jet-to-kick-off-soon-defense-chief>

Iran to produce domestically developed helicopters: Defense Minister

Tehran Times, December 13,2023

Iran's Defense Minister, Brigadier General Mohammad-Reza Ashtiani, announced the start of homegrown helicopter production at Iran Aircraft Manufacturing Industrial Company (HESA). He also discussed the replacement of G3 rifles with advanced Masaf rifles, emphasizing the Ministry of Defense's role in creating weapons. Ashtiani highlighted the significance of Yasin jet trainers for training and combat missions, including close air support. Ongoing efforts were mentioned for homegrown hypersonic ballistic missiles, with upgraded and new systems gradually being revealed. These advancements underscore Iran's

commitment to enhancing national defense capabilities, with a firm stance on the non-negotiable nature of defense capabilities in diplomatic discussions.

<https://www.tehrantimes.com/news/492538/Iran-to-produce-domestically-developed-helicopters-Defense-Minister>

Iran's Defense Ministry advances 'Sarir' satellite launcher for space exploration program

Tehran Times, December 13,2023

Iran's Defense Ministry aims for a significant stride in space exploration with the 'Sarir' satellite launcher, targeting geostationary orbit. Spokesperson Ahmad Hosseini Mounes highlighted Sarir's completed design and ongoing subsystem construction, emphasizing the Defense Ministry's pivotal role in space technology development and engineering self-sufficiency. Differentiating between Simorgh and Salman launchers, he revealed a directive for the next launcher to carry a 1.5-ton payload. Hosseini Mounes outlined Sarir's capabilities for geostationary orbit and stressed the importance of coherent space governance under the Supreme Space Council. He also noted strategic developments in launch bases, including the Imam Khomeini Spaceport, and plans for a Chabahar base.

<https://www.tehrantimes.com/news/492525/Iran-s-Defense-Ministry-advances-Sarir-satellite-launcher-for>

Iran dismisses U.S. foolish plans to launch naval task force in Red Sea

Tehran Times, December 15,2023

Iran's Defense Minister, Brigadier General Mohammad Reza Ashtiani, rejects U.S. plans for Red Sea marine task force, deeming it "foolish" and warning of complications. This follows Yemeni attacks on ships, promoting the Pentagon's consideration of a maritime task force. Ashtiani emphasizes there's no space for foreign presence in the region and expresses confidence that the U.S.

would not engage in such actions. Yemen's Ansarullah resistance mentions having "stinging" pressure leverages. Iran's Foreign Ministry rejects British accusations related to Red Sea attacks, labelling them baseless and politically motivated.

<https://www.tehrantimes.com/news/492570/Iran-dismisses-U-S-foolish-plans-to-launch-naval-task-force>

I. Iraq

Iraq, France discusses the development of combat capabilities

Iraqi News Agency, December 12, 2023

Lieutenant General Qais al-Mohammadawi, JOC deputy commander, discussed combat capabilities with the Lieutenant General Pierre Schell, Chief of Staff of French Land Forces. They emphasized joint French-Iraqi cooperation in training and combat preparations, acknowledging Iraq's progress and victories against territories. The French official praised Iraq's development and expressed support, concluding the meeting with appreciation for French forces' contribution to Iraq's security victories.

<https://ina.iq/eng/30542-iraq-france-military-talks-to-develop-combat-capabilities.html>

J. Israel

IAI in joint venture with Germany's FFG for land sector products

Israel Defense, December 3, 2023

Israel Aerospace Industries (IAI) has entered a partnership with German FFG Flensburg Fahrzeugbau Gesellschaft to establish a joint venture named FTS (Flensburg Technology Systems). The new company aims to develop and promote land sector products, focusing on the fusion of FFG's vehicle systems with IAI's expertise in areas such as robotics, autonomous capabilities, artificial intelligence, digitalization, networks, radar, SIGINT, electronic warfare, and situational awareness. FFG is recognized for its specialization in vehicle maintenance, repair, overhaul, and development, particularly in tracked armoured personnel carriers and combat support engineering

vehicles for both civilian and military applications.

