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A Fortnightly Newsletter from the Indian Pugwash Society

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A. India

Successful firing of extended range version of Brahmos Air Launched Missile from SU-30 MKI Aircraft

PIB, May 12, 2022

India, today successfully fired the Extended Range Version of BrahMos Air Launched missile from Su-30 MKI fighter aircraft. The launch from the aircraft was as planned and the missile achieved a direct hit on the designated target in the Bay of Bengal region. It was the first launch of Extended Range version of BrahMos missile from Su-30MKI aircraft. With this, the IAF has achieved the capability to carry out precision strikes from Su-30MKI aircraft against a land/ sea target over very long ranges. The dedicated and synergetic efforts of the IAF, Indian Navy, DRDO, BAPL and HAL have proven the capability of the nation to achieve this feat. The extended range capability of the missile coupled with the high performance of the Su-30MKI aircraft gives the IAF a strategic reach and allows it to dominate the future battle fields.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1824795>

ISRO successfully tests large human rated solid rocket booster for the Gaganyaan programme

ISRO (Press Release), May 13, 2022

ISRO successfully completed the static test of a human-rated solid rocket booster (HS200) for the Gaganyaan Programme at Satish Dhawan Space Centre (SDSC), Sriharikota, Andhra Pradesh on May 13, 2022, at 7:20 AM local time. HS200 rocket booster is the human-rated version of the well-proven S200 rocket booster of GSLV Mk III satellite launch vehicle, popularly known as LVM3. The successful completion of this test marks a major milestone for the prestigious human space flight mission of ISRO, the Gaganyaan, as the first stage of the launch vehicle is tested for its performance for the full duration. The event was witnessed by Shri S Somanath, Chairman, ISRO / Secretary, Department of Space and Dr. S Unnikrishnan Nair,

Director, VSSC along with other ISRO scientists. Design and development of the HS200 booster were completed at Vikram Sarabhai Space Centre (VSSC), Thiruvananthapuram and propellant casting was completed at SDSC, Sriharikota.

<https://www.isro.gov.in/update/13-may-2022/isro-successfully-tests-large-human-rated-solid-rocket-booster-gaganyaan>

BS Number Wise: In India's coal crisis, a question about nuclear power

Business Standard, May 18, 2022

India's coal-based power plants produce more than half of its electricity, but the fuel is polluting and the logistics to transport it quickly in peak demand daunting. As the country considers other fuels, can nuclear energy be a long-term solution? The government said in March that it will next year begin work in Karnataka on a new nuclear power reactor, moving ahead on plans announced earlier for ten such facilities. Britain and Belgium, too, are reviewing nuclear power for energy security. The rethink reverses a decade-long global slowdown after Japan's Fukushima.

https://www.business-standard.com/article/economy-policy/bs-number-wise-in-india-s-coal-crisis-a-question-about-nuclear-power-122051701570_1.html

DRDO & Indian Navy conduct successful maiden flight-test of indigenously-developed Naval Anti-Ship Missile off Odisha coast

PIB, May 18, 2022

Defence Research and Development Organisation (DRDO) and Indian Navy successfully conducted maiden flight-test of indigenously-developed Naval Anti-Ship Missile launched from a Naval Helicopter from Integrated Test Range (ITR), Chandipur off the coast of Odisha on May 18, 2022. The mission met all its objectives. It is the first indigenous air launched anti-ship missile system for the

Indian Navy. The missile followed the desired sea skimming trajectory and reached the designated target with high degree of accuracy, validating the control, guidance and mission algorithms. All the sub-systems performed satisfactorily. The sensors deployed across the test range and near impact point tracked the missile trajectory and captured all the events.

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=1826257>

Indian nuclear scientists visit plant in Russia

The New Indian Express, May 18, 2022

Representatives of the Nuclear Power Corporation of India Limited (NPCIL) and JSC "TENEX", an exporter of initial nuclear fuel cycle products, recently visited the Kalinin nuclear power plant in Russia to learn about the process management of spent nuclear fuel (SNF) after its removal from a reactor core. The visit could help nuclear scientists at the Kudankulam nuclear power plant (KKNPP) in dealing with the transport of spent fuel assemblies to a processing plant. The scientists were given a demonstration starting from the receipt of an empty container, placing it in the pool soaking the reactor building, and the fuel loading using a console machine overload till the final stage of loading onto the transport platform.

<https://www.newindianexpress.com/nation/2022/may/18/indian-nuclear-scientists-visit-plant-in-russia-2454889.html>

India intends to operate S-400 missile system to defend against threats from Pak, China: Pentagon

The Times of India, May 18, 2022

By June 2022, India intends to deploy the S-400 missile defence system that it has received from Russia to defend itself against threat from Pakistan and China, a Pentagon spy master has told US lawmakers. India started receiving the delivery of S-400 missile defence system from Russia in December last year, Lt Gen Scott Berrier, Director, Defense Intelligence

Agency told members of the Senate Armed Services Committee during a recent Congressional hearing. As of October 2021, India's military was seeking to procure advanced surveillance systems to strengthen its land and sea borders and boost its offensive and defensive cyber capabilities. "In December, India received its initial delivery of the Russian S-400 air defence system, and it intends to operate the system to defend against Pakistani and Chinese threats by June 2022," Berrier said.

<https://timesofindia.indiatimes.com/world/us/india-intends-to-operate-s-400-missile-system-to-defend-against-threats-from-pak-china-pentagon/articleshow/91632212.cms>

B. Russia

Russian air defenses down 17 Ukrainian drones, three Tochka-U missiles last night

TASS, May 7, 2022

Russian air defenses downed 17 Ukrainian unmanned aerial vehicles, three Tochka-U missiles and nine Smerch missiles last night, Russian Defense Ministry Spokesman Major General Igor Konashenkov said on Saturday. According to him, the drones were downed in the Nikolaev region, as well as near the Signalnoye, Luganskoye, Krasnokogorovka, Yasinovatoye and Zugres in the Donetsk People's Republic, the Olgino settlement in the Kherson region, the Cherneshchina settlement in the Kharkov region. Konashenkov added that three Tochka-U missiles and nine Smerch missiles had been intercepted above the city of Izyum in the Kharkov region.

<https://tass.com/defense/1448227>

Lugansk Republic's air defenses intercept Ukrainian Tochka-U missile

TASS, May 9, 2022

Air defense forces of the Lugansk People's Republic (LPR) shot down a Ukrainian Tochka-U missile that targeted a

residential area in the settlement of Novaya Astrakhan, the LPR people's militia reported on Monday.

"On the day of celebrating the Great Victory, the Ukrainian Neo-Nazi forces bombarded a residential area in the community of Novaya Astrakhan, firing a 9M79-1 Tochka-U ballistic missile," the LPR people's militia said on its Telegram channel. The emergency warning system helped avoid casualties among civilians, the LPR people's militia said.

