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A. India

India's submarine plans hit by dwindling fleet as Navy decommissions INS Sindhudhvaj

The Print, July 18, 2022

Even as the Navy decommissioned INS Sindhudhvaj, a Kilo-class submarine acquired from Russia in 1987, on Saturday, India's struggle with its three-decade-old plan to shore up under-water capabilities continues. India is currently left with 15 conventional diesel-electric submarines, seven of which are of the Russian Kilo class. Under the ambitious 30 year old plan that ends in 2030, India was to build 24 submarines – 18 conventional submarines and six nuclear-powered submarines (SSNs) – as an effective deterrent against China and Pakistan.

<https://theprint.in/defence/indias-submarine-plans-hit-by-dwindling-fleet-as-navy-decommissions-ins-sindhudhvaj/1043167/>

Government says, Unit 3 of Kakrapar atomic plant is expected to commence commercial operation by December 2022

PIB, July 20, 2022

The Government to informed that Unit 3 of Kakrapar atomic plant is expected to commence commercial operation by December 2022, after obtaining stage-wise regulatory clearances. In a written reply to a question in the Lok Sabha today, Union Minister of State, Dr Jitendra Singh said, in Unit-3, modifications/improvements required based on commissioning feedback have been carried out and their validation is also completed by hot run. He said, the unit is now being readied for startup and progressive power raise to full power in line with the regulatory clearances. During the unit commissioning, following synchronization with the grid, elevated temperatures were observed in certain areas of the reactor building. These have since been addressed by carrying out requisite modifications and improvements. Dr Jitendra Singh also informed that Unit-4 of Kakrapar Atomic Power Project (KAPP-4)

has achieved a physical progress of 93.65% as of June-2022.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1843089>

Union Minister Dr Jitendra Singh says, 10 (Ten) in-orbit operational communication satellites have been transferred from Government of India to M/s. New Space India Ltd (NSIL), a CPSE under Department of Space

PIB, July 20, 2022

Union Minister of State (Independent Charge), Dr Jitendra Singh said, 10 (Ten) in-orbit operational communication satellites have been transferred from Government of India to M/s. New Space India Ltd (NSIL), a CPSE under Department of Space. In a written reply to a question in the Lok Sabha today, Dr Jitendra Singh said, communication satellites viz. GSAT-8, GSAT-10, GSAT-12R (CMS-01), GSAT-14, GSAT-15, GSAT-16, GSAT-17, GSAT-18, GSAT-30 and GSAT-31 have been transferred at a written down value of Rs 4697.60 crores against issue of equity to Government of India, with 01.04.2021 as the effective date of transfer.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1843088>

The case for a civilian nuclear resurgence for India's energy economy

Financial Express, July 20, 2022

Severe global shortages of coal and natural gas and rising commodity prices in the wake of the COVID-19 pandemic and the Russia-Ukraine war continue to send shockwaves through the global economy, with winter weather preparedness in question across many parts of the world. India, as a net energy importer, has not been immune to these concerns. The country generates over 75% of its electricity from coal. As recently as late June 2022, several media reports cite a

“severe and protracted” power crisis in the country due to surging coal prices, which have led to dwindling coal import volumes and power plant stockpiles, threatening power shortages and rolling blackouts.

<https://www.financialexpress.com/defence/the-case-for-a-civilian-nuclear-resurgence-for-indias-energy-economy/2600243/>

Union Minister Dr Jitendra Singh says, ISRO is in the process of developing indigenous capabilities towards space tourism through the demonstration of human space flight capability to Low Earth Orbit (LEO)

PIB, July 21, 2022

Union Minister of State (Independent Charge), Dr Jitendra Singh said, ISRO is in the process of developing indigenous capabilities towards space tourism through the demonstration of human space flight capability to Low Earth Orbit (LEO). Dr Jitendra Singh said, the Indian National Space Promotion and Authorization Centre (IN-SPACe) also seeks to promote active participation of private sector in carrying out end-to-end space activities, which includes space tourism as well. With regards to question on space diplomacy, the Minister said, Indian Space Research Organization (ISRO) pursues international cooperation and relations with 61 countries in varied domains of space activities.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1843333>

Development Work by Defence Industries

PIB, July 22, 2022

In continuous pursuit of achieving self-reliance in defence manufacturing under ‘Aatmanirbhar Bharat Abhiyan’ and in sync with the announcement made in the Union Budget 2022-23 that allocated 25% of Defence R&D Budget for industry led R&D, 18 (eighteen) major platforms have been identified and announced by the Ministry of Defence for industry led Design &

Development under various routes prescribed in Defence Acquisition Procedure-2020, namely, Make-I, Make-II, Special Purpose Vehicle (SPV) and the Innovations for Defence Excellence (iDEX). These Platforms have been identified after extensive consultations with the Services, DRDO and the Industry.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1843761>

After the House, US Senate moves to deepen ties with India on defence, tech

Hindustan Times, July 22, 2022

Among other issues, the Senate has identified intelligence collection capabilities, unmanned aerial vehicles, 5G, fourth and fifth generation aircraft, and joint research and development, as areas for cooperation with India. In yet another signal of Capitol Hill’s political commitment to the India-United States (US) strategic relationship, the Senate Armed Services Committee (SASC), in its version of the National Defence Authorisation Act (NDAA), has asked Pentagon to step up its engagement with India on issues of “emerging technologies, readiness and logistics” within 90 days of the passage of the legislation.

<https://www.hindustantimes.com/world-news/after-the-house-us-senate-moves-to-deepen-ties-with-india-on-defence-emerging-tech-101658381891879.html>

Defence Acquisition Council, headed by Raksha Mantri Shri Rajnath Singh, approves arms procurement proposals worth Rs 28,732 crore; They include Swarm Drones, Bulletproof Jackets, and Carbines

PIB, July 26, 2022

The Defence Acquisition Council (DAC) meeting under the chairmanship of Raksha Mantri Shri Rajnath Singh, was held on July 26, 2022. Acceptance of Necessity (AoN) for Capital Acquisition

Proposals of the Armed Forces amounting to Rs 28,732 crore were accorded by the DAC in this meeting under Buy (Indian IDDM) and Buy (Indian) categories giving a further boost to 'Aatmanirbharta' in Defence. Among the proposals approved by DAC in the meeting are three proposals of the Indian Army, viz. Guided Extended Range Rocket Ammunition, Area Denial Munition Type I and Infantry Combat Vehicle - Command have been designed and developed by DRDO. The total value of these three proposals is Rs 8,599 crore. Guided Extended Range Rocket Ammunition has the range of 75 kms with accuracy of 40 meters. The Aerial Denial Munition Type I Rocket Ammunition contains dual purpose sub munitions capable of neutralizing both tanks and armoured personnel carriers as well as B vehicle entrenched troops. The Infantry Combat Vehicle - Command is equipped with technology to collect, disseminate, share and present real time information to commanders to facilitate quick decision making for execution of tasks.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1845058>

Delayed Kakrapar-3 To Begin Commercial Operation By End Of Year, Says Minister

Nucnet, July 27, 2022

The Kakrapar-3 nuclear power plant in Gujarat state, western India, will begin commercial operation by the end of the year, atomic energy minister Jitendra Singh said in a written supply to the Lok Sabha, the country's lower house of parliament. Mr Singh said the schedule for the plant - the country's first indigenous 630 MW net (700 MW gross) pressurised heavy water reactor unit - was dependent on obtaining regulatory approvals. Kakrapar-3, owned and operated by state nuclear company Nuclear Power Corp of India Ltd (NPCIL), was connected to the grid in January 2021.

<https://www.nucnet.org/news/delayed-kakrapar-3-to-begin-commercial-operation-by-end-of-year-says-minister-7-3-2022>

Union Minister Dr Jitendra Singh says, PSLV-C53 launch on 30th June, 2022 was the dedicated international customer mission wherein 3 Singaporean satellites were launched

PIB, July 27, 2022

Union Minister of State (Independent Charge), Dr Jitendra Singh said, PSLV-C53 launch on 30th June, 2022 was the dedicated international customer mission wherein 3 Singaporean satellites were launched. In reply to a question in the Lok Sabha, Dr Jitendra Singh said, the launch also provided an opportunity to Indian space start-ups to host their technology payloads as part of PS4 upper stage orbiting platform. PSLV-C53 realized by Indian Space Research Organization (ISRO), successfully launched three Singapore customer satellites namely DS-EO, NeuSAR and SCOOB-1. PSLV-C53 was the 2nd dedicated commercial mission for NewSpace India Limited (NSIL), a Central Public Sector Enterprise under administrative control of the Department of Space (DOS), thus enabling NSIL to earn Foreign Exchange for providing Launch Services to international customers. ISRO, through its commercial arms, has successfully launched 345 foreign satellites from 34 countries on-board Polar Satellite Launch Vehicle (PSLV).