<https://www.israeldefense.co.il/en/node/60480>

Indian Special Forces uses SmartShooter's SMASH X4 sight

Israel Defense, December 3, 2023

SMARTSHOOTER's SMASH X4 sight, enhancing small arms' accuracy, is used by the special forces of the Indian Army's 15 Corps in Srinagar. The SMASH X4, with a 4x magnifying optic scope and unique fire control capabilities, extends detection and lethality ranges. The Indian Navy, in 2020-21, procured SMASH 2000 rifle sights from SMARTSHOOTER for protection against drone attacks, highlighting the effectiveness of SMARTSHOOTER's technologies in improving operational shooting accuracy.

<https://www.israeldefense.co.il/en/node/60482>

IDF Allocates Millions for continued procurement of JLTV Light Tactical Vehicles

Israel Defense, December 4, 2023

The IDF continues its procurement of JLTV light tactical vehicles, with Oshkosh Defense receiving a second order from the Israeli Ministry of Defense for dozens more JLTVs. The initial order of 75 vehicles, valued at over \$21 million, was part of the US State Department's Foreign Military Sale program. Oshkosh Defense recently secured orders totalling \$209 million for JLTVs, trailers, and kits for the US Army, USMC, and USAF, followed by a \$160 million order for several countries, marking a successful month for the company.

<https://www.israeldefense.co.il/en/node/60493>

Hundreds of Emtan "Ramon" Pistols sold to Peruvian Police

Israel Defense, December 4, 2023

Israeli small arms manufacturer Emtan is expanding its presence in South America, securing a \$472.5 million contract with

Peru's Joint Command of the Armed Forces to supply 540 9x19 Ramond pistols for the National Police. This follows Emtan's summer deal with the Ecuadorian Police for 1,752 MZ-4P assault rifles and 30 MZ10 sniper rifles worth \$4.5 million. The company, known for providing firearms to various Latin American countries, expressed its commitment to delivering high-quality weapons to government agencies globally. The Peruvian army conducted pre-acceptance exams on the Ramon pistols based on the NATO AC225 standard.

<https://www.israeldefense.co.il/en/node/60498>

In the shadow of combat: How the IDF artillery corps operates in Gaza

I24 News, December 5, 2023

The Israel Defense Forces (IDF) provided insights into its artillery operations in the Gaza Strip during an expanded ground offensive following a temporary truce. The IDF emphasized the crucial role of artillery in advancing ground operations, particularly in urban combat scenarios like Sheyaja in Gaza City. The report highlighted instances where artillery played a pivotal role, such as massive shelling targeting terrorists to support ground forces. One incident involved the 282nd fire brigade aiding the Golani brigade in carrying out an attack mission. Another highlighted the 215th fire brigade assisting the Givati brigade caught in an ambush, firing hundreds of shells to rescue troops and eliminate terrorists. The IDF revealed firing over 100,000 shells during the ground offensive.

<https://www.i24news.to/en/news/israel/defense/1701765571-in-shadow-of-combat-how-idf-artillery-operates-in-gaza>

Gilat Wins U.S. Army Contract to Sustain Satellite Connectivity

Israel Defence, December 6, 2023

Gilat Satellite Networks, an Israel provider of satellite-based broadband communications, has been awarded a nearly \$20 million contract by the U.S. Army through its U.S. based subsidiary, Wavestream. The contract aims to sustain

anytime, anywhere satellite connectivity, utilizing Wavestream's ruggedized solid-waste power amplifier (SSPA). Designed to withstand challenging environments, the SSPA supports satellite transportable terminals, providing a reliable "Communications-on-the-Pause" solution for diverse climates globally. Bob Hauffman, Wavestream's General Manager and Gilat's Senior VP, emphasized the field-proven performance of the Wavestream 50 W ka SSPA in meeting the Army's communication needs for war fights in harsh environments.

<https://www.israeldefense.co.il/en/node/60526>

Israeli Navy Launches first Shaldag MK5 Vessel

Israel Defense, December 10, 2023

Israel Shipyards has launched the first MK5 patrol ship for the Israeli Navy, part of a four-vessel deal valued at approximately NIS 100 million for coastal defense. The Shaldag MK5 vessels, known for their speed and versatility, are in demand globally, with recent shipments to the Philippines marking the fifth and sixth vessels in an \$145 million, eight-vessel deal. In 2020, Israel SShipyards supplied a Shaldag MK5 to the Senegalese Navy as part of a broader agreement. The Israeli Ministry of Defense's procurement plan aligns with ongoing efforts to enhance coastal defense capabilities.