<https://tass.com/defense/1448733>

Russian Navy nuclear-powered subs hold underwater duel in Arctic drills

TASS, May 12, 2022

The Northern Fleet's nuclear-powered submarines Vepr and Kazan held joint anti-submarine warfare drills involving a duel at a depth of up to 100 meters, the Fleet's press office reported on Thursday. "The crews of the third-and fourth-generation nuclear-powered submarines Vepr and Kazan held a final tactical anti-submarine warfare exercise as part of a combat training check for the winter training period," the press office said in a statement.

<https://tass.com/defense/1450179>

Ukraine's security forces implode vat with fertilizer to accuse Russia of chemical attack

TASS, May 12, 2022

The members of the Security Service of Ukraine and nationalists imploded, presumably, a vat with ammonium nitrate in the Kharkov Region in order to accuse Russia's Armed Forces of using chemical weapons, head of Russia's National Defense Control Center Mikhail Mizintsev reported on Wednesday.

"Today, around 14:00, in the vicinity of the Dolgenkoye community in the Kharkov Region, in order to pin the blame on the Russian army for using chemical weapons, the Ukrainian Security Service and nationalists imploded a vat with fertilizer,

presumably, with ammonium nitrate, which caused a cloud of orange-colored smoke which dispersed after some time," the military official who also heads Russia's Joint Coordination Headquarters for Humanitarian Response in Ukraine said.

<https://tass.com/defense/1449645>

Russian Navy missile ships practice artillery fire in Baltic drills

TASS, May 12, 2022

The Baltic Fleet's missile corvettes Sovetsk and Mytishchi practiced artillery fire against surface targets at long ranges during naval maneuvers, the Fleet's press office reported on Thursday "At a naval range in the Baltic Sea, the naval strike group composed of the missile corvettes Sovetsk and Mytishchi accomplished a set of artillery firings against large and small sea targets simulating a mock enemy's combat ships," the press office said in a statement. The missile corvettes also delivered artillery fire against buoy fields outside direct visibility of the crews.

<https://tass.com/defense/1450151>

Drone downed by Russian National Guard forces in Kharkov region

TASS, May 13, 2022

Russian National Guard Special Forces have downed a Ukrainian drone in the Kharkov region, the Guard's press service told TASS on Friday.

"Russian National Guard troops downed an A1-SM Furia-class unmanned aerial vehicle during a reconnaissance operation in a forest in the immediate vicinity of military positions. This multi-purpose unmanned aerial vehicle is currently in service with the Ukrainian armed forces and is used for round-the-clock air reconnaissance, target tracking and artillery fire adjusting purposes," the press service said in a statement.

<https://tass.com/defense/1450381>

Russian army to have new chemical reconnaissance vehicle RKhM in 2022

TASS, May 13, 2022

The latest version of the chemical reconnaissance vehicle RKhM-9 based on the Taifun-K chassis will be provided for the Russian army in 2022, the Defense Ministry said on Friday on the occasion of the 90th anniversary of the Marshal Timoshenko Radiation, Chemical and Biological Protection Academy.

“Kostroma’s residents and guests were able to see samples of current and future weapons and military hardware of Russia’s Radiation, Chemical and Biological Protection Force, including the newest reconnaissance vehicle RKhM-9.

<https://tass.com/defense/1450673>

Russian air defense downs six Ukrainian drones, intercepts three Smerch rockets

TASS, May 14, 2022

During the day, Russian air defense forces downed six Ukrainian drones, including one above Snake Island, Russian Defense Ministry spokesman Major General Igor Konashenkov said Saturday. He added that Russian forces also intercepted a Tochka-U tactical missile and three Ukrainian Smerch rockets.

“During the day, Russian missile forces and artillery hit 6 control posts, 178 personnel and combat vehicle concentration areas, 3 reinforced bunkers, as well as 28 artillery units at firing positions, including a Smerch multiple launch rocket system near the settlement of Beryozovka,” Konashenkov said.

<https://tass.com/defense/1450985>

Russian Navy sub carrying Kalibr cruise missiles to re-enter service soon – source

TASS, May 16, 2022

The Project 877V ‘Paltus’ diesel-electric submarine B-871 Alrosa carries Kalibr-PL cruise missiles after its upgrade and will

shortly re-enter service with the Black Sea Fleet’s 4th separate submarine brigade, a source in Sevastopol defense circles told TASS on Monday.

“The submarine Alrosa has departed from the 13th Ship Repair Plant and taken up its place at the berth. Its crew will shortly start practicing L-1 and L-2 course tasks, following which it will re-enter the combat inventory of the fourth separate submarine brigade,” the source said.

<https://tass.com/defense/1451597>

US tries to catch up with Russia in development of air-based hypersonic missiles – expert

TASS, May 17, 2022

The US makes attempts to catch up with Russia in development of air-based hypersonic missiles, Colonel General Viktor Yesin, former head of the Russian Strategic Missile Forces headquarters, told TASS.

“The US trials of an air-based missile were unable to achieve Mach 5 speed. This is where hypersonic speed begins. But our Kinzhal missile has long reached Mach 8,” he noted. The expert noted that hypersonic missiles can be either powered (cruise) or engineless (glide vehicles) - an example of the latter being the Avangard missile, which can exceed Mach 20 speed

<https://tass.com/world/1452165>

Nuclear shield ‘pacifies’ those who want to push Russia to World War III – Medvedev

TASS, May 17, 2022

Russian nuclear shield has been preserving Russia’s national independence for many years, and it ‘pacifies’ those who want to push Russia towards World War III, Russian Security Council Deputy Chairman Dmitry Medvedev said during his visit to Sarov, Nizhny Novgorod Region.

“The historic achievement of all those who worked here is exactly in that a reliable nuclear

shield for Russia and our allies was created. And this shield has been ensuring our independence for many years; it also helps us to pacify those who seeks to push our country towards World War III or some other problems,” Medvedev said.

<https://tass.com/defense/1452245>

US labs' experiments in Ukraine look like bioweapon tests – Kurchatov Institute's chief

TASS, May 17, 2022

US laboratories' tests on Ukrainians can be considered as experiments in using biological weapons, the president of the national research center Kurchatov Institute, Mikhail Kovalchuk, said on the sidelines of the educational marathon conference New Horizons, organized by the Russian Znanie (Knowledge) society. Earlier on Monday, Russian President Vladimir Putin said at the jubilee summit of the Collective Security Treaty Organization that US laboratories on the post-Soviet space were gathering biological materials with the aim of “studying for their own purposes the specifics of spreading viruses and dangerous diseases.” In Ukraine they were in fact working on components of biological weapons.

<https://tass.com/defense/1452293>

Could Russia Use the Nuclear Option?