<https://pib.gov.in/PressReleasePage.aspx?PRID=1845269>

Government says, at present there are no laws governing space tourism in the country and there are no plans to make a law specific to space tourism

PIB, July 28, 2022

Government today said that at present there are no laws governing space tourism in the country and there are no plans to make a law specific to space tourism. However, as part of 'Gaganyaan' mission, India is developing technologies and crew safety protocols required for human space

flight missions. In reply to a question in the Rajya Sabha today, Union Minister of State (Independent Charge), Dr Jitendra Singh said, ISRO is currently developing technologies for Human Rated Launch Vehicle, Orbital Module, Life Support System, Crew Escape System, Human Centric Products and Crew Recovery for Gaganyaan mission. All these technologies will act as building blocks for pursuing space tourism in future. In another question related to private start-ups offering satellite services to global customers, Dr Jitendra Singh informed that about 15 start-ups are working in the domain of offering satellite services i.e. value-added services through satellite data.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1845769>

Atomic energy cheaper than solar, wind for end consumers, says nuclear scientist Anil Kakodkar

The Print, July 29, 2022

Nuclear energy might be capital intensive, but the cost to the consumer is much lower than that of other renewable resources, like solar and wind, said Anil Kakodkar, nuclear scientist and former chairman of the Atomic Energy Commission of India, Thursday. The nuclear scientist touched on the various aspects of nuclear science, the inhibitions around the technology and why India needs to expand its renewable power production. Talking about how India's use of thorium can reduce the generation of radioactive waste, Kakodkar said: "Thorium can essentially limit the amount of spent fuel coming out of uranium reactors".

<https://theprint.in/theprint-otc/atomic-energy-cheaper-than-solar-wind-for-end-consumers-says-nuclear-scientist-anil-kakodkar/1059993/>

B. Russia

Surface-based Tsirkon hypersonic missile may be commissioned this year – source

TASS, July 18, 2022

The newest Tsirkon hypersonic missile for surface ships may be commissioned in the Russian Navy before the end of 2022, a

source close to the Defense Ministry told TASS Monday. According to the source, NPO Mashinostroyeniya continues to produce the missiles, while simultaneously working on increasing its range.

<https://tass.com/defense/1481151>

Putin in Iran for Syria Summit Overshadowed by Ukraine War

The Moscow Times, July 19, 2022

Russian President Vladimir Putin arrived in Tehran for talks Tuesday on the Syrian war at a three-way summit overshadowed by fallout from his country's war on Ukraine. Putin travelled abroad for only the second time since ordering the invasion of Ukraine in order to attend the gathering that also involves Turkish President Recep Tayyip Erdogan. All three are involved in the conflict, with Iran and Russia supporting Syria's President Bashar al-Assad and Turkey backing rebel forces.

<https://www.themoscowtimes.com/2022/07/19/putin-in-iran-for-syria-summit-overshadowed-by-ukraine-war-a78336>

Russia's cutting-edge strategic nuclear-powered sub takes to sea for tests – source

TASS, July 20, 2022

The Project 955A (Borei-A) second serial-built nuclear-powered submarine cruiser Generalissimus Suvorov deployed to the White Sea for the first time for shipbuilders' sea trials, a source in the domestic shipbuilding industry told TASS on Wednesday. After a host of various shipbuilders' tests, the state-of-the-art nuclear-powered submarine will enter into state trials with practical checks of all its armament systems, the source specified.

<https://tass.com/defense/1482343>

Russia's Goals in Ukraine No Longer Solely Focused on the East – Lavrov

The Moscow Times, July 20, 2022

Russia's "geographical goals" in Ukraine have changed to include not only the

breakaway Donetsk and Luhansk People's Republics of eastern Ukraine, but a number of other regions as well, Foreign Minister Sergei Lavrov told state media Wednesday. "Now, [our] geography is different. It is not only the DNR and LNR, it is also the Kherson region, the Zaporizhzhia region and a number of other territories," he said in an interview with the state-run RIA Novosti news agency and Kremlin-backed RT network.

<https://www.themoscowtimes.com/2022/07/20/russias-goals-in-ukraine-no-longer-solely-focused-on-the-east-lavrov-a78354>

Russia to Scrap World's Largest Nuclear Sub – Reports

The Moscow Times, July 20, 2022

Russia has decommissioned the world's largest nuclear ballistic missile submarine, state media reported Wednesday. The Dmitry Donskoy, a Typhoon-class submarine that served in the Russian Navy's Northern Fleet since 1980, stood at 175 meters in length. Its status as the world's largest submarine will be taken by the 184-meter Oscar II-class Belgorod nuclear submarine, which was commissioned earlier in July.

<https://www.themoscowtimes.com/2022/07/20/russia-to-scrap-worlds-largest-nuclear-sub-reports-a78349>

HIMARS used by Kiev is not 'panacea', Russia can counteract, senior legislator says

TASS, 21 July, 2022

The HIMARS multiple launch rocket system is serious weapons, but the Russian Armed Forces can counter it, Andrei Kartapolov, head of the State Duma Defense Committee, told TASS on Thursday. "One should not be afraid [of HIMARS], one should fight it, it is not a panacea, it is one of the weapons that the enemy uses now," the legislator said. "At the same time, I want to emphasize that it is foreign specialists, that is to say mercenaries, who steer it at a target. I don't rule out American servicemen working there," he said.

<https://tass.com/defense/1482931>

Ukrainian army launches 10 Grad missiles at Donetsk – DPR

TASS, July 23, 2022

Ukraine's armed forces have launched 10 Grad MLRS missiles at the Kievsky district in Donetsk, the Donetsk People's Republic's (DPR) mission at the Joint Center for Control and Coordination of ceasefire (JCCC) reported on Saturday.

<https://tass.com/world/1484007>

Russian cutting-edge missile corvette arrives in Kamchatka for naval parade

TASS, July 25, 2022

The Project 20385 latest multi-purpose missile corvette Gremyashchiy has arrived at its permanent base on the Kamchatka Peninsula in the Russian Far East, the Pacific Fleet's press office reported on Monday. The state-of-the-art missile corvette was welcomed by Kamchatka Region Governor Vladimir Solodov and Northeastern Force Commander Alexander Yuldashev. The Gremyashchiy is set to participate in the naval parade off the coast of Kamchatka on Russia's Navy Day on July 31, the press office said in a statement.

<https://tass.com/defense/1484287>

World's largest nuclear sub Dmitry Donskoy returns to home base – source

TASS, July 27, 2022

Russia's nuclear-powered submarine The Dmitry Donskoy, the largest in the world, has returned to the Northern Fleet's base at Severodvinsk, a shipbuilding industry source told TASS on Wednesday. "On July 26, the Dmitry Donskoy nuclear submarine returned from the White Sea to the Belomorsk naval base in Severodvinsk. For about a month, the submarine was performing various combat training tasks," he said. In his words, the submarine's crew is engaged

in all combat training events of Russia's Northern Fleet.

<https://tass.com/defense/1485275>

Tsirkon hypersonic missile to enter service with Russian naval ships in September – source

TASS, July 28, 2022

The state-of-the-art Tsirkon hypersonic missile is set to enter service with surface ships of the Russian Navy in September this year, a source close to Russia's Defense Ministry told TASS on Thursday. "The missile's state tests have been completed and all the documents on accepting the weapon for service have been adopted. The Tsirkon is expected to enter service with the Navy in September," the source said. The breakthrough Tsirkon weapon was earlier expected to become operational in the Russian Navy by the end of 2022.

<https://tass.com/defense/1485885>

Kremlin Expresses Solidarity With China Over Taiwan

The Moscow Times, July 29, 2022

The Kremlin expressed "solidarity" on Friday with China's stance on Taiwan after Chinese President Xi Jinping warned U.S. leader Joe Biden not to "play with fire" over the self-ruled island. "Certainly, we are in solidarity," Kremlin spokesman Dmitry Peskov told reporters. "We respect China's sovereignty and territorial integrity and believe that no country in the world should have the right to question this or take any inflammatory or other steps," he added.

<https://www.themoscowtimes.com/2022/07/29/kremlin-expresses-solidarity-with-china-over-taiwan-a78445>

Russia Says U.S., NATO 'Main Threats' to National Security

The Moscow Times, July 31, 2022

The United States' quest to dominate the oceans and NATO's expansion are the biggest threats facing Russia, according to a new Russian naval doctrine signed by

President Vladimir Putin on Sunday. The 55-page document said the "main challenges and threats" to national security and development were Washington's "strategic objective to dominate the world's oceans" and NATO military infrastructure moving toward Russia's borders.

<https://www.themoscowtimes.com/2022/07/31/russia-says-us-nato-main-threats-to-national-security-a78453>

C. China

China launches two new high-resolution remote sensing satellites into space

CGTN, July 16, 2022

China successfully launched two new high-resolution remote sensing satellites from Taiyuan Satellite Launch Center in north China's Shanxi Province at 06:57AM (Beijing Time) on July 16. The pair of satellites, Siwei 03 and 04, were launched by a Long March-2C carrier rocket and entered the planned orbit. They will provide commercial remote sensing data services for emerging sectors such as urban safety and security, real-scene 3D mapping, City Information Modeling for urban planning, as well as digital agriculture and in conventional areas like land resource surveying, natural disaster prevention and mitigation, and maritime monitoring. The first group of satellites, Siwei 01 and 02, were sent into orbit on April 29, 2022.

<https://news.cgtn.com/news/2022-07-16/China-launches-two-new-satellites-into-space-1bHNyOnktVK/index.html>

China's Tianzhou-3 cargo craft separates from space station combination

Xinhua, July 17, 2022

The Tianzhou-3 cargo craft, carrying supplies for China's space station, separated from the orbiting station combination at 10:59AM on July 17 (Beijing Time), after completing all

assigned tasks, according to the China Manned Space Engineering Office. China launched the Tianzhou-3 on Sept. 20, 2021 from the Wenchang Spacecraft Launch Site in the southern province of Hainan, delivering six tonnes of goods to the country's under-construction space station. At present, the Tianzhou-3 cargo craft is in good condition and will re-enter the atmosphere under ground control in the future, said the engineering office.