<https://www.israeldefense.co.il/en/node/60550>

Good News for the Israeli Defense Industries: Australia to Purchase 129 Redback IFVs

Israel Defense, December 11, 2023

Australia has signed a \$2.6 billion agreement with South Korean company Hanwha Defense to acquire 129 RedBack infantry fighting vehicles (IFVs) for the Australian army. The production of these IFVs will occur in Australia, with delivery scheduled for 2027-28. The RedBack, part of the LAND 400 program, incorporates various Israeli systems, including Rafael's Spike anti-tank missile launchers, Elbit's

Iron Fist active protection system, MT30 Mk2 turret, and Electro-optic devices, along with Plasan's armor protection. This development signifies a significant win for Israeli defense industries, contributing to the RedBack's advanced capabilities.

<https://www.israeldefense.co.il/en/node/60564#>

K. Kuwait

Saab to supply Double Eagle underwater Mine disposal Drone to Kuwait

The Defense Post, December 13, 2023

Saab clinches a deal to supply Kuwait Naval Force with a Double Eagle undersea mine disposal drone under the US Navy's foreign military sales program. The Semi-Autonomous Remotely Operated Vehicle (SAROV) will handle detection, classification, and identification in anti-mine operations. Development and production will occur in Linköping, Sweden, with Saab's Autonomous and Undersea Division in Rhode Island contributing components. The SAROV variant provides versatility for underwater tasks, contributing to enhance mine disposal capabilities.

<https://www.thedefensepost.com/2023/12/13/kuwait-double-eagle-underwater-drone-saab/>

L. Oman

Strait of Hormuz: Iran and Oman's joint sea exercise

FSI and Security, December 1, 2023

Iran and Oman conducted a joint maritime rescue and relief drill in the northern Indian Ocean and the Strait of Hormuz to enhance combat readiness. The exercise involved the Iranian Army's naval wing, IRGC naval forces, and the Omani Navy, showcasing coordination and capabilities. Iranian-made destroyers, helicopters, drones, and reconnaissance aircraft were deployed. Plans for further naval collaboration were announced, including joint exercises with international forces and a naval war game in the Indian Ocean. The Iran-Oman alliance

extends beyond the military, with Oman mediating to ease tensions in the region.

<https://www.defsecme.com/defence/sea/strait-of-hormuz-iran-and-omans-joint-sea-exercise>

M. Qatar

Chief of Staff takes part in Islamic Military Counter-Terrorism coalition meeting

Gulf Times, December 13, 2023

Qatar's Chief of Staff, Lieutenant-General Salem bin Hamad bin Aqeel al-Nabit, recently attended the second Chiefs of Staff meeting of the Islamic Military Counter Terrorism Coalition in Riyadh. The meeting focused on strengthening the coalition's counter-terrorism initiatives and contributing to international peace and security.

<https://www.gulf-times.com/article/673557/qatar/chief-of-staff-takes-part-in-islamic-military-counter-terrorism-coalition-meeting>

N. Saudi Arabia

Defense minister inaugurates HMS Jazan in Jeddah

Saudi Gazette, December 5, 2023

Saudi Defense Minister Prince Khalid bin Salman inaugurates 'His Majesty's Ship Jazan,' the fourth vessel of the Sarawat project, at King Faisal Naval Base in Jeddah. This marks the first ship under the Sarawat project to complete system construction and acceptance trials on Saudi lands and waters. The ship's defensive capabilities, including the "Hazm" battle management system, were localized, reflecting the Kingdom's Vision 2030. All ships in the Sarawat project feature a 100 percent Saudi battle management system. The ceremony was attended by senior Saudi and Spanish officials, emphasizing the collaborative nature of the project.

<https://www.saudigazette.com.sa/article/638371/SAUDI-ARABIA/Defense-minister-inaugurates-HSM-Jazan-in-Jeddah>

Defense minister and US counterpart discuss defense cooperation

Saudi Gazette, December 7, 2023

Ministry of Defense Prince Khalid bin Salman received a phone call from US Secretary of Defense Lloyd Austin. They discussed enhancing bilateral relations in defense, addressing current regional and international developments, and collaborative efforts to address challenges.