The Moscow Times, May 17, 2022

The threat of a nuclear strike on Ukraine is being hotly discussed in the media and social networks. But there are reasons to be both skeptical and wary of this threat. But first, a caveat. While the fighting that began on Feb. 24 continues in Ukraine, speculation about a possible escalation of the armed conflict to war with nuclear weapons seems counterproductive and irresponsible... There is always the possibility that talking about the nuclear threat might demotivate the defending side.

<https://www.themoscowtimes.com/2022/05/16/could-russia-use-the-nuclear-option-a77693>

State-of-the-art S-500 air defense weapons arriving for Russian troops – deputy PM

TASS, May 18, 2022

The latest S-500 anti-aircraft missile system has begun arriving for Russian troops, Deputy Prime Minister Yury Borisov said during the government's New Horizons educational marathon on Wednesday.

“Today the troops have already begun receiving the systems that actually combine the functions of air and anti-missile defenses and these are S-500 weapons,” Borisov said. The S-500, like the Tor, Buk, S-300, S-350 and S-400 surface-to-air missile systems, enjoy great demand on the global arms markets, the Russian deputy PM said.

<https://tass.com/defense/1452551>

Russia to launch serial production of Okhotnik heavy attack drones in 2023

TASS, May 18, 2022

The serial production of the Okhotnik (Hunter) heavy strike drone will begin in 2023, Head of the state tech corporation Rostec Sergey Chemezov said at a meeting with Russian President Vladimir Putin on Wednesday.

“The first flying prototype was rolled out in 2021 and we will begin serial-producing and delivering it to the Defense Ministry in 2023,” Chemezov said. As its specific feature, the Okhotnik features a flat nozzle thruster that makes it less visible for radars, the Rostec chief stressed. “Also, a new ground control post is being created for the drone,” he said.

<https://tass.com/defense/1452733>

Russia, Ukraine Trade Barbs Over Europe's Largest Nuclear Plant

The Moscow Times, May 19, 2022

A top Russian official claimed Wednesday that Europe's largest nuclear power station - that was captured by Russian forces in

Ukraine - will provide electricity to Russia. Ukraine's energy providers dismissed the comments on the seized Zaporizhzhia nuclear plant as a technical impossibility. Russia's Deputy Prime Minister Marat Khusnullin, on a visit to the occupied areas of southeastern Ukraine, said Wednesday that the Zaporizhzhia plant (ZNPP) will provide electricity to Russia.

<https://www.themoscowtimes.com/2022/05/19/russia-ukraine-trade-barbs-over-europes-largest-nuclear-plant-a77725>

Russia uses new laser weapons in Ukraine, Zelenskyy mocks 'wonder weapon'

Euractiv, May 19, 2022

Russia on Wednesday (18 May) said it was using a new generation of powerful lasers in Ukraine to burn up drones, deploying some of Moscow's secret weapons to counter a flood of Western arms. Russian President Vladimir Putin in 2018 unveiled an intercontinental ballistic missile, underwater nuclear drones, a supersonic weapon and a laser weapon. Little is known about the specifics of the new laser. Putin mentioned one called Peresvet, named after a medieval Orthodox warrior monk Alexander Peresvet who perished in mortal combat. Yury Borisov, the deputy prime minister in charge of military development, told a conference in Moscow that Peresvet was already being widely deployed and it could blind satellites up to 1,500 km above Earth.

<https://www.euractiv.com/section/global-europe/news/russia-uses-new-laser-weapons-in-ukraine-zelenskyy-mocks-wonder-weapon/>

Russian army to have strategic drones soon – defense minister

TASS, May 20, 2022

The Russian army is to be armed with strategic drones in the near future, Defense Minister Sergey Shoigu said at the Defense Ministry's board meeting on Friday.

"Strategic UAVs are expected to be supplied [to the Russian armed forces] in the near future. They will ease the pressure on flight personnel and considerably reduce the costs

of reconnaissance and strike operations as well as the consumption of ammunition and the aircraft's wear rate," he said. Shoigu stressed that Russia's army continued to be supplied with advanced tactical drones.

<https://tass.com/defense/1453839>

US intention to supply antiship missiles to Ukraine not new – Kremlin spokesman

TASS, May 20, 2022

Washington's intention to supply antiship missiles Harpoon to Kiev is not new as such. The Russian army keeps a close watch on such weapons supplies and takes preventive measures, Russian presidential spokesman Dmitry Peskov told the media on Friday.

"You know, many weapons are being supplied to Ukraine from the West. And you know our attitude very well. There is nothing new about this," he said. "The Russian military thoroughly monitors all these supplies and takes preventive measures."

<https://tass.com/defense/1453831>

Two nuclear-powered subs to join Russia's Pacific Fleet in 2022 – commander

TASS, May 20, 2022

The Russian Pacific Fleet's submarine forces will receive the nuclear-powered strategic submarine Knyaz Oleg, the multi-purpose nuclear underwater cruiser Novosibirsk and the diesel-electric sub Magadan this year, Fleet Commander Admiral Sergey Avakyan said on Friday... This year, the Russian Pacific Fleet will also receive the Project 636.3 third diesel-electric submarine Magadan. With its arrival, the Fleet will operate six stealthy diesel-electric subs armed with Kalibr cruise missiles, the admiral said. In 2022, the Russian Pacific Fleet will also receive the Project 20380 corvette Rezkiv built at the Amur Shipyard. The warship is currently undergoing mooring trials.

<https://tass.com/defense/1453623>

C. China

China and ROK share similar positions on Korean Peninsula issue amid rising tensions: Chinese special envoy

Global Times, May 8, 2022

China and the Republic of Korea share similar positions and broad common interests on the Korean Peninsula issue and China-ROK relations have always been treated as a priority in China's overall foreign policy, said China's special representative on Korean Peninsula Affairs Liu Xiaoming. Liu, who paid a visit to Seoul from Tuesday to Friday, said that China-ROK relations have always been treated as a priority in China's overall foreign policy. Liu said that China has always supported the ROK and North Korea in improving their relations and pursuing reconciliation and cooperation. Liu also stressed that China will strengthen communication and coordination with the ROK to jointly work for peace and stability on the Peninsula and promote the political settlement process of the Peninsula issue.

<https://www.globaltimes.cn/page/202205/1265029.shtml>

PLA holds joint drills east, southwest to Taiwan island, 'sends warning to secessionists, external forces'

Global Times, May 9, 2022

The Chinese People's Liberation Army (PLA) recently held a large-scale joint exercise surrounding the island of Taiwan from both sides, a move that experts said on Monday demonstrated and further boosted the PLA's high level of combat preparedness over Taiwan and sent a strong warning to "Taiwan independence" secessionist forces and external interference forces at a time when those forces repeatedly made wrong remarks and actions on the Taiwan question. By featuring a powerful aircraft carrier group east of the island, a large number of different types of warplanes and additional warships west of the island, plus conventional missiles, the PLA exercise was

a partial rehearsal of a possible reunification-by-force operation, including the neutralization of the military potential of secessionist forces on the island and the cutting off of possible military intervention from countries like the US and Japan, analysts said.