<https://english.news.cn/20220717/745aa4d3876b4b9fb3b2ea180b8ea5b9/c.html>

Chinese scientists simulate hypersonic flight to US after devising BeiDou satellite-switching system

South China Morning Post, July 18, 2022

A Chinese satellite navigation system will allow the Chinese military to monitor, or even control, a hypersonic flight from China to the United States, according to a new study by Chinese space scientists. BeiDou is a satellite positioning system similar to GPS that also offers a communication service with global coverage. In the study, the Chinese researchers simulated the flight of a hypersonic vessel launched from Jinan, in China's eastern Shandong province, to New York via the Arctic Ocean. Although China has put several satellite communication networks in orbit, the researchers found that only BeiDou allowed the command centre back on Earth to maintain contact with the hypersonic vehicle while it made wild manoeuvres in the high atmosphere to evade air-defence systems.

<https://www.scmp.com/news/china/science/article/3185709/chinese-scientists-simulate-hypersonic-flight-us-after-devising>

This time, China likely won't care (much) about a North Korean nuclear test

NK PRO, July 19, 2022

After launching missiles at a torrid pace in the first half of 2022, North Korea appears to be gearing up to conduct a nuclear test in the near future. Each of Pyongyang's most

recent nuclear tests in 2016 and 2017 garnered visible pushback from Beijing, but that likely won't be the case in 2022. In fact, amid a hostile international environment, domestic challenges and growing Taiwan ambitions, China may even encourage North Korea to operationalize its nuclear arsenal.

<https://www.nknews.org/pro/this-time-china-likely-wont-care-much-about-a-north-korean-nuclear-test/>

US developing satellites to track Chinese and Russian hypersonic weapons

South China Morning Post, July 19, 2022

The United States will spend US\$1.3 billion to develop advanced satellites that will be able to better track hypersonic missile threats, the Pentagon said, announcing two new contracts that will put the detection and tracking systems in orbit by 2025. Derek Tournear, director of the Space Development Agency, said the contracts will provide 28 satellites, as the US moves to greatly expand and enhance its ability to counter increasing threats from Russia and China. Both countries have been making strides in their development of hypersonic missiles, which are more difficult to track and shoot down because they manoeuvre more in flight than conventional weapons that travel in predictable paths. Last year China tested what US officials said was a hypersonic missile, and Russia has used the weapons in strikes during the war in Ukraine.

<https://www.scmp.com/news/world/united-states-canada/article/3185757/us-developing-satellites-track-chinese-and-russian>

U.S. touts progress in hypersonic arms race with China, Russia

The Washington Post, July 19, 2022

The Pentagon said it reached important new milestones as it scrambles to catch up with China and Russia in what has become a fraught arms race between the world's most advanced militaries, conducting a successful hypersonic missile

test and securing a \$1.3 billion deal to help defend against such threats. The test of the air-breathing hypersonic missile, a partner venture of defense-tech manufacturers Raytheon and Northrop Grumman, follows separate successful tests announced last week using hardware built by Lockheed Martin. Together, they hint at a potential breakthrough for the Defence Department, which has faced growing scrutiny from lawmakers who fear the United States is losing ground to its adversaries and just last month conceded a full-system test fail. Yet with China testing advanced-engine hypersonic missiles and Russia promising to use hypersonic cruise missiles in battle by the end of this year, U.S. officials say there is perhaps greater urgency to develop adequate defences against such weapons. Central to that, they say, is a deal to have L3Harris Technologies and Northrop Grumman design and launch 28 satellites as part of the Pentagon's new missile defence network.

<https://www.washingtonpost.com/national-security/2022/07/19/hypersonic-missile-pentagon-china-russia/>

China's military puts advanced rocket launch system to the test at high altitude

South China Morning Post, July 19, 2022

China's military has put the precision strike capability of its new rocket launch system to the test at high altitude, according to state broadcaster CCTV. The People's Liberation Army used the PCL191 multiple launch rocket system – which is mounted on a truck – to hit a target several kilometres away at a desert shooting range in the west of China during a recent test, Sunday's report said. It was reported on state television as the PLA and Indian Army began a 16th round of talks to resolve a protracted border stand-off in the Ladakh region, where at least 20 Indian and four Chinese troops were killed in 2020 – the worst clash on the disputed border in decades.

<https://www.scmp.com/news/china/military/article/3185730/chinas-military-puts-advanced-rocket-launch-system-test-high>

AUKUS sub deal could involve transferring tons of weapons-grade nuke material: Chinese report

Global Times, July 20, 2022

China released a research report entitled *The Nuclear Proliferation Risk of the Nuclear-powered Submarines Collaboration in the Context of AUKUS*, the first report published by Chinese academic institutes to objectively analyse the serious risks of nuclear proliferation and multiple hazards caused by the AUKUS nuclear-powered submarine collaboration through detailed data and case studies. Under AUKUS, the US and the UK are anticipated to provide Australia with eight nuclear-powered submarines involving the transfer of tons of weapons-grade nuclear materials which are enough to manufacture nearly a hundred nuclear weapons, experts warned. Jointly released by the China Arms Control and Disarmament Association (CACDA) and the China Institute of Nuclear Industry Strategy (CINIS), the report said that the AUKUS nuclear-powered submarine collaboration has seriously violated the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), marking a blatant act of nuclear proliferation. The AUKUS nuclear-powered submarine collaboration obviously serves a military purpose, making it a direct violation of the Statute of the International Atomic Energy Agency (IAEA), the report said.

<https://www.globaltimes.cn/page/202207/1270985.shtml>

Chinese scientists plan 'disposable' nuclear reactor for long-range torpedo

South China Morning Post, July 20, 2022

A Beijing research team says it has completed the conceptual design for a small, low-cost nuclear reactor that would be able to drive a swarm of torpedoes across the Pacific Ocean in about a week. The Chinese researchers are proposing a

mini version of the Russian Poseidon unmanned submarine – the world’s first known underwater drone powered by nuclear energy. Unlike the Poseidon, which cannot be mass-produced because it is too big, expensive and destructive, the mini version could be fitted into a standard torpedo tube and launched in large numbers from almost any submarine or warship, the scientists said. Each torpedo would use a disposable nuclear reactor to reach and maintain a cruising speed of over 30 knots (56km/h or 35mph) for 200 hours before dumping the reactor to the seabed and drawing power from a battery to launch an attack with conventional weapons.

<https://www.scmp.com/news/china/science/article/3185980/chinese-scientists-plan-disposable-nuclear-reactor-long-range>

Are defense capabilities of US nuclear chain of command so weak? Global Times editorial

Global Times, July 24, 2022

CNN on Saturday reported that “among the most alarming things the FBI uncovered [one] pertains to Chinese-made Huawei equipment atop cell towers near US military bases in the rural Midwest,” The FBI determined the equipment was capable of capturing and disrupting highly restricted Defense Department communications, including those used by US Strategic Command, which oversees the country’s nuclear weapons,” citing more than a dozen unnamed sources. The report said that the so-called anonymous sources included incumbent and former national security officials. One former FBI official said, “It would impact our ability for essentially command and control with the nuclear triad.” The Pentagon and even the nuclear command and control system are under major threat from Huawei’s equipment just under the noses of the US, and this is happening against the backdrop in which the US government has exerted maximum pressure and exclusion on Huawei. How can this make those Americans who believe in the “China threat” fall sleep? It has to be said that the imagination and storytelling

ability of the US national security department have rapidly “improved” after years of practice and exercise in exaggerating the “China threat.” This time, they came up with a “panic rating” playbook.

<https://www.globaltimes.cn/page/202207/1271297.shtml>

Nonsense to say ‘Australia needs nuclear submarines to defend itself’: Australian scholar

Global Times, July 24, 2022

After the Albanese government took office in Australia, there have been discussions about a possible reset of China-Australia ties. Global Times reporter Yan Yuzhu talked to Professor David Goodman, director of the China Studies Centre at the University of Sydney, about his opinions on the reason why there has been hostility in Australia toward China and possible changes in the new government regarding the China policies. According to Goodman, there has been a bit of easing of tensions, we had a very nasty government before, and the new government coming in has had to be very careful about what it is about to do and what it would say.

<https://www.globaltimes.cn/page/202207/1271242.shtml>

US hypersonic missile test expected to spur on China’s programme

South China Morning Post, July 24, 2022

The two recent successes in the United States programme to develop hypersonic weapons are expected to push other countries to step up their research into more sophisticated weapons. The US successfully tested a Raytheon air-breathing hypersonic weapon capable of flying faster than five times the speed of sound for the second time. A statement from the contractor said the flight test met all objectives, including demonstrating tactical range capabilities. Song

Zhongping, a former Chinese military instructor, said: "China and Russia will definitely carry out plans to improve their hypersonic missiles' range, accuracy, reliability, safety and operational flexibility." But some analysts doubt that the US tests will affect other countries' plans.