<https://www.saudigazette.com.sa/article/638490/Saudi-Arabia/Defense-minister-and-US-counterpart-discuss-defense-cooperation>

Dassault CEO talks Saudi interest in Rafale, takes a shot at F-35 and reveals FCAS details

Breaking Defense, December 14, 2023

Dassault CEO Eric Trappier confirms Saudi negotiations for 54 Rafale aircraft and plans for a Rafale deal with India for 26 navy jets. Trappier emphasizes the independent nature of the Saudi request amid regional conflicts, questions F-35 interoperability, and discusses ongoing projects. Dassault is working on the F5 version for the French Air Force in 2030 and provides insights into the Future Combat Air System (FCAS) project, highlighting the need for a compromise between aerodynamic and stealth. The navy's NGF version will match the air force design, adapted for carrier landings. Trappier also discusses aircraft needs in state-against-state conflicts and ongoing competition with Airbus for a French procurement agency contract. Dassault offers the Falcon 10X, emphasizing experience and collaboration with Thales.

<https://breakingdefense.com/2023/12/dassault-ceo-talks-saudi-interest-in-rafale-takes-a-shot-at-f-35-and-reveals-fcas-details/>

SAMI, Embraer to co-operate on C-390 for Saudi Arabia

World Defense Show, December 14, 2023

Saudi Arabian Military Industries (SAMI) and Embraer have signed an MOU to

promote the C-390 Millennium transport aircraft in Saudi Arabia. The collaboration seeks to expand both companies' operational presence in Saudi Arabia, emphasizing the C-390's capabilities and supporting the kingdom's Ministry of Defense. SAMI and Embraer will explore maintenance capabilities, a Regional Maintenance, Repair, and Overhaul (MRO) Hub, a final assembly line for the C-390, and mission system integration in Saudi Arabia, aligning with the Saudi Vision 2030 initiative.

<https://www.worlddefenseshow.com/media/news/article-list/sami-embraer-to-co-operate-on-c-390-for-saudi-arabia/>

O. United Arab Emirates

World leaders declare support for tripling global nuclear capacity to reach net zero

Khaleej Times, December 3, 2023

World leaders at COP28 endorsed the "Declaration to Triple Nuclear Energy Capacity by 2050," emphasizing nuclear power's role in achieving net-zero emissions. Heads of State from nine countries supported the initiative, recognizing nuclear energy as a clean and reliable source. The declaration encourages partnerships and innovations for substantial expansion, addressing the importance of decarbonizing energy systems in combating climate change. The ceremony occurred at the Rove Hotel in Dubai, acknowledging expert analyses and aiming to meet global climate goals.

<https://www.khaleejtimes.com/business/energy/world-leaders-declare-support-for-tripling-global-nuclear-capacity-to-reach-new-zero>

ENEC to evaluate deployment of SMRs and micro-reactors

World Nuclear News, December 5, 2023

Following the launch of a programme aimed at leveraging its experience in successfully delivering a nuclear power plant project, the UAE's Emirates Nuclear Energy Corporation (ENEC) has signed a

number of agreements with small modular reactor and micro-reactor vendors to explore opportunities for the commercialisation and global deployment of their designs. ENEC said its ADVANCE programme - launched on 30 November - is "provisioned to strengthen the UAE's position as a leading nation in delivering climate action by accelerating the global clean energy transition to Net Zero".

The programme will evaluate the latest technologies in the advanced, small modular reactor (SMR) and microreactor categories. In doing so, ENEC will then work with national stakeholders to determine deployment pathways, and with international partners for both technology and project collaboration opportunities.

<https://www.world-nuclear-news.org/Articles/ENEC-to-evaluate-deployment-of-SMRs-and-microreact>

Nuclear's New Wave of Popularity Has to Overcome Age, Economics

Bloomberg, December 6, 2023

Amid rising public acceptance and political commitments for nuclear energy, analysts have a message for industry advocates: temper your enthusiasm.

Countries that pledged this month in Dubai to triple nuclear generation by 2050 face an uphill battle that is likely to leave them short of their goal, scientists and energy researchers wrote in their annual World Nuclear Industry Status Report, released Wednesday.