<https://www.globaltimes.cn/page/202205/1265116.shtml>

China's cargo craft docks with space station combination

Xinhua, May 10, 2022

China's cargo spacecraft Tianzhou-4, carrying supplies for the upcoming Shenzhou-14 crewed mission, successfully docked with the combination of the space station core module Tianhe and the Tianzhou-3 cargo craft on Tuesday, according to the China Manned Space Agency (CMSA). At 8:54 a.m. (Beijing Time), Tianzhou-4 completed a computer-orchestrated rendezvous and docking at the rear docking port of Tianhe, the CMSA said. The CMSA declared the launch a complete success.

<https://english.news.cn/20220510/7585f7d69cac492fadf90f94c91da9ab/c.html>

U.S. Navy gathers best destroyers in Japan to hunt Chinese submarines

Ken Moriyasu

Nikkei Asia, May 10, 2022

Off the coast of Japan's glittering capital, the U.S. Navy recently dropped a hint about its shifting strategy in Asia. In March, the Navy and the Japan Maritime Self-Defense Force conducted a torpedo drill in Tokyo Bay for the first time. From the air, an MH-60R helicopter launched an inert training torpedo into Japanese waters, simulating an attack on a submarine. Previously, all similar torpedo exercises had been conducted off the shores of San Diego. The drill came as the U.S. Navy quietly reshuffles its ship roster in Japan, bringing newer and more capable vessels closer to the Taiwan Strait and reflecting the changing priorities of its

global mission. Since last summer, five Arleigh Burke-class guided-missile destroyers have arrived in Yokosuka – the largest overseas U.S. naval installation in the world, about an hour's drive south of Tokyo. They have replaced ships such as the USS John S. McCain and USS Curtis Wilbur, which had been forward-deployed to Japan for a quarter of a century.

<https://asia.nikkei.com/Spotlight/Asia-Insight/U.S.-Navy-gathers-best-destroyers-in-Japan-to-hunt-Chinese-submarines>

A Chinese team has tested an engine for hypersonic flight – powered by explosions

South China Morning Post, May 11, 2022

Researchers in southwest China say their air-breathing engine – driven by the explosions of cheap hydrocarbon fuel – achieved stable operation during a simulated test flight at hypersonic speed. This approach can wreck an engine because the explosions release a huge amount of energy in a sudden, uncontrollable way. But the team at the China Aerodynamics Research and Development Centre in Mianyang, Sichuan province say their rotating detonation engine could power a plane or missile at five times the speed of sound or faster by producing thousands of explosions per second.

<https://www.scmp.com/news/china/science/article/3177336/chinese-team-has-tested-engine-hypersonic-flight-powered>

Over 100 aircraft drill sorties from carrier Liaoning in 6 days near Japan, Taiwan island ‘demonstrate readiness’

Global Times, May 11, 2022

Japanese Defense Minister Nobuo Kishi said that the aircraft carrier Liaoning of the Chinese People's Liberation Army (PLA) Navy hosted more than 100 aircraft sorties within six days when recently conducting drills near Japan and the island of Taiwan, a figure that analysts said demonstrated the carrier's high level of training, and showed

that the carrier can do even better in real combat. Chinese fighter jets and helicopters were confirmed to have taken off from and landed on the aircraft carrier Liaoning far more than 100 times from May 3, when the Chinese carrier group was operating in waters about 160 kilometers southwest of Okidaitojima and 150 south of Ishigaki Island, Kishi said in a press conference. The move could be part of the Chinese military's efforts to boost the carrier's operational capability and enhance its ability to carry out operations in more distant maritime and aerial areas, Kishi said, noting that the Japanese government "had to monitor the situation with concern" because it happened "near Japan's southwestern islands and Taiwan."

<https://www.globaltimes.cn/page/202205/1265387.shtml>

Foreign reports on PLA Navy's new submarine 'speculative and biased'

Global Times, May 11, 2022

Foreign media reported that China recently launched what seems to be a new or upgraded class of nuclear-powered attack submarine, citing analyses based on satellite images. Chinese experts said that the reports are only speculative, and the West, especially the US, should not apply double standards on China's normal national defense development, as the US has been frequently sending nuclear-powered submarines near China and the newly established AUKUS alliance which provides Australia with nuclear-powered submarines for the first time also aims to confront China. Commercial satellite images taken from April 24 to May 4 confirm that a probable nuclear-powered attack submarine was in dry dock at a shipyard in Northeast China, and the boat was later seen mostly submerged in the same place after the dry dock was flooded, Reuters reported.

<https://www.globaltimes.cn/page/202205/1265408.shtml>

Superpowers promising not to seek hegemony primary responsible for space security, Chinese diplomat urges

Global Times, May 11, 2022

The primary responsible behavior in space should have superpowers to promise not to seek hegemony, nor dominate the outer space, a senior Chinese diplomat said, elaborating China's views on how to protect space security and avoid arms race in space. Though the Cold War has been over for 30 years already, some individual countries still stick with the Cold War mentality and seek unilateral strategic advantages in space, which brings severe negative impact on global strategic stability and long-lasting threat on space peace, Li Song, China's ambassador for disarmament affairs, said. Li said that no country should engage in great power competition, bloc politics and camp confrontation in space, instead, countries should uphold the concept of building a community with a shared future for mankind and respond to threats to space security through cooperation. Whether or not to support the negotiation of a new outer space control treaty is the touchstone for measuring whether a country's outer space behavior is responsible, Li noted.

<https://www.globaltimes.cn/page/202205/1265333.shtml>

Satellite images of Chinese nuclear submarine being built prompt speculation of vertical launch system

South China Morning Post, May 14, 2022

Commercial satellite images have shown China is building a new and bigger nuclear submarine with a more advanced propulsion system than its active Type 093 variants, raising speculation that the country will introduce a next-generation nuclear sub with a vertical launching system. However, an expert said the new vessel could be an experimental platform to try out the country's new-generation ship-borne nuclear reactors that are designed for future submarines – bigger nuclear subs equipped

with ballistic missiles – and even future aircraft carriers. According to experts, the deliberate disclosure of the new sub could be seen as a warning to the Americans, who are selling more advanced and offensive weapons to Taiwan.

<https://www.scmp.com/news/china/military/article/3177644/satellite-images-chinese-submarine-under-construction-prompt>

War games predict China could resort to nuclear weapon if it invades Taiwan

Taiwan News, 14 May 2022

China could end up dropping a nuclear bomb if it decided to invade Taiwan, according to the latest cross-strait war game exercise. The war game took into account the example of Russia's failed invasion of Ukraine and was run by the Washington-based Center for a New American Security (CNAS), former Pentagon officials, U.S. lawmakers, and the broadcaster NBC. The original premise of the operation was that China would try to achieve a swift decapitation of Taiwan's leadership. In doing so, it would preemptively attack U.S. bases in Japan and Guam. The U.S. would likely respond by hitting Chinese ports and mobilizing its allies, in the war-game scenario. This would lead to further escalation and China taking extreme measures.