<https://www.scmp.com/news/china/military/article/3186405/us-hypersonic-missile-test-expected-spur-chinas-programme>

South Korea's risky 'Kill Chain' plans to counter North Korea nuclear threat may raise eyebrows in China

South China Morning Post, July 27, 2022

In the face of North Korea's mounting nuclear threats, South Korea is pursuing a rare strategy of bolstering conventional counterforces focused on assertive strikes – a risky manoeuvre that could lead to an arms race and regional instability, analysts warn. After the new conservative president Yoon Suk-yeol took office in May, Seoul returned to a decade-old "Kill Chain" strategy of mounting precautionary strikes and possibly removing the North's senior leadership in case of an impending attack. Kim Jung-sup of the think tank Sejong Institute said the South's military programmes including the Kill Chain would raise eyebrows in China, despite being targeted at the North. He noted China responded angrily when the United States lifted restrictions on the ranges of South Korean missiles last year as Seoul is reportedly developing a missile that can carry the world's largest conventional warhead weighing up to 8 tonnes.

<https://www.scmp.com/week-asia/politics/article/3186746/south-koreas-risky-kill-chain-plans-counter-north-korea-nuclear>

Risk of nuclear war from cutting off China and Russia, says security tsar

The Guardian, July 27, 2022

The west risks the initiation of nuclear conflict with China or Russia because of a

"breakdown of communication" with the two countries, the UK's national security adviser has warned. Sir Stephen Lovegrove, 55, said that the erosion of backdoor channels had resulted in an increased chance of an accidental escalation into war. In a speech in Washington at the Centre for Strategic and International Studies, he said he believed the deterioration of communication with China and Russia had created a higher risk of "rapid escalation to strategic conflict". "The cold war's two monolithic blocks of the USSR and Nato – though not without alarming bumps – were able to reach a shared understanding of doctrine that is today absent," he said. "Doctrine is opaque in Moscow and Beijing, let alone Pyongyang or Tehran."

<https://www.theguardian.com/world/2022/jul/27/breakdown-of-communication-higher-risk-of-nuclear-conflict-with-china-or-russia-adviser-warns>

China to raise concerns over AUKUS submarine deal at UN treaty meeting

The Sydney Morning Herald, July 27, 2022

China will raise the AUKUS submarine deal at the United Nations nuclear non-proliferation meeting next week and force Washington and Canberra to argue there has been no breach of the nuclear treaty. Ambassador Adam Scheinman, the US special representative for nuclear non-proliferation, said Beijing had made a series of claims about the US, United Kingdom and Australia violating the nuclear treaty [NPT] that would be disputed in New York. "I know that China at the NPT review conference will criticise the partnership, although I also think that what China fails to do is to recognise that it's China's own actions in the region that have led the partners to close gaps in our security," Scheinman said at a US state department briefing in Asia.

<https://www.smh.com.au/world/asia/china-to-raise-concerns-over-aukus-submarine-deal-at-un-treaty-meeting-20220727-p5b4xy.html>

China's 'breathtaking' nuclear arms push a rising challenge, Stratcom chief says

The Washington Times, July 28, 2022

China is expanding its nuclear forces at a "breathtaking" pace, the commander of the U.S. Strategic Command warned in urging for strengthened U.S. nuclear deterrence against the danger. Adm. Charles Richard, meeting with reporters at the command's annual conference on deterrence Thursday, said it was still unclear how far and how fast China is preparing to go with its nuclear arsenal, but that the challenge posed by Beijing was real and growing. "The threat posed to this nation, our allies from China is expanding at a breathtaking pace," the admiral said. "We don't know where that's going to wind up."

<https://www.washingtontimes.com/news/2022/jul/28/chinas-nuclear-arms-push-rising-challenge-stratcom/>

Eurasia

D. Kazakhstan

Kazakhstan Boosts Defense Spending Amid Ukraine Invasion – WSJ

The Moscow Times, July 25, 2022

Kazakhstan is significantly increasing its defense spending and seeking closer ties with China and NATO countries amid fears of Moscow's geopolitical ambitions spreading beyond Ukraine, The Wall Street Journal reported, citing a Kazakh official. The Central Asian country will commit an extra 441 billion tenge (\$918 million) to its defense budget, a nearly 1.5-fold increase over last year's budget of \$1.7 billion, WSJ reported. Part of the additional funds will be spent on strengthening its military reserves.

<https://www.themoscowtimes.com/2022/07/25/kazakhstan-boosts-defense-spending-amid-ukraine-invasion-wsj-a78400>

Europe

E. Albania

Widespread cyberattack blocks government and public websites in Albania

Euro News, July 19, 2022

Albanian authorities are investigating after the official government website was shut down on Monday after a major cyberattack. The "wide and complex" attack began on Friday and targeted government infrastructure and other public online services, according to a statement. It began as a ransomware attack as hackers tried to hit critical systems and render them functionless, the government added.

<https://www.euronews.com/2022/07/18/widespread-cyberattack-blocks-government-and-public-websites-in-albania>

F. European Union

'Historic moment': EU opens accession negotiations with Albania and North Macedonia

Euro News, July 19, 2022

Accession negotiations for North Macedonia and Albania started in Brussels on Tuesday in what was described as a "historic moment" for the two Western Balkans countries and for the European Union. "What a historic moment," European Commission President Ursula von der Leyen told reporters during a joint press statement with the leaders of the two countries. For North Macedonia, this moment has been 17 years in the making as the country of two million inhabitants first became a candidate country in 2005. But its road to EU accession was until now paved with vetoes.

<https://www.euronews.com/my-europe/2022/07/19/historic-moment-eu-opens-accession-negotiations-with-albania-and-north-macedonia>

EU slaps Russia with more sanctions over Ukraine war

Euro News, July 21, 2022

The European Union has imposed more sanctions on Russia over its invasion of Ukraine after the bloc's member states backed a series of measures that would include gold imports and tighten export controls on some high-technology goods. European Commission President Ursula von der Leyen said that the "reinforced, prolonged EU sanctions against the Kremlin" send "a strong signal to Moscow". EU officials have been seeking all week to tighten the extensive package of sanctions on Russia and looking at ways to add a ban on gold exports in hopes that the measures might finally start to have a decisive impact on the war in Ukraine.

<https://www.euronews.com/my-europe/2022/07/21/eu-slaps-russia-with-more-sanctions-over-ukraine-war>

EU puts forward new draft text to revive Iran nuclear deal

Euractiv, July 27, 2022

The European Union's foreign policy chief said on Tuesday (26 July), he has proposed a new draft text to revive the 2015 Iran nuclear deal, saying there is no room left for further major compromises. "I have now put on the table a text that addresses, in precise detail, the sanctions lifting as well as the nuclear steps needed to restore the JCPOA," the European Union's Josep Borrell wrote in an essay in the Financial Times. He referred to the 2015 deal called the Joint Comprehensive Plan of Action.

<https://www.euractiv.com/section/defence-and-security/news/eu-puts-forward-new-draft-text-to-revive-iran-nuclear-deal/>

G. France

Thales to supply Iraq with air-surveillance radars

Janes, 26 July, 2022

Iraq's Air Defence Command (ADC) will receive Thales radars in addition to the Lockheed Martin TPS-77. This was

announced during a ceremony marking the start of construction of a new operations centre for the military branch on 24 July. The Iraqi Ministry of Defence (MoD) released a video of the event in which Minister of Defence Juma Inad Sadoun said the "new operations centre will be connected to the new radar system that is being imported from the French company Thales".

<https://www.janes.com/defence-news/c4isr-command-tech/latest/thales-to-supply-iraq-with-air-surveillance-radars>

H. Netherlands

Netherlands orders counter-MANPADS solution from Elbit Systems

Janes, July 19, 2022

Elbit Systems will provide a Directional Infrared Counter Measures (DIRCM) system and an airborne electronic warfare (EW) system for a Netherlands Gulfstream G650 aircraft. Announced by the company on 14 July, the order involves the delivery of their J-Multi Spectral Infrared Countermeasure (J-MUSIC) DIRCM system and the Infrared-based Passive Airborne Warning System (IR-PAWS). According to the company, the systems will provide a high level of protection and redundancy, have accumulated hundreds of thousands of flight hours to date, and have been selected by Israel, Germany, and NATO's multinational fleet.

<https://www.janes.com/defence-news/industry-headlines/latest/netherlands-orders-counter-manpads-solution-from-elbit-systems>

I. Norway

Norway receives US Department of State approval for AMRAAM order

Janes, July 19, 2022

The US Department of State has approved a possible USD950 million Foreign Military Sale of AIM-120 C-8 or D Advanced Medium-Range Air-to-Air Missiles (AMRAAMs) to Norway, the US Defense

Security Cooperation Agency (DSCA) said on 15 July. The Norwegian government requested up to 205 Raytheon AIM-120 D-series AMRAAMs, up to 60 AIM-120 C-8 or D-series AMRAAMs, and four AIM-120D AMRAAM guidance sections. The request also included support equipment, spare parts, and maintenance support.

<https://www.janes.com/defence-news/industry-headlines/latest/norway-receives-us-department-of-state-approval-for-amraam-order>

J. Slovakia

Slovakia Enhances Efforts to Strengthen Occupational Radiation Protection

IAEA, July 26, 2022

Effective coordination, cooperation and consultation among responsible national authorities will play a crucial part in Slovakia's efforts to enhance the country's occupational radiation protection arrangements, a recent mission of the Occupational Radiation Protection Appraisal Service (ORPAS) concluded. The ORPAS mission, held from 27 June to 6 July and conducted by a team of experts from 12 countries and the IAEA, visited institutions employing some of Slovakia's 16 000 occupationally exposed workers as registered in the national database, including nuclear installations, medical and industrial facilities, and workplaces with exposure due to natural sources of radiation.