<https://www.bloomberg.com/news/articles/2023-12-06/nuclear-s-new-wave-of-popularity-has-to-overcome-age-economics>

US OKs \$582M Spy plane upgrade for Saudi, \$85M Radar for UAE

The Defense Post, December 7, 2023

The US State Department approved \$582 million for upgrading Saudi Arabia's RE-3A surveillance aircraft, enhancing mission readiness. The package includes GPS security devices, communication intelligence sensors, and an identification friends-or-foe

system. It aims to improve patrol capabilities, counter regional threats, and enhance interoperability. Additionally, the UAE received clearance for an \$85 million deal to purchase AN/TPQ-50 radar, reinforcing military installations against artillery and drone threats.

<https://www.thedefensepost.com/2023/12/07/us-spy-plane-saudi/>

UAE announces first women in Nuclear Middle East chapter

Khaleej Times, December 8, 2023

The UAE has unveiled the first Women in Nuclear Middle East chapter, making a significant step in promoting gender diversity and inclusion in the nuclear industry. The initiative aims to empower women professionals, foster collaboration, and advance opportunities in nuclear-related fields in the Middle East.

<https://www.khaleejtimes.com/uae/uae-announces-first-women-in-nuclear-middle-east-chapter>

P. Türkiye

Türkiye issues permission to commission 1st power unit of Russian-built nuclear power plant

Xinhua, December 12, 2023

Türkiye's Akkuyu Nuclear Company announced Tuesday that it had received permission from Turkish authorities to commission the first power unit of the country's first nuclear power plant being built by Russia.

With the permission, the start-up, adjustment and operation processes, which are the final phase of the construction of the Akkuyu Nuclear Power Plant, can be started, according to a statement from the company.

The next stage is to obtain a license to operate the first power unit, which will allow them to begin loading nuclear fuel into the reactor and begin pre-launch control operations, said the statement.

“Currently, Akkuyu nuclear specialists continue to develop technical documentation for applying for a license,” said the statement.

<https://english.news.cn/europe/20231212/cee74e56062347de9fa3f62bcf7ef00d/c.html>

Q. Yemen

Commercial ships hit by missiles in Houthi attacks in Red Sea, US warship downs 3 drones

Arab News, December 3, 2023

Three commercial ships in the Red Sea were struck by ballistic missiles fired from Houthi-controlled Yemen and a US warship shot down three drones in self-defense during the assault. Houthi rebels, backed by Iran took the responsibility. The attack marked an escalation in a series of maritime attacks in the Middle east linked to Israel-Hamas war, as multiple vessels found themselves found themselves in the crosshairs of a single Houthi assault for the first time in the conflict.

<https://www.arabnews.com/node/2419476/middle-east>

Yemen’s Houthis say they launched ballistic missiles at Israel

Arab News, December 7, 2023

Yemen’s Houthi group targeted military posts in Eilat with ballistic missiles, according to their spokesperson. A US destroyer intercepted a drone from Houthi-controlled Yemen, with no reported injuries or damage. This marks the sixth incident in the Red Sea since the Israel-Hamas conflict began on Oct. 7. Houthi vows to continue operations against Israel and restrict its ships in support of Palestinians. Global concerns rise as commercial vessels face attacks, prompting warnings from UKMTO. Pentagon suggests Houthi strikes may not specifically target US warships. The situation unfolds amid heightened tensions in the region.

<https://www.arabnews.com/node/2421491/middle-east>

Yemeni coastguard on high alert to counter Houthi attacks

Arab News, December 13, 2023

Houthi rebels intensify attacks on Red Sea ships bound for Israel, prompting Human Rights Watch to accuse them of war crimes for seizing civilian vessels. Yemen’s government, anticipating Houthi actions under an anti-Israel pretext, puts its Red Sea coastguard on high alert. VP Tareq Mohammed Saleh warns of the threat from Iran-backed groups, while Houthi official Mohammed Al-Bukhaiti vows retaliation against those hindering attacks on Israeli ships. The situation is tense, with international calls for support to Yemen’s coastguard. Yemen denies a reported US offer for coalition support, and Human Rights Watch urges the release of the Galaxy Leader ship’s crew, emphasizing the imperative for peace. Stay tuned for updates on this unfolding Red Sea crisis.