<https://www.taiwannews.com.tw/en/news/4538470>

Satellite photo shows possible new Chinese nuclear submarine able to launch cruise missiles

Defence News, May 16, 2022

A submarine seen in a satellite photo of a Chinese shipyard shows what could be a new class or subtype of a nuclear-powered attack sub with a new stealthy propulsion system and launch tubes for cruise missiles. The satellite photo of the shipyard at Huludao in Liaoning province, northern China, which was provided to Defense News by Planet Labs, was taken

May 3 and shows a submarine on a drydock. The unidentified boat's presence at the yard was first noted in an April 29 satellite image by geospatial intelligence outfit AllSource Analysis. The organization said the submarine is possibly a new class undergoing construction by China. The submarine has two distinct patches of green coloring on its hull immediately behind its conning tower, while a cruciform rudder arrangement and a possible shrouded propulsion system are seen.

<https://www.defensenews.com/naval/2022/05/16/satellite-photos-show-possible-new-chinese-nuclear-submarine-able-to-launch-cruise-missiles/>

Moves by Russia, China, North Korea rekindle nuclear concerns

The Harvard Gazette, May 16, 2022

Russia's threats to use nuclear weapons in Ukraine along with China's missile system expansion and North Korea's recent accelerated pace of missile testing have revived concerns about global arms security. During a talk Wednesday, Ambassador Bonnie Jenkins, Under Secretary of State for Arms Control and International Security, spoke to Matthew Bunn, James R. Schlesinger Professor of the Practice of Energy, National Security, and Foreign Policy at Harvard Kennedy School and co-principal investigator of the Managing the Atom Project, about the approaches that the U.S. is taking to the changing landscape of nuclear threats in Russia, China, and North Korea. Despite Russia's explicit and implicit threats, the U.S. has seen no signs so far that Russia has taken concrete steps toward deploying nuclear weapons. The U.S. and allies such as France and the U.K. have been cautious in their public responses in an effort to tamp down, or at least not escalate, Russia's rhetoric. But that doesn't mean such talk is not being taken seriously, she said.

<https://news.harvard.edu/gazette/story/2022/05/moves-by-russia-china-north-korea-rekindle-nuclear-concerns/>

Chinese FM urges Japan to immediately stop construction of nuclear wastewater discharge project

Global Times, May 17, 2022

China's Foreign Ministry urged the Japanese government to immediately terminate the construction of the nuclear-contaminated wastewater discharge project near the Fukushima nuclear power plant by Japan's Tokyo Electric Power Company (TEPCO), stressing that countries across the Pacific have expressed serious concern and firm opposition to Japan's wastewater-dumping decision. Chinese Foreign Ministry Spokesperson Wang Wenbin noted that it is irresponsible for Tokyo Electric Power Company to push ahead with the project of dumping nuclear-contaminated wastewater into the sea in disregard of the serious concerns of local residents and the international community. Japan's Nuclear Safety Commission (NSC) announced that it will discuss a draft review of the Tokyo Electric Power Company's plan to discharge nuclear-contaminated wastewater from the Fukushima nuclear plant into the sea at its regular meeting on May 18. If agreed, the plan could be approved after a process including soliciting public opinions.

<https://www.globaltimes.cn/page/202205/1265871.shtml>

Chinese scientists work on hypersonic missile that can hit moving car

South China Morning Post, May 17, 2022

China is developing a heat-seeking hypersonic weapon that will be able to hit a moving car at five times the speed of sound, according to scientists involved in the project. The research team, led by Yang Xiaogang from the PLA Rocket Force University of Engineering in Xian, said "important progress" had been made

towards solving the main problem of how to pinpoint a moving target at extreme speeds. Yang and his colleagues from the university's College of Missile Engineering have been given a deadline of 2025 to come up with solutions to the seemingly intractable challenges of hypersonic technology.

<https://www.scmp.com/news/china/military/article/3177908/chinese-scientists-work-hypersonic-missile-can-hit-moving-car>

Construction of Xudapu 4 under way

World Nuclear News, May 19, 2022

In June 2018, Russia and China signed four agreements, including for the construction of two VVER-1200 reactors as units 7 and 8 of the Tianwan plant in Jiangsu province. In addition, two further VVER-1200 units were to be constructed at the new Xudapu (also known as Xudabao) site in Huludao, Liaoning province. Agreements signed in June 2019 included a general contract for the construction of Xudapu units 3 and 4, as well as a contract for the supply of nuclear fuel. Russian state nuclear corporation Rosatom will design the nuclear island and supply key equipment, as well as provide field supervision, installation supervision, and commissioning services for the supplied equipment. Turbine generators and balance of plant will be supplied by China. Construction of Xudapu unit 3 began on 28 July 2021. The units are expected to be commissioned in 2027-2028. Rosatom has now announced the start of construction of Xudapu unit 4.

<https://www.world-nuclear-news.org/Articles/Construction-of-Xudapu-4-under-way>

Chinese aerospace experts slam NASA's chief for 'ridiculous and outrageous' allegations of 'stealing' technology

Global Times, May 19, 2022

Chinese aerospace experts slammed NASA's Administrator Bill Nelson for his "ridiculous" and "outrageous" remarks after the senior official alleged that China is "good at stealing" American designs in a

"space race." China has achieved space achievements beyond the US despite the strong blockade of the country because China is taking the road of independent space development, experts stressed. During Nelson's testimony at the House Appropriations Committee hearing, he expressed his views when Alabama representative, Robert Aderholt, asked about the steps taken by NASA "to secure American research and development." Aderholt was reportedly referring to the "jarring similarities" that were noticed between the US and Chinese spacecrafts, US media reported. The NASA chief responded that "they [the Chinese] are pretty good at stealing," and emphasized that the US needs to take cybersecurity "very seriously" both in the private and the public sectors.

<https://www.globaltimes.cn/page/202205/1266116.shtml>

Chinese astronomers propose space survey to seek Earth-like planets via astrometry

Global Times, May 19, 2022

Chinese astronomers have proposed a space telescope survey program to search for habitable exoplanets some 32 light-years from Earth. This would be the world's first space exploration mission dedicated to finding neighboring Earth-like planets via astrometry beyond the solar system, the Global Times learned from the project leader. "The search for habitable exoplanets is one of the fundamental research frontiers in astronomy, which concerns major scientific questions such as whether the Earth is 'unique' and how planets become the 'cradle of life'," said Ji Jianghui, the project leader and research fellow of the Purple Mountain Observatory, affiliated with the Chinese Academy of Sciences. More than 5,000 exoplanets have been found and confirmed so far, of which about 50 are believed to be habitable terrestrial planets, but most of them are thousands of light-years away. "Finding habitable Earth-like planet around the nearby solar-type stars would be a major

discovery for mankind and will help us study future human visits and even search for new places to live," Ji told the Global Times.