<https://www.iaea.org/newscenter/news/slovakia-enhances-efforts-to-strengthen-occupational-radiation-protection>

K. Ukraine

Update 87 – IAEA Director General Statement on Situation in Ukraine

IAEA, July 22, 2022

The Director General of the International Atomic Energy Agency (IAEA), Rafael Mariano Grossi, said recent reports about the Zaporizhzhya Nuclear Power Plant (ZNPP) indicate an increasingly alarming situation there and he called for maximum restraint to avoid any accident that could

threaten public health in Ukraine and elsewhere. The IAEA has not been able to visit the Russian-occupied facility in Ukraine's south since before the conflict began five months ago. It is therefore not in a position to confirm or deny the reports about the country's largest nuclear power plant (NPP), with six reactors.

<https://www.iaea.org/newscenter/pressreleases/update-87-iaea-director-general-statement-on-situation-in-ukraine>

L. United Kingdom

Farnborough 2022: RAF to launch post-Mosquito 'drone' effort later in 2022

Janes, July 18, 2022

The UK Royal Air Force (RAF) is to launch an industry effort to develop and bring into service unmanned aerial vehicles (UAVs) at a faster pace than the recently cancelled Mosquito 'loyal wingman' programme. Speaking ahead of the Farnborough Airshow, the Chief of the Air Staff, Air Chief Marshal Sir Mike Wigston, said that this effort will be launched in the third quarter of 2022, as his service seeks to take 'in another direction' the Lightweight Affordable Novel Combat Aircraft (LANCA) programme that spawned the Mosquito.

<https://www.janes.com/defence-news/air-platforms/latest/farnborough-2022-raf-to-launch-post-mosquito-drone-effort-later-in-2022>

Farnborough 2022: BAE Systems 'in a good place' to meet UK's UAS Challenge

Janes, July 18, 2022

BAE Systems feels it is "in a good place" to meet the United Kingdom's upcoming Unmanned Aircraft System (UAS) Challenge to develop quick-to-field uncrewed aircraft, unveiling its UAS Concept family of systems ahead of the Farnborough Airshow. BAE Systems' head of the future systems, Steve Reeves, told Janes on 15 July that the company's UAS Concept family could provide the Ministry of Defence (MoD) with the options it is

looking for under the UAS Challenge announced just the day before by chief of the Air Staff Air Chief Marshal Sir Mike Wigston.

<https://www.janes.com/defence-news/air-platforms/latest/farnborough-2022-bae-systems-in-a-good-place-to-meet-uks-uas-challenge>

Farnborough 2022: UK-Japan firms agree on combat sensor concept for FCAS/F-X

Janes, July 19, 2022

An advanced combat air sensor technology demonstrator called Jaguar has moved closer to development, following agreements at Farnborough International Airshow. Leonardo UK and Mitsubishi Electric announced on 18 July that they have agreed on the concept for the sensor. Leonardo UK said that this follows the completion of joint concept work and feasibility studies conducted earlier in 2022. The Jaguar is intended to benefit the UK's Future Combat Air System (FCAS) and Japan's F-X advanced fighter programmes. Janes has earlier reported that Tokyo is interested in joint development of the F-X sixth-generation fighter with the UK.

<https://www.janes.com/defence-news/air-platforms/latest/farnborough-2022-uk-japan-firms-agree-on-combat-sensor-concept-for-fcas-f-x>

Farnborough 2022: Thales Alenia Space downselected for UK ISTARI programme

Janes, July 21, 2022

Thales Alenia Space UK – a joint venture (JV) between Thales and Leonardo – has been downselected for an early-stage study of the UK ISTARI programme. Speaking to Janes at the Farnborough Airshow 2022, Mark Hewer, the CEO of Telespazio UK, said that Thales Alenia Space UK was downselected by the UK Ministry of Defence (MoD) on 1 July to provide a firm proposal for an intelligence, surveillance, and reconnaissance (ISR) constellation demonstration.

<https://www.janes.com/defence-news/industry-headlines/latest/farnborough-2022-thales-alenia-space-downselected-for-uk-istari-programme>

QinetiQ conducts demo of laser-controlled UAS

Janes, 26 July, 2022

QinetiQ has conducted the world's first demonstration of an airborne unmanned platform controlled through a laser communication system, the company announced on 20 July. The demonstration involved an unmanned aerial system (UAS) controlled by a ground-based operator using free-space optical communications (FSOC) as a bidirectional link in its mission communication system to transmit control commands and receive sensor and platform information, the company stated.

<https://www.janes.com/defence-news/air-platforms/latest/qinetiq-conducts-demo-of-laser-controlled-uas>

RAF unveils Next Generation Force Protection Vision

Janes, 26 July, 2022

The UK Royal Air Force (RAF) unveiled multiple components of its Next Generation Specialist Air Force Protection Vision for the first time at the Air and Space Chiefs' Conference held in London between 13 and 14 July. RAF officials said at the event that the concept, also referred to as Next Generation Force Protection (NGFP), will be rolled out between 2022 and 2040, subject to funding. Budget requests are expected to be submitted to the UK Ministry of Defence (MoD) later in 2022.

<https://www.janes.com/defence-news/air-platforms/latest/raf-unveils-next-generation-force-protection-vision>

UK MoD seeks ground segment solution for space ISR constellation

Janes, July 29, 2022

The UK Ministry of Defence (MoD) has launched a new GBP20 million (USD24.2 million) 36-month project named Beroe, which seeks a ground segment software solution for controlling the UK's space-

based intelligence, surveillance, and reconnaissance (ISR) constellation. Announced by the MoD on 25 July, the contracting authority – Defence Equipment & Support (DE&S) – is seeking a supplier(s) that can provide a ground segment software solution for tasking, monitoring, and controlling the UK's future ISR low Earth orbit satellite constellation.

<https://www.janes.com/defence-news/air-platforms/latest/uk-mod-seeks-ground-segment-solution-for-space-isr-constellation>

M. United States of America

DARPA conducts 'successful' live-fire test with OpFires hypersonic weapon

Janes, July 18, 2022

The US Defense Advanced Research Projects Agency (DARPA) recently conducted the first flight test of its new, 'highly mobile' Operational Fires (OpFires) hypersonic weapon at White Sands Missile Range in New Mexico. "The OpFires system achieved all test objectives, including first-ever use of a US Marine Corps (USMC) logistics truck as a medium-range missile launcher, missile canister egress, stable flight capture, and use of US Army inventory artillery fire-control systems to initiate the test mission," DARPA wrote in a 13 July announcement.

<https://www.janes.com/defence-news/industry-headlines/latest/darpa-conducts-successful-live-fire-test-with-opfires-hypersonic-weapon>

Raytheon-Northrop Grumman team complete second HAWC test

Janes, July 20, 2022

A Raytheon and Northrop Grumman team completed the second free flight test of a Hypersonic Air-breathing Weapon Concept (HAWC) for a joint Defense Advanced Research Projects Agency (DARPA) and US Air Force (USAF) effort. DARPA released details about the event on 18 July and said that during the test, the weapon's scramjet engine, built by Northrop Grumman, ignited after it was released from an aircraft. The HAWC then flew at speeds greater than five times the speed of sound (Mach 5) for over

300 n miles, and reached altitudes greater than 60,000 ft.

<https://www.janes.com/defence-news/air-platforms/latest/raytheon-northrop-grumman-team-complete-second-hawc-test>

DoD sees LEO, MEO satellites as future of US missile defence

Janes, July 25, 2022

Senior policy decision makers at the US Department of Defense (DoD) and US Space Force (USSF) are seeking to transition the US missile defence apparatus away from geosynchronous (GEO) satellite constellations, in favour of those that operate at low Earth Orbit (LEO) and mid Earth orbit (MEO), a top Pentagon official said. "As the future progresses ... the department should move away from these larger satellites in the highly elliptical orbits and the satellites at geosynchronous, and in the future go to a proliferated [tracking] layer at low Earth orbit (LEO) and mid Earth orbit (MEO)," Derek Tournear, head of the Pentagon's Space Development Agency (SDA), said during an 18 July briefing at the Pentagon.

<https://www.janes.com/defence-news/industry-headlines/latest/dod-sees-leo-meo-satellites-as-future-of-us-missile-defence>

Lockheed Martin, IAI incorporate Elta Systems radar in integrated air defence offering

Janes, July 25, 2022

Lockheed Martin and Israel Aerospace Industries (IAI) are incorporating an Elta Systems radar as part of an integrated medium-range air-defence (MRAD) solution, Janes has learned. In March 2022 Lockheed Martin and IAI announced that they would partner to offer a solution that combines the Lockheed Martin UK-developed SkyKeeper ground-based air-defence (GBAD) and battle management capability with IAI's Barak MX surface-to-air missile system.