<https://www.arabnews.com/node/2424986/middle-east>

Suspected Houthi missiles target commercial ships in the Red Sea

Arab News, December 15, 2023

Houthi rebels issued warnings for cargo ships to avoid routes towards occupied Palestinian territories in the Red Sea. A ballistic missile from rebel-held Yemen targeted the Liberian-flagged cargo ship MSC Palatium III, following an earlier assault on the Al-Jasrah. The attacks, linked to the Israel-Hamas conflict, raise international concerns. Hapag-Lloyd’s Al-Jasrah suffered a projectile hit, causing a fire on deck. UKMTO confirmed the incidents, urging caution. Houthi missile assaults on Red Sea shipping have surged, with vessels narrowly escaping in recent days. The strategic Bab El-Mandeb Strait faces increased risk, impacting global shipping routes. Stay tuned for updates on this evolving situation.

<https://www.arabnews.com/node/2426206/middle-east>

R. East Asia

EU and Japan celebrate start of operations of the JT-60SA fusion reactor and reaffirm close cooperation on fusion energy

European Commission, December 1, 2023

The EU and Japan have today marked the start of operations of the biggest and most advanced tokamak-type fusion reactor in the world - JT-60SA located in Ibaraki Prefecture, Japan. At an inauguration ceremony in Naka, the EU's Commissioner for Energy Kadri Simson and Japan's Minister of Education, Culture, Sports, Science and Technology (MEXT) Mr. Masahito Moriyama reaffirmed their long-standing cooperation in the field of fusion energy, supporting the international effort to develop fusion energy, including through the ITER project and the Broader Approach activities. Both sides underlined their support for the operation and technical upgrades of JT-60SA to continue producing groundbreaking research results, useful for ITER and for designing and constructing the fusion reactors of the future.

https://energy.ec.europa.eu/news/eu-and-japan-celebrate-start-operations-jt-60sa-fusion-reactor-and-reaffirm-close-cooperation-fusion-2023-12-01_en

World's biggest experimental nuclear fusion reactor launched in Japan

The Guardian, December 1, 2023

The world's biggest operational experimental nuclear fusion reactor - a technology in its infancy but billed by some as the answer to humanity's future energy needs - has been inaugurated in Naka, Japan. Fusion differs from fission, the technique used in nuclear power plants, by fusing two atomic nuclei instead of splitting one. The goal of the JT-60SA reactor is to investigate the feasibility of fusion as a safe, large-scale and carbon-free source of net energy - with more energy generated than is put into producing it.

The six-storey-high machine, in a hangar in Naka, north of Tokyo, comprises a doughnut-shaped "tokamak" vessel set to contain swirling plasma heated to 200 million degrees celsius.

<https://www.theguardian.com/world/2023/dec/01/worlds-biggest-experimental-nuclear-fusion-reactor-launched-in-japan>

KHNP touts i-SMR to international audience

World Nuclear News, December 4, 2023

Korea Hydro & Nuclear Power (KHNP) has used the 28th United Nations Climate Change Conference (COP28) in Dubai, UAE, to launch its new Innovative SMR (i-SMR) technology and its i-SMR powered Smart Net-Zero City model. The company has agreed to cooperate with Indonesian and Jordanian partners to investigate the deployment of i-SMR units. KHNP said the i-SMR - an integrated pressurised water reactor type nuclear power plant with an electrical output of 170 MWe - is being developed according to a development roadmap, with the goal of completing the standard design by the end of 2025 and obtaining standard design approval in 2028.

<https://www.world-nuclear-news.org/Articles/KHNP-touts-i-SMR-to-international-audience>

In East Asia, many people see China's power and influence as a major threat

Pew Research, December 5, 2023

In parts of East Asia, roughly half of adults or more view China's power and influence as a major threat, according to a Pew Research Center survey conducted between June and September 2023. In most places surveyed, more people name China's influence as a major threat than any of the other geopolitical issues asked about. Those issues include North Korea's nuclear weapons program and the power and influence of the United States and Russia. In South Korea and Japan, though,

North Korea's nuclear weapons program is also a top concern. Most Japanese adults also see Russia's power and influence as a major threat – though fewer than half of adults in the other places surveyed agree.