<https://www.globaltimes.cn/page/202205/1266085.shtml>

D. Pakistan

Pakistan likely to continue to modernise and expand its nuclear capabilities:US intelligence official

The Print, May 18, 2022

Pakistan is likely to continue to modernise and expand its nuclear capabilities by conducting training with its deployed weapons and developing new delivery systems in 2022 as it perceives it as key to its survival, given India's nuclear arsenal and conventional force superiority, the Pentagon's top intelligence official has told lawmakers.

Lt Gen Scott Berrier, Director, Defence Intelligence Agency told members of the Senate Armed Services Committee during a recent Congressional hearing that Pakistan's tense relationship with India will continue to drive its defence policy.

He said Pakistan "perceives nuclear weapons as key to its national survival, given India's nuclear arsenal and conventional force superiority." "Pakistan very likely will continue to modernise and expand its nuclear capabilities by conducting training with its deployed weapons and developing new delivery systems in 2022," Berrier said.

<https://theprint.in/world/pakistan-likely-to-continue-to-modernise-and-expand-its-nuclear-capabilitiesus-intelligence-official/960531/>

E. Europe

IAEA Mission Finds Progress in Waste Management in Denmark, Sees Specific Areas for Improvement

IAEA, May 12, 2022

An International Atomic Energy Agency (IAEA) team of experts said that Denmark

has developed and implemented a robust and well-functioning system for maintaining and further enhancing the safety and effectiveness of spent fuel and radioactive waste management. The team also noted that the national programme for the management of radioactive waste should be further developed and its implementation requires significant efforts.

The Government of Denmark requested the IAEA Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) mission to provide an independent international evaluation of Denmark's radioactive waste and spent fuel management, based on the relevant IAEA Safety Standards and proven international practices.

<https://www.iaea.org/newscenter/pressreleases/iaea-mission-finds-progress-in-waste-management-in-denmark-sees-specific-areas-for-improvement>

Nuclear 'Has Role To Play' As Bloc Shifts Away From Russian Fossil Fuels

Nucnet, May 19, 2022

Nuclear power will have a role to play as the EU strives to shift away from its reliance on Russian fossil fuels with fossil-free hydrogen, notably nuclear-based, also playing a part in substituting natural gas. The European commission said in a communication on its "REPowerEU" plan that Russia's "unprovoked and unjustified" military aggression against Ukraine has massively disrupted the world's energy system and in March 2022 EU leaders had already agreed to phase out Europe's dependency on Russian energy imports "as soon as possible". The commission said the REPowerEU plan is its response to the hardships and global energy market disruption caused by Russia's invasion of Ukraine.

<https://www.nucnet.org/news/nuclear-has-role-to-play-as-bloc-shifts-away-from-russian-fossil-fuels-5-4-2022> (EU)

F. Ukraine

Update 75 – IAEA Director General Statement on Situation in Ukraine

IAEA, May 11, 2022

Remote transmission of safeguards data from Ukraine's Chornobyl Nuclear Power Plant (NPP) has been fully re-established, Director General of the International Atomic Energy Agency (IAEA), Rafael Mariano Grossi, said today. This resulted from the deployment of new transmission channels based on satellite technologies and of other technical work conducted by the Agency since the visit of safeguards inspectors and technicians to the Chornobyl NPP, 26-27 April 2022. This is the first time that remote data from all sites where such systems are in place in Ukraine, including all nuclear power plants and associated spent fuel storage facilities, has been transferred in full to the IAEA Headquarters since the two months interruption at the Chornobyl NPP. "This is a very important step for the IAEA to continue to implement safeguards in Ukraine," Director General Grossi said.

<https://www.iaea.org/newscenter/pressreleases/update-75-iaea-director-general-statement-on-situation-in-ukraine>

Ukraine: Amid fresh Russian claims, no trace of secret bioweapons programme

UN News, May 13, 2022

The Russian Federation, the United States and Ukraine are all States Parties to the 1972 Biological Weapons Convention prohibiting the development, production, acquisition, transfer, stockpiling and use of biological and toxin weapons. In turn, US deputy ambassador Richard M. Mills lamented that the United Nations disarmament director had been asked to join today's "truly farcical conversation". He blamed Russia for again using the Council as a platform to spout disinformation and conspiracy theories about Ukraine as it continues its brutal and inhumane assault on the Ukrainian people.

"Russia repeatedly debases the Council through these absurd meetings," he said.

Endless claims of chemical and biological weapons programmes in Ukraine are categorically false and "ludicrous".

<https://news.un.org/en/story/2022/05/1118232>

Energoatom Head Says Soviet-Era Site Is 'Promising' For New Nuclear

Nucnet, May 17, 2022

Ukraine is looking at new sites where it can build commercial nuclear power plants once the war with Russia is over, with the "most promising" location in the east of the country where a new unit was under construction during the Soviet era. Plans to build the Chyhyryn nuclear power station, in Cherkasy Oblast, central Ukraine, were shelved in 1989 following the 1986 Chernobyl accident. Ground had been broken in 1970, but little progress made. But Petro Kotin, chief executive officer of Ukraine's state nuclear operator Energoatom, told the Vesti news website that the "promising" project could be revived.

<https://www.nucnet.org/news/energoatom-head-says-soviet-era-site-is-promising-for-new-nuclear-5-2-2022>

Update 77 – IAEA Director General Statement on Situation in Ukraine

IAEA, May 19, 2022

Ukraine told the International Atomic Energy Agency (IAEA) today that new wildfires in the area near the Chornobyl Nuclear Power Plant (NPP) did not pose a radioactive threat to people, Director General Rafael Mariano Grossi said. Informing the IAEA about the occurrence of the wildfires, Ukraine said the gamma dose rate levels in the vicinity of the Chornobyl NPP were "not exceeding the reference levels". The Director General said that, based on previous experience, such fires could lead to a very small increase of radioactive concentration in the air. He said the Agency agreed with Ukraine's assessment that it would not

constitute a danger to human health. Spontaneous fires often occur in the area, still contaminated by radioactive material from the 1986 accident, this time of the year.

<https://www.iaea.org/newscenter/pressreleases/update-77-iaea-director-general-statement-on-situation-in-ukraine>

G. France

France orders additional TALIOS pods for Rafale aircraft

Janes, May 9, 2022

The French Defence Procurement Agency (Direction Générale de l'Armement: DGA) has ordered an additional 21 TALIOS (TArgeting Long-range Identification Optronic System) pods from Thales to integrate on Dassault Rafale aircraft, the company announced on 6 May. Deliveries of the additional pods are expected between 2024 and 2025, following completion of the original contract for 46 TALIOS systems, Thales said. TALIOS, first developed in 2008, is an airborne, open-architecture targeting and reconnaissance pod. It can be used for day/night target detection, recognition, and identification.