<https://www.janes.com/defence-news/industry-headlines/latest/lockheed-martin-iai-incorporate-elta-systems-radar-in-integrated-air-defence-offering>

AARGM-ER hits land-based radar system in third live-fire test for US Navy

Janes, July 27, 2022

The US Navy completed a third live-fire development test (DT3) of the Northrop Grumman AGM-88G Advanced Anti-Radiation Guided Missile – Extended Range (AARGM-ER) off a Boeing F/A-18 Super Hornet, the company announced on 21 July. “AARGM-ER performed as expected and detected, identified, located, and engaged a land-based air-defence radar system,” Captain Alex Dutko, navy programme manager for Direct and Time Sensitive Strike (PMA-242), wrote in the press release.

<https://www.janes.com/defence-news/air-platforms/latest/aargm-er-hits-land-based-radar-system-in-third-live-fire-test-for-us-navy>

N. Canada

Update: Top Aces eyes European ADAIR programmes

Janes, July 22, 2022

Montreal, Canada-headquartered adversary air (ADAIR) and close air support (CAS) services provider Top Aces is targeting a number of European ADAIR programmes and has expanded to support its efforts, company representatives have told Janes. “The US has always led the field when it comes to the use of aggressor aircraft and many European nations have held a more conservative view about the benefits of this type of training,” said David Bradshaw, a former Royal Air Force (RAF) air commodore, who has joined the company as director of business development – Europe, adding “One major exception has been Germany with its SFZD [Schnelle Flugziieldarstellung] programme.”

<https://www.janes.com/defence-news/air-platforms/latest/update-top-aces-eyes-european-adair-programmes>

ARC, CNL team up on SMR fuel fabrication

World Nuclear News, July 27, 2022

ARC Clean Energy Canada has partnered with Canadian Nuclear Laboratories (CNL)

to deliver a technology demonstration of the fuel fabrication process for ARC’s ARC-100 advanced small modular reactor (SMR). ARC’s ARC-100 is a 100 MWe sodium-cooled fast reactor based on proven technology developed at the Experimental Breeder Reactor-II (EBR II) sodium-cooled fast-reactor, which operated successfully at the US government’s Argonne National Laboratory for 30 years.

<https://www.world-nuclear-news.org/Articles/ARC,-CNL-team-up-on-SMR-fuel-fabrication>

West Asia

O. Iran

Iran Navy unveils drone carrier

Tehran Times, July 16, 2022

The Iranian Army’s Navy has unveiled the first drone carrier that includes a variety of modern and advanced types of drones that were produced and manufactured by Iranian experts in the Army and the Ministry of Defense. The naval division, which joined the southern fleet, consists of military ships and submarines carrying a broad range of combat, reconnaissance and suicide drones, according to Tasnim. The event, held on Friday, was attended by Army Commander Major General Abdolrahim Mousavi and Navy Commander Rear Admiral Admiral Shahram Irani . The UAVs aboard the naval division include advanced aircraft manufactured by the Army and the Defense Ministry in cooperation with the knowledge-based centers, including Pelican, Homa, Arash, Chamrosh, Jubin, Ababil-4 and Bavar-5 drones, which flew over the Indian Ocean waters.

<https://www.tehrantimes.com/news/474741/Iran-Navy-unveils-drone-carrier>

Iranian officials say decision is theirs to build bomb

Al-Monitor, July 18, 2022

Iranian officials have created a storm of controversy over the weekend with comments regarding Iran’s nuclear capabilities. The first official to speak

about it was Khamal Kharazi, adviser to Supreme Leader Ayatollah Ali Khamenei and chairman of the Strategic Council of Foreign Relations. During an interview with Al Jazeera on July 17, Kharazi was asked about the indirect nuclear negotiations between Iran and the United States to revive the 2015 Joint Comprehensive Plan of Action (JCPOA). Kharazi said that given the US actions, especially their withdrawal from the deal in 2018, "It is difficult to conduct direct negotiations." Kharazi added, "It is known to everyone that we have the technical ability to build a nuclear bomb, but we have not made a decision to do this. In the span of a few days, we increased enrichment from 20% to 60% and we could easily enrich to 90%."

<https://www.al-monitor.com/originals/2022/07/iranian-officials-say-decision-theirs-build-bomb#ixzz7asTyrD8D>

Iran's Khamenei tells Erdogan to avoid military action in north Syria

Al-Monitor, July 19, 2022

Iran's Supreme Leader Ayatollah Ali Khamenei cautioned Turkey's President Recep Tayyip Erdogan today against launching an operation into Syria, a plan that has been in Ankara's pipeline for weeks. "Any military offensive into Syria's north will definitely harm Turkey, Syria and the greater region, and will benefit the terrorists," Khamenei told the visiting Turkish leader during a meeting in Tehran July 19. According to Khamenei's website, he did not specify who those "terrorists" were, but underscored the importance Iran attaches to Syria's territorial integrity. Turkey recently threatened an incursion into Syria's autonomous north controlled by People's Protection Units, a Kurdish group known by its Kurdish acronym, the YPG.

<https://www.al-monitor.com/originals/2022/07/irans-khamenei-tells-erdogan-avoid-military-action-north-syria#ixzz7asUIA8x9>

Iran: We will negotiate on nuclear deal until sanctions are removed

Al-Monitor, July 20, 2022

Iran's Foreign Minister Hossein Amir-Abdollahian discussed the ongoing nuclear

negotiations to revive the 2015 Joint Comprehensive Plan of Action today. In a video message, Amir-Abdollahian said, "To remove the sanctions, Iran will pursue negotiations while by abiding by its red lines." He added that Iran will "not leave the negotiations and sees logical and honorable negotiations to reach a deal as right." Amir-Abdollahian continued, "The American side has repeatedly stated that due to domestic problems it is not able to accept and be committed to the what has been discussed in the negotiations." He added, "Iran has been the most committed to the agreement and welcomes a good, strong and durable agreement and to reach an agreement to remove sanctions we will move in the direction of negotiations."

<https://www.al-monitor.com/originals/2022/07/iran-we-will-negotiate-nuclear-deal-until-sanctions-are-removed#ixzz7asUZHNsf>

Iran Expedites Building Phases 2, 3 of Bushehr Nuclear Power Plant

Fars News Agency, July 23, 2022

Head of the Atomic Energy Organization of Iran (AEOI) Mohammad Eslami underlined that the construction of the second and third phases of the Bushehr Nuclear Power Plant has been expedited to overcome the Islamic Republic's need to diverse power generation resources. "After a tour of the region by President Ebrahim Raisi a few months ago, the pace of construction of the new phases expedited for electricity generation purposes," Eslami said while visiting the central Iranian city of Khondab on Friday. He pointed out that the new project is part of the plan to increase the electricity generation capacity across the nation by 10,000 megawatts. "Bushehr power plant currently generates 1,000 megawatts of electricity which is injected into the national grid as clean and pollution-free energy that has been effective in regulating the grid load," Eslami added. He, meanwhile, said that the heavy water complex and the reactor in Khondab have created a great scientific, industrial and research capacity.

<https://www.farsnews.ir/en/news/14010501000670/Iran-Expedies-Bilding-Phases-2-3-f-Bshehr-Nclear-Pwer-Plan>

Iran emerging as drone power

Tehran Times, July 24, 2022

After years of assiduous efforts, Iran has now mastered the process of producing state-of-the-art drones, something that has added another element to Iran's military prowess. Iran's drone capabilities are nothing new. Over the last decade, Iran, thanks to its native scientists, has succeeded in developing a full range of combat, reconnaissance, and surveillance drones. The latest major achievement in this regard was unveiled earlier this month when the Iranian Army's navy inaugurated Iran's first drone carrier which included a variety of modern and advanced types of drones all produced and manufactured by Iranian experts in the Army and the Ministry of Defense. Officials have highlighted the progress Iran has made in developing drones, which have increased Iran's power exponentially. Two weeks ago, a lawmaker said Iran's drone capabilities have increased the strength of Iran and the Resistance Axis. Mehrdad Veis-Karami told Iran's state news agency IRNA that the Axis is now enjoying drone and missile power.

<https://www.tehrantimes.com/news/475003/Iran-emerging-as-drone-power>

AEOI Chief: Iran Not to Turn on Beyond-Safeguards Cameras Before JCPOA Revival

Fars News Agency, July 25, 2022

Head of the Atomic Energy Organization of Iran (AEOI) Mohammad Eslami stated on Monday that Tehran will keep the International Atomic Energy Agency (IAEA) cameras, which had been installed beyond the country's undertakings under the safeguards agreement, switched off until the nuclear deal is fully restored. "Those cameras are related to the nuclear deal," Eslami reminded. The Iranian official noted that when the Western parties to the 2015 accord return to the agreement, and "Tehran is assured that they will not commit any acts of mischief, AEOI will make a decision on the cameras". Iran announced

in early June that it has removed the IAEA surveillance cameras that functioned beyond the safeguards agreement, after the United Nations Agency's chief Rafael Grossi started escalating tensions against Tehran. The AEOI announced at the time that the UN atomic body has not appreciated Iran's good-will gesture and has instead viewed Tehran's voluntary move as part of its undertakings.