<https://www.pewresearch.org/short-reads/2023/12/05/in-east-asia-many-people-see-chinas-power-and-influence-as-a-major-threat/>

US, South Korea, Japan Urge International Push to Curb North Korea's Nuclear Program

VOA News, December 9, 2023

The national security advisers of the United States, South Korea and Japan called Saturday for a stronger international push to suppress North Korea's development of nuclear weapons and missiles, its cybertheft activities and alleged arms transfers to Russia. The meeting in Seoul came as tensions on the Korean Peninsula are at their highest in years, with North Korean leader Kim Jong Un accelerating the expansion of his nuclear and missile program and flaunting an escalatory nuclear doctrine that authorizes the preemptive use of nuclear weapons. The United States and its Asian allies have responded by increasing the visibility of their trilateral partnership in the region and strengthening their combined military exercises, which Kim condemns as invasion rehearsals.

<https://www.voanews.com/a/us-south-korea-japan-urge-international-push-to-curb-north-korea-s-nuclear-program/7391624.html>

Analysts: Japan Strengthening ASEAN Security Ties to Contain China

VOA News, December 14, 2023

Tokyo has been expanding its security ties with multiple Southeast Asian countries ahead of a Japan-ASEAN summit that analysts see as a forum to offset China's aggressive behavior in the region. Japan is scheduled to host the ASEAN-Japan

Commemorative Summit in Tokyo from Saturday to Monday, marking the 50th anniversary of ASEAN-Japan friendship and cooperation. Japan and 10 ASEAN countries seek to expand ties at a time when "the free and open international order based on the rule of law is under serious challenge," Japanese Prime Minister Fumio Kishida said Wednesday. Kishida said challenges in the Indo-Pacific include "attempts to unilaterally change the status quo by force" in the East and South China seas and "North Korea's increasing nuclear missile activities."

<https://www.voanews.com/a/analysts-japan-strengthening-asean-security-ties-to-contain-china-/7399066.html>

Seoul Scrambles Jets After Chinese, Russian Warplanes Approach

VOA News, December 14, 2023

South Korea's military said Thursday it scrambled fighter jets as two Chinese and four Russian military planes entered its air defense zone, an area wider than the country's airspace. The Chinese and Russian planes entered and exited the Korea Air Defense Identification Zone (KADIZ) in the East Sea, also known as the Sea of Japan, from 11:53 a.m. (0253 GMT) to 12:10 p.m., Seoul's Joint Chiefs of Staff said. But "there was no invasion of airspace," it added, and the South Korean military identified the planes "before they entered KADIZ, and deployed air force fighter jets to take tactical measures in preparation for contingencies." An air defense identification zone is a broader area than a country's airspace in which it tries to control aircraft for security reasons, but the concept is not defined in any international treaty.

<https://www.voanews.com/a/seoul-scrambles-jets-after-chinese-russian-warplanes-approach-/7397658.html>

S. Oceania

Australia says AI will be used to help track Chinese submarines under new Aukus plan

The Guardian, December 2, 2023

Artificial intelligence, drones, and deep space radar are among the technologies that will be used by Australia and its Aukus allies to counter China's aggression in the Pacific. Australia's defence minister, Richard Marles, met with his counterparts from the United States and United Kingdom – Lloyd J Austin and Grant Shapps – in California on Saturday to announce the second “pillar” of the Aukus deal. It came after the prime minister, Anthony Albanese, last month accused a Chinese naval ship of “dangerous, unsafe and unprofessional” behaviour after Australian naval divers were injured by sonar pulses said to have been emitted by a Chinese warship in the international waters off Japan.

<https://www.theguardian.com/world/2023/dec/02/australia-says-ai-will-be-used-to-help-track-chinese-submarines-under-new-aukus-plan>

With New Government, New Zealand's Foreign Policy Resets on AUKUS, Gaza, and Ukraine

The Diplomat, December 4, 2023

New Zealand's international relations are under new management. And Winston Peters, the new foreign minister, is already setting a change agenda.

There were strong hints that New Zealand's new government – a coalition of the National Party, ACT Party, and Peters' New Zealand First – wants to move swiftly when it comes to Wellington's potential involvement in in Pillar II of the AUKUS defense pact, which currently involves Australia, the United Kingdom, and the United States.