<https://www.janes.com/defence-news/air-platforms/latest/france-orders-additional-talios-pods-for-rafale-aircraft>

IAEA Mission Sees Safety Commitment by France's Civaux Nuclear Power Plant

IAEA, May 13, 2022

An International Atomic Energy Agency (IAEA) team of experts said the operator of France's Civaux Nuclear Power Plant (NPP) had strengthened operational safety by addressing the findings of an IAEA review which took place in 2019. The team's mission was carried out at the request of the Government of France. The Operational Safety Review Team (OSART) concluded on 13 May a five-day follow up mission to the Civaux NPP to evaluate progress made in addressing the findings of the OSART mission conducted three years ago. The plant, which is located around 40 km

southeast of the city of Poitiers, is operated by Électricité de France S.A. (EDF). It consists of two 1450 Megawatt electric (MWe) units with pressurised water reactors. The units were connected to the grid between 1997 and 1999. France's 56 nuclear power reactors supply more than 70 percent of the country's electricity.

<https://www.iaea.org/newscenter/pressreleases/iaea-mission-sees-safety-commitment-by-frances-civaux-nuclear-power-plant>

France seeks mini attack drones

Janes, May 13, 2022

The Direction Générale de l'Armement (DGA), the French defence procurement agency, and the L'Agence de l'Innovation de Défense (AID), the country's defence innovation agency, have released two calls for projects for low-cost mini attack drones. French Ministry of Armed Forces spokesperson Hervé Grandjean told a press conference on 12 May that the first call is for the Larinae project for a system to neutralise targets at a range of over 50 km, and the second is for the complementary Colibri project for a system to neutralise targets in the area of contact with the enemy at a range of over 5 km.

<https://www.janes.com/defence-news/air-platforms/latest/france-seeks-mini-attack-drones>

EDF Does Not Anticipate Further Reactor Shutdowns Over Corrosion Problems

Nucnet, May 20, 2022

France's state power company EDF is continuing an inspection programme related to the discover of stress corrosion in some of its nuclear power plants, but said it does not anticipate any new reactor shutdowns. The company said in a statement that 12 reactors, currently shut down, are affected by stress corrosion and stress corrosion testing. The presence of corrosion has been confirmed in piping circuits at the Civaux-1, Chooz-1, Penly-1 and Chinon B-3 plants. Checks and investigations are continuing at eight other prioritised reactors: Bugey-3, Bugey-4,

Cattenom-3, Civaux-2, Chooz-2, Flamanville-1, Flamanville-2 and Golfech-1.

<https://www.nucnet.org/news/edf-does-not-anticipate-further-reactor-shutdowns-over-corrosion-problems-5-5-2022>

H. Germany

Germany Confirms It Will Oppose Plans To Include Nuclear Energy

Nucnet, May 16, 2022

Germany will oppose European Union plans to include nuclear energy as a sustainable investment in its sustainable finance regulations for labelling green investments, the government said on Monday. Brussels is seeking approval from EU countries and the European parliament for its plan to label nuclear as a climate-friendly investment, which has split opinion among states who disagree on its green credentials. Germany, the EU's biggest economy, is among those planning to reject it when countries come to vote on the plan in the coming weeks.

"The Federal Government has expressed its opposition to the taxonomy rules on nuclear power. This 'no' is an important political signal that makes clear: Nuclear energy is not sustainable and should therefore not be part of the taxonomy,"

<https://www.nucnet.org/news/germany-confirms-it-will-oppose-plans-to-include-nuclear-energy-5-1-2022>

I. Austria

AIT Austrian Institute of Technology Becomes the First IAEA Collaborating Centre for Information and Computer Security for Nuclear Security

IAEA, May 19, 2022

The Austrian Institute of Technology has become the first IAEA collaborating centre for Information and Computer Security for Nuclear Security. The agreement signed last week builds on a long-term partnership between the IAEA and the AIT, which is Austria's largest non-university research and technology organization. The

establishment of a collaborating centre in the area of computer security is of strategic importance for the implementation of the IAEA nuclear security programme.

<https://www.iaea.org/newscenter/news/ait-austrian-institute-of-technology-becomes-the-first-iaea-collaborating-centre-for-information-and-computer-security-for-nuclear-security>

J. Poland

Poland signs biggest UAS deal in its history

Janes, May 9, 2022

The Polish Armaments Agency has signed a PLN2 billion (USD450 million) contract on the strike-reconnaissance unmanned aircraft system (UAS), dubbed Gladius. The deal was signed on 6 May by the Armaments Agency Chief Col Artur Kuptel and WB Group's president Piotr Wojciechowski.

"Gladius is a complex strike-reconnaissance [system] developed," Wojciechowski said during the ceremony. WB Group is to deliver four strike-reconnaissance UAS battery modules with training, service, and logistics packages, including a simulator centre and trainers. Janes understands hundreds of Gladius systems are to be ordered.

<https://www.janes.com/defence-news/industry-headlines/latest/poland-signs-biggest-uas-deal-in-its-history>

Warsaw Needs To Achieve Key Nuclear Milestones 'In Coming Years'

Nucnet, May 12, 2022

If Poland is to meet its ambitious targets for new nuclear it needs to achieve important milestones in the coming years including site selection, choice of co-investor and reactor technology, and the finalisation of a financing mechanism and contractual arrangements. The International Energy Agency said in a report on Poland's energy policy that the introduction of nuclear power is a key component of Poland's energy policy.

Poland is aiming to construct two nuclear power stations with three reactors each, with the first reactor to be in operation by 2033 and for all six reactors to be in operation by 2043

<https://www.nucnet.org/news/warsaw-needs-to-achieve-key-nuclear-milestones-in-coming-years-5-4-2022>

Poland ready to build bases for permanent NATO presence

TASS, May 19, 2022

The Polish authorities are in favor of building military bases to permanently station NATO forces, Prime Minister Mateusz Morawicki said at a conference Thursday.

“Permanent NATO bases” should appear in countries on the alliance’s eastern flank, Morawicki said. “Poland is prepared to build bases” for the permanent stationing of the alliance’s light forces, he added. “Russia should know that we will not cede any inch of NATO’s territory,” the premier said.

<https://tass.com/defense/1453329>

K. United Kingdom

Fund to secure our energy supply and boost cutting-edge nuclear projects opens for business

Gov.UK, May 13, 2022

A £120 million government fund designed to unlock and accelerate new nuclear technologies while encouraging new players into the market opens today (13 May). The Future Nuclear Enabling Fund (FNEF) will help to realise the government’s ambition to approve 8 new reactors by 2030, as committed to in the British Energy Security Strategy in April. It will provide targeted, competitively-allocated government grants which will help nuclear construction projects...Nuclear power is a key part of the UK’s energy mix, helping to reduce dependence on global gas markets, boosting UK energy independence, protecting consumers from high energy bills and

stimulating investment in nuclear as a clean energy technology of the future.