<https://www.farsnews.ir/en/news/14010503000715/AEOI-Chief-Iran-N-Trn-n-Beynd-Safegards-Cameras-Befre-JCPOA-Revival>

Iran to propel brand-new satellite into space by year's end

Tehran Times, July 25, 2022

Iran will launch a new satellite into orbit by the end of the current Iranian year, which ends on March 20, 2023. The statement was made on Sunday on the side-lines of the 12th Malek Ashtar Festival in Tehran by Brigadier General Amir Ali Hajizadeh, chief of the IRGC Aerospace Division. Hajizadeh said the Qaem satellite carrier will be used to launch the new home-grown satellite into space. He added this will be a continuation of the country's achievements in the field of aerospace technology. The IRGC Aerospace Division commander also said the adversary now acknowledges Iran's military capabilities. It will be Iran's third military satellite into space. The nation put its second satellite, Nour-2, into orbit in March 2022, and its first spacecraft, Nour-1, in April 2020. The orbiter, which was charged with conducting reconnaissance missions, was launched from a launchpad located in Iran's Dasht-e Kavir desert aboard the domestically produced satellite carrier Qassed. It traveled 6.7 km/s for 480 seconds before entering orbit at a 500 km height.

<https://www.tehrantimes.com/news/475046/Iran-to-propel-brand-new-satellite-into-space-by-year-s-end>

Iran's nuclear chief: IAEA cameras remain off until JCPOA is restored

Tehran Times, July 25, 2022

The head of the Atomic Energy Organization of Iran (AEOI) said on Monday that the Islamic Republic will keep the UN nuclear watchdog's cameras turned off until the 2015 nuclear deal, officially called the Joint Comprehensive Plan of Action (JCPOA), is restored. Iran informed the International Atomic Energy Agency (IAEA) that it had removed IAEA equipment, including 27 cameras installed under the 2015 pact, after the IAEA Board of governors passed a resolution in June criticizing Tehran. "We will not switch on the Agency cameras until the other side returns to the nuclear deal," Mohammad Eslami stated. Eslami also urged IAEA Director General Rafael Grossi to avoid raising questions that had already been resolved based on the JCPOA.

<https://www.tehrantimes.com/news/475045/Iran-s-nuclear-chief-IAEA-cameras-remain-off-until-JCPOA-is>

IRGC Navy boats armed with stealth technology

Tehran Times, July 26, 2022

Commander of the Islamic Revolution Guard Corps (IRGC) Navy announced on Monday that Iran has equipped the hulls of its boats with stealth technology and is trying to use domestically made hulls. Speaking on the sidelines of an IRGC award giving ceremony, Rear Admiral Alireza Tangsiri noted that over the past 3 years, the IRGC Navy has seen more 8 new military equipment. Tangsiri considered one of the honors of the navy and the IRGC to be the use of domestic knowledge and products by Iranian scientists. He continued, "Our navy is a completely strategic force and everything that exists in other forces is also at our disposal, from tanks and water tanks to fixed-wing aircraft and drones." Therefore, he added, the IRGC Navy has always tried to be in close communication and continuous cooperation with other forces and military units as well as the

defense ministry in production of systems and equipment.

<https://www.tehrantimes.com/news/475085/IRGC-Navy-boats-armed-with-stealth-technology>

Iran's N. Chief: Construction of Research Reactor to Start within Weeks

Fars News Agency, July 28, 2022

Head of the Atomic Energy Organization of Iran (AEOI) Mohammad Eslami said that the building of a new research reactor in the Central city of Isfahan will begin in coming weeks. "The research reactor to test fuel for other reactors will be built at the Isfahan Nuclear Technology Center," the head of the AEOA noted during a visit to the Uranium Conversion Facility (UCF) of the Isfahan site on Wednesday. "We have planned that based on the studies carried out, we will officially start the construction of the research reactor at the Isfahan site in the coming weeks," Eslami added. "It must be said that this project is completely indigenous and Iranian, which will complete the chain of research, evaluation, testing and assurance of our nuclear power production," he continued. Eslami noted the nuclear fuel cycle is the most important part of the nuclear industry.

<https://www.farsnews.ir/en/news/14010506000265/Iran's-N-Chief-Cnsrcin-f-Research-Reacr-Sar-wihin-Weeks>

Iran Appoints New Representative to IAEA, UN Offices in Vienna

Fars News Agency, July 29, 2022

Mohsen Naziri Asl was appointed as Iran's new representative to the International Atomic Energy Agency (IAEA) and other UN offices in Vienna. Naziri Asl was also appointed as Iran's new ambassador and permanent representative to the United Nations Office in Vienna. Naziri Asl succeeded Kazzem Qaribabadi who was the last Permanent Representative of Iran to the UN Office in Vienna. He has served as Iran's Permanent

Representative to International Organizations in Geneva before.

<https://www.farsnews.ir/en/news/14010507000277/Iran-Appins-New-Represenaive-IAEA-UN-Offices-in-Vienna>

Iran succeeded to develop precision-strike ballistic missiles under sanctions: general

Tehran Times, July 29, 2022

Iran mastered the technology to build ballistic missiles and drones with pinpoint accuracy while under crippling sanctions, the commander-in-chief of the Islamic Revolution Guards Corps (IRGC) has said.

Speaking at a student gathering in Mashhad, General Hossein Salami said, "With this technology, a drone can travel a distance of more than 2,000 kilometers from any point and strike a moving target or a certain point." He added, "We achieved even stronger technologies. Today, we are not behind others in quantum technology."

Such sanctions that have been imposed on Iran would have dismantled any other country, IRNA quoted the top general as saying. He added, "We know that there are problems but we also know that climbing summits is a difficult job."

<https://www.tehrantimes.com/news/475160/Iran-succeeded-to-develop-precision-strike-ballistic-missiles>

AEOI: Iran's Nuclear Facilities 90 Percent Home-Made

Fars News Agency, July 31, 2022

The Atomic Energy Organization of Iran announced that the country's nuclear industries conduct their activities by utilizing equipment built 90 percent domestically. AEOI Deputy Head Pejman Shirmardi pointed out that the AEOI's achievements are the winning card of the negotiating team and the biggest fear of the western negotiator while science and technology used for making the achievements are native. Shirmardi reiterated that about 90 percent of the equipment in the field of

nuclear technology has been domestically produced which is the result of the efforts of the Iranian scientists, and this would not have been achieved if the country depended on foreign powers.

<https://www.farsnews.ir/en/news/14010509000271/AEOI-Iran's-Nuclear-Facilities-90-Perce-Hme-Made>

P. Saudi Arabia

US President Biden to discuss regional missile, defense capabilities in Saudi Arabia

Alarabiya, July 16, 2022

US President Joe Biden will discuss regional missile and defense capabilities on Saturday when he meets Arab leaders in Saudi Arabia, where he will be seeking to integrate Israel as part of a new axis largely driven by shared concerns over Iran, said a senior administration official. "We believe there's great value in including as many of the capabilities in this region as possible and certainly Israel has significant air and missile defense capabilities, as they need to. But we're having these discussions bilaterally with these nations," the administration official told reporters. Biden, on his first Middle East trip as president, has focused on the planned summit with six Gulf states and Egypt, Jordan and Iraq.

<https://english.alarabiya.net/News/gulf/2022/07/16/US-President-Biden-to-discuss-regional-missile-defense-capabilities-in-Saudi-Arabia>

Q. United Arab Emirates

UAE: Hot functional test on fourth reactor completed at Barakah Nuclear Energy Plant

Gulf News, July 21, 2022

Pre-operational testing on the fourth reactor's cooling and safety systems at Barakah Nuclear Energy Plant has been completed, Emirates Nuclear Energy Corporation (Enec) announced today. Hot functional testing (HFT) on Unit 4, which exposed the reactor to extreme heat,

showed that all systems performed in line with the required quality and safety standards. HFT takes place over a series of weeks and consists of nearly 200 individual and integrated tests performed on major systems to check their performance under normal operational conditions, without the presence of nuclear fuel in the reactor. Enec said the successful completion of the tests demonstrates the integrity and robustness of the building structure and its ability to perform safely under normal and extraordinary circumstances.

<https://gulfnews.com/uae/science/uae-hot-functional-test-on-fourth-reactor-completed-at-barakah-nuclear-energy-plant-1.89431468>

East Asia

R. North Korea

N Korea ready to conduct nuclear test 'at any time': S Korean Prez

Business Standard, July 22, 2022

South Korean President Yoon Suk-yeol said on Friday that North Korea is ready to conduct a nuclear test at any time it decides. Yoon was responding to a reporter's question about the US Department of Defence's assessment that the North has completed preparations to carry out a nuclear test as early as within the month, Yonhap news agency reported.

"We believe that not only at the end of this month, but ever since my inauguration, it's fully ready and able to do it whenever it decides," he told reporters as he arrived for work.

https://www.business-standard.com/article/international/n-korea-ready-to-conduct-nuclear-test-at-any-time-s-korean-prez-122072200221_1.html

North Korea's Kim Jong Un threatens to use nukes amid tension with U.S., South Korea

The Hindu, July 28, 2022

North Korean leader Kim Jong Un has warned he's ready to use his nuclear weapons in potential military conflicts with the United States and South Korea. North

Korean leader Kim Jong Un warned he's ready to use his nuclear weapons in potential military conflicts with the United States and South Korea, state media said Thursday, as he unleashed fiery rhetoric against rivals he says are pushing the Korean Peninsula to the brink of war. Mr. Kim's speech to war veterans on the 69th anniversary of the end of the 1950-53 Korean War was apparently meant to boost internal unity in the impoverished country amid pandemic-related economic difficulties. While Mr. Kim has increasingly threatened his rivals with nuclear weapons, it's unlikely that he would use them first against the superior militaries of the U. S. and its allies, observers say.