Peters' disclosed in the Q&A to the speech that he had already talked to Judith Collins, the new defense minister, about New Zealand's AUKUS stance.

The previous Labor government's position was that AUKUS remained a hypothetical

question while no formal offer existed for New Zealand to join Pillar II.

<https://thediplomat.com/2023/12/with-new-government-new-zealands-foreign-policy-resets-on-aukus-gaza-and-ukraine/>

Australia's military must prepare for conflict if deterrence fails

Defense News, December 7, 2023

Australia's national interest lies in a region that is open, stable, peaceful and prosperous. At the ASEAN Defence Ministers' Meeting Plus in mid-November and at meetings throughout the Pacific, I've been clear that Australia is committed to working with our partners to build and defend a region that is peaceful, places the Association of Southeast Asian Nations at its core, respects sovereignty, and operates by agreed rules.

The Australian government is working with its partners to bring about a strategic environment that is characterized by a regional balance, where no actor concludes the benefits of military action outweigh the risks.

<https://www.defensenews.com/outlook/2023/12/04/australias-military-must-prepare-for-conflict-if-deterrence-fails/>

Australia must seize nuclear science opportunities to meet challenges on the horizon

Australian Academy of Science, December 7, 2023

Maintain the health of Australians through medical research and its translation into care. Defend Australia. Meet our space ambitions. None of this can be achieved without increasing Australian nuclear science capabilities. That is the conclusion reached by experts at a national nuclear science roundtable hosted recently by the Australian Academy of Science. The roundtable determined that Australia's nuclear science sector needs a national strategy that leads to new knowledge and infrastructure and equips Australians for

jobs in this expanding sector. The online forum brought together multidisciplinary experts from fields including nuclear physics, nuclear medicine, radiation science, space, nuclear waste management, environmental science, and nuclear regulation and diplomacy.

<https://www.science.org.au/news-and-events/news-and-media-releases/australia-must-seize-nuclear-science-opportunities-to-meet-challenges-on-the-horizon>

Coalition opposes Australia tripling renewable energy, backs nuclear power pledge at Cop28

The Guardian, December 9, 2023

The federal Coalition has declared at the Cop28 climate summit that it will back a global pledge to triple nuclear energy if the opposition leader, Peter Dutton, becomes prime minister, but will not support Australia tripling its renewable energy.

Speaking on the sidelines of the conference in Dubai, the opposition's climate change and energy spokesperson, Ted O'Brien, also said a Coalition government would consider supporting Generation III+ large-scale nuclear reactors, and not just the unproven small modular reactors it has strongly touted.

<https://www.theguardian.com/australia-news/2023/dec/10/coalition-tells-cop28-it-will-tback-tripling-of-nuclear-energy-if-peter-dutton-becomes-prime-minister>

Nuclear power to be a 'key battle line' at next election

Sky News, December 10, 2023

Lifting Australia's nuclear industry ban is set to be a "key battle line" at the next election, according to Sky News Political Editor Andrew Clennell.

His remarks come as the COP28 climate conference is underway in Dubai.

"The Opposition's energy spokesman Ted O'Brien is at the COP talking up a lifting Australia's domestic nuclear industry ban," Mr Clennell said.

"This is going to be a key battle line at the next election."

He said Labor is determined to counter the Coalition policy with a "scare campaign" about nuclear power stations in people's electorates.

<https://www.skynews.com.au/business/energy/nuclear-power-to-be-a-key-battle-line-at-next-election/video/304718eebb32031a02771894338a5e7e>

Australia to create navy nuclear safety watchdog for AUKUS

Deccan Herald, December 13, 2023

Australia will spend A\$558 million (\$366 million) to create a naval nuclear power safety regulator as part of the AUKUS programme to acquire conventionally armed nuclear submarines, a government economic update showed on Wednesday. Australia will buy three nuclear-powered submarines from the United States in the next decade before building a new class of submarine with Britain using US nuclear propulsion technology around 2040 through the AUKUS partnership. Legislation introduced to parliament last month establishes a regulator to ensure safety for the nuclear-powered submarine programme. It does not alter Australia's moratorium on civil nuclear power, the government said.

<https://www.deccanherald.com/world/australia-to-create-navy-nuclear-safety-watchdog-for-aukus-2808611>

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