<https://www.thehindu.com/news/international/north-koreas-kim-jong-un-threatens-to-use-nukes-amid-tension-with-us-south-korea/article65694067.ece>

UN stands against nuclear rhetoric as North Korea readies forces

The Print, July 28, 2022

The United Nations is against any rhetoric involving threats to use of nuclear weapons, UN spokesperson Farhan Haq said on Thursday after North Korea warned it is ready to mobilize its nuclear forces. "We are against all rhetoric involving the use of such deadly weapons and of course, we continue to call for resumed negotiations on the peaceful denuclearization of the Korean Peninsula," Haq told a briefing.

<https://theprint.in/world/un-stands-against-nuclear-rhetoric-as-north-korea-readies-forces/1059722/>

S. Japan

No issues at Sendai nuclear plant in Japan near erupted volcano: Regulators

Alarabiya News, July 24, 2022

Japan's nuclear regulators said on Sunday no irregularities had been detected at the Sendai nuclear power plant after the nearby Sakurajima volcano erupted. The nuclear facility on Japan's western major

island of Kyushu is located some 50 km (31 miles) northwest of Sakurajima, a volcano that erupted at about 8:05 p.m. (1105 GMT). At around 10:00 p.m. or two hours after the eruption, a Japanese government spokesperson told reporters the government had not heard of any damage from the eruption.

<https://english.alarabiya.net/News/world/2022/07/24/No-issues-at-Sendai-nuclear-plant-in-Japan-near-erupted-volcano-Regulators>

High anxiety as Japan takes another step toward releasing wastewater from crippled Fukushima nuclear plant into sea

CBS News, July 25, 2022

The fishing industry around Japan's Fukushima coast expressed disappointment and resignation over the weekend as long-expected plans to start releasing treated wastewater into the ocean from the crippled Fukushima Daiichi nuclear power plant moved one step closer to reality. The drastic measure has been adopted as the only practical way out of a dilemma that's plagued the damaged plant for more than a decade. Late last week, Japan's national nuclear regulator formally endorsed the plan to discharge more than 1 million tons of wastewater from the plant into the sea off Japan's Pacific coast. The water will be filtered first to remove about 60 radioactive isotopes, with the exception of tritium, which can't be extracted using existing technology. After inspection and dilution with seawater, the water will be pumped out beyond Japan's fishing zones through a 0.6-mile-long undersea tunnel, which will be carved through ocean bedrock starting near the Fukushima Daiichi plant's reactor number 5.

<https://www.cbsnews.com/news/japan-fukushima-daiichi-nuclear-plant-wastewater-release-into-sea-approved/>

Kishida to call for nuke-free world in historic address at U.N. treaty conference

The Japan Times, July 31, 2022

In a year in which nuclear disarmament hopes have been dented by not-so-subtle

references by Russia to its own arsenal following its invasion of Ukraine, Prime Minister Fumio Kishida is set to make history as the first Japanese leader to address the United Nations' nuclear nonproliferation treaty review conference, which begins in New York on Monday. Kishida, who represents a district in Hiroshima, is expected to call for a world without nuclear weapons and for greater transparency among nuclear powers regarding their stockpiles and capabilities. His message will refer to Japan's experience as the only country to have been attacked with an atomic bomb. The leader will also stress that all countries should neither use nuclear weapons nor threaten to use them.

<https://www.japantimes.co.jp/news/2022/07/31/national/nuclear-conference-kishida-speech/>

T. Australia

Australian Bushmasters to receive Raytheon EW upgrade

Janes, July 19, 2022

Raytheon has secured a AUD75 million contract (USD51 million) to deliver electronic warfare (EW) capabilities to the Australian Defence Force (ADF), Australia's Minister for Defence Industry Pat Conroy announced on 18 July. Raytheon has been contracted to deliver a "Bushmaster protected mobility vehicle-medium based force level" EW capability to the Australian Army "under Tranche 2 of the Land 555 Phase 6 project", a spokesperson for the Australian Department of Defence (DoD) told Janes on 18 July.

<https://www.janes.com/defence-news/c4isr-command-tech/latest/australian-bushmasters-to-receive-raytheon-ew-upgrade>

Drone Shield, AMC partner on Australian missiles

Janes, July 21, 2022

Sydney-headquartered DroneShield and the Australian Missile Corporation (AMC) announced on 21 July an agreement to cooperate on capabilities to support

Australia's Guided Weapons and Explosive Ordnance (GWEO) enterprise programme. DroneShield's CEO Oleg Vornik told Janes that the scope of collaboration will be focused on counter-drone technologies and electronic warfare systems. He said, "The collaboration is effective as of now." A press release by the two companies said they will explore "counter-drone security prevalent in current battlefield as seen with the Ukraine war as well as electronic warfare and associated artificial intelligence works".

<https://www.janes.com/defence-news/air-platforms/latest/droneshield-amc-partner-on-australian-missiles>

Australia approved for JASSM-ER package

Janes, July 25, 2022

The Royal Australian Air Force (RAAF) is set to acquire an initial suite of Lockheed Martin AGM-158B Joint Air-to-Surface Standoff Missiles-Extended Range (JASSM-ER) – potentially including the latest AGM-158B-2 JASSM 'extreme range' variant – following US State Department approval of the possible Foreign Military Sale (FMS) to Australia. According to a US Defense Security Cooperation Agency (DSCA) notification on 21 July, the estimated USD235 million FMS package includes provision for 80 JASSM-ER missiles (AGM-158B with telemetry kits and/or AGM-158B-2 configurations) along with JASSM training missiles, missile containers, and support equipment.

<https://www.janes.com/defence-news/air-platforms/latest/australia-approved-for-jassm-er-package>

Update: CEA Technologies to build air-defence radars for ADF

Janes, July 27, 2022

Canberra-based CEA Technologies has secured a "multimillion-dollar" contract from the Australian Department of Defence (DoD) to build four new air-defence radars, Australia's Minister for Defence Industry Pat Conroy announced on 21 July. "The new sensors will be able to detect aircraft and

missile threats at greater ranges and with increased accuracy than our current systems, allowing for real-time critical information to be received and affording greater warning, decision, and response time," Conroy said. The new radars use active electronically scanned array (AESA) technology and will replace "four in-service radars" of the Australian Defence Force (ADF), a spokesperson for the DoD told Janes on 27 July.

<https://www.janes.com/defence-news/c4isr-command-tech/latest/update-cea-technologies-to-build-air-defence-radars-for-adf>

U. New Zealand

Phil Twyford to attend Nuclear Non-Proliferation Treaty meeting

Beehive, July 29, 2022

Disarmament and Arms Control Minister Phil Twyford will lead Aotearoa New Zealand's delegation to the Nuclear Non-Proliferation Treaty (NPT) Review Conference at the United Nations in New York next week. "Aotearoa New Zealand has a long history of advocating for a world free of nuclear weapons," Phil Twyford said. "The NPT has been the cornerstone of international nuclear disarmament and non-proliferation since 1970, and has been successful in limiting the spread of nuclear weapons. But progress on implementation of the Treaty's disarmament obligations has been less impressive, and there are signs of a new nuclear arms race.

<https://www.beehive.govt.nz/release/phil-twyford-attend-nuclear-non-proliferation-treaty-meeting>

V. Opinion

Old Wine in a Broken Bottle? South Asian Perspectives on a Nuclear-Weapon Ban

ORF, July 19, 2022

South Asia as a region has been critical of the global nuclear order in both ideational and empirical terms. That order – in its current form as represented by the NPT

and ancillary arrangements – has had an interactive relationship with the region ranging in intensity from instrumental to integral. Unsurprisingly, the stakes are significant for India and the global nuclear order, and this is anchored in the ineluctable fact that the South Asian country has been and continues to be an outlier in terms of its position on nuclear disarmament within the global nuclear order. Incidentally, Pakistan also opposed the TPNW's creation (Ministry of Foreign Affairs, Pakistan 2017) – both the Indian and Pakistani official responses highlighted the TPNW's inability to advance the creation of customary international law.

<https://www.orfonline.org/research/south-asian-perspectives-on-a-nuclear-weapon-ban/>

C. Raja Mohan writes: It's time India and Japan rethink their nuclear policy

C Raja Mohan

Indian Express, July 26, 2022

Last week's report on Asian nuclear transitions by Ashley Tellis of the Carnegie Endowment for International Peace and Japan's debate on its atomic options underline the shared security challenges for Delhi and Tokyo. At the root of that common nuclear challenge is the continuing growth in Chinese military power and the rapid modernisation of Beijing's nuclear arsenal. India and Japan may have had good reasons until now to take a relaxed view of Chinese nuclear weapons. Both believed China's modest nuclear arsenal does not pose an existential challenge to either of them. But three factors compel them to rethink this complacent calculus.

<https://indianexpress.com/article/opinion/columns/its-time-india-and-japan-rethink-their-nuclear-policy-8051160/>

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The Indian Pugwash Society aims to promote the study, discussion, and knowledge of and to stimulate general interest in, and to diffuse knowledge in regards to problems relating on WMD proliferation, arms control, disarmament, space security, export controls, nuclear technology and other related issues. This newsletter is part of the project "Emerging Nuclear Order in Asia: Implications for India" sanctioned to us by Department of Atomic Energy-Board of Research in Nuclear Sciences (DAE-BRNS).

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