[https://www.gov.uk/government/news/fund-to-secure-our-energy-supply-and-boost-cutting-edge-nuclear-projects-opens-for-business#:~:text=The%20Future%20Nuclear%20Enabling%20Fund,the%20British%20Energy%20Security%20Strategy.&text=A%20%C2%A3120%20million%20government,opens%20today%20\(13%20May\)](https://www.gov.uk/government/news/fund-to-secure-our-energy-supply-and-boost-cutting-edge-nuclear-projects-opens-for-business#:~:text=The%20Future%20Nuclear%20Enabling%20Fund,the%20British%20Energy%20Security%20Strategy.&text=A%20%C2%A3120%20million%20government,opens%20today%20(13%20May))

Poisoned legacy: why the future of power can’t be nuclear

The Guardian, May 14, 2022

On 10 October 1957, Harold Macmillan sent a letter to President Dwight Eisenhower. The question he asked his US counterpart was: “What are we going to do about these Russians?” The launch of the Sputnik satellite six days earlier had carried with it the threat that Soviet military technology would eclipse that of the west. The prime minister was hoping to boost British nuclear capabilities, and was desperate for US cooperation. On that same day, however, the UK’s most advanced nuclear project went up in flames – putting the knowledge and bravery of its best scientists to the test, and threatening England’s peaceful countryside with a radiological disaster.

<https://www.theguardian.com/books/2022/may/14/poisoned-legacy-why-the-future-of-power-cant-be-nuclear>

Kwasi Kwarteng seeks US investment for UK nuclear plants to end reliance on China

The Telegraph, May 14, 2022

The Business Secretary is to fly to the US to drum up American investment in new nuclear plants amid concerns that the UK is too reliant on China for help building reactors in Britain. Kwasi Kwarteng is expected to hold talks with Jennifer Granholm, the US energy secretary, in Washington DC, where a Whitehall source said the minister was “keen to strengthen cooperation with the

Americans on energy security". Last month Boris Johnson and Mr Kwarteng announced plans for a massive expansion of nuclear energy in Britain as part of the country's new energy security strategy that followed Vladimir Putin's invasion of Ukraine. Mr Kwarteng is said to be concerned that Britain has become too reliant on two major players in the nuclear market - China General Nuclear, a Chinese state-owned energy giant, and EDF, which is owned by the French state.

<http://webcache.googleusercontent.com/search?q=cache:KvcjeN45bjAJ:https://www.telegraph.co.uk/politics/2022/05/14/kwasi-kwarteng-seeks-boost-us-investment-nuclear-end-reliance/&hl=en&gl=in&strip=1&vwsrc=0>

Sturgeon's anti-nuclear stance to come at 'enormous cost' and cause UK major 'headache'

Daily Express, May 15, 2022

Despite fears of nuclear war amid the Ukraine conflict, it appears that Scotland's First Minister does not want the UK's trident nuclear deterrent to remain in her country. Ms Sturgeon still has made clear that if Scotland voted to no longer remain part of the UK, she would remove Trident from the Faslane naval base on the Clyde. She said in 2019: "We should lead the way by scrapping nuclear weapons and investing that money in our communities and our public services. "The fact that the Westminster parties are united in their opposition to this approach will only confirm to many Scots that independence is the only way to scrap Trident once and for all.

"My message is simple - the overwhelming majority of countries the world over do not have nuclear weapons.

<https://www.express.co.uk/news/science/1610235/sturgeon-trident-nuclear-clyde-faslane-scottish-independence>

US atomic bombs back in Britain?

Beyond Nuclear International, May 15, 2022

News that US nuclear weapons may already be back in Britain, at RAF/USAF Lakenheath in East Anglia, makes Britain

once again a forward nuclear base for the US in Europe. 110 US/NATO free-fall B61 nuclear bombs were removed from Lakenheath in 2008, following sustained protest at the base by CND and the Lakenheath Action Group. US nuclear bombs had been located there since 1954. Their return - assigned to NATO - will increase global tensions and put Britain on the front line in a NATO/Russia war. B61s have continued to be sited in five other countries across Europe - Belgium, Germany, the Netherlands, Italy and Turkey - in spite of strong opposition within some of the 'host' countries.

<https://beyonddnuclearinternational.org/2022/05/15/us-atomic-bombs-back-in-britain/>

'END of Russia' Putin told UK will 'cripple' Moscow in swift revenge for nuclear strike

Daily Express, 15 May 2022

Russia is believed to have around 2,000 tactical nuclear weapons in its arsenal, with some even powerful enough to kill tens of thousands of people with a single strike. Vladimir Putin's surge into Ukraine hasn't gone to plan, with his troops being met with courageous and spirited resistance from Ukraine. This has seen Russia suffer swathes of casualties on the battlefield - including forces and high-ranking military generals - while troops have been forced out of Ukrainian cities they had been confident of occupying.

<https://www.express.co.uk/news/world/1610163/putin-news-russia-nuclear-weapons-strike-western-countries-ukraine-war>

Silent Sentinel to equip British Army UGVs with electro-optical systems

Janes, May 16, 2022

Silent Sentinel has won a contract to supply its electro-optical systems for the British Army's Rheinmetall Canada Mission Master SP unmanned ground vehicles (UGV), the company announced on 16 May. The contract is part of the British Army's Robotic Platoon Vehicle

(RPV) programme, which seeks to determine the use cases and capability of unmanned vehicles in boosting the combat effectiveness and capabilities of dismounted troops at the platoon level. According to the announcement, the platform will provide threat detection, recognition, and identification at long range and in all weather and lighting conditions.

<https://www.janes.com/defence-news/industry-headlines/latest/silent-sentinel-to-equip-british-army-ugvs-with-electro-optical-systems>

London to provide long-range artillery, anti-ship missiles, drones to Kiev

TASS, May 19, 2022

Britain's new package of military aid to Ukraine will include long-range artillery, shore-to-ship missiles and drones, as follows from a news release issued by the office of Prime Minister Boris Johnson following a conversation with Ukrainian President Vladimir Zelensky on Thursday. "Noting the recent announcement of an additional £1.3 billion (\$1.62 billion - TASS) in UK military aid for Ukraine, the Prime Minister set out the support flowing to Ukraine's defense, including long-range artillery, shore-to-ship missiles and unmanned drones," the news release reads.

<https://tass.com/defense/1453315>

UK Nuclear Power Station Delayed And Will Cost Extra £3 Billion

Nucnet, May 20, 2022

The new nuclear power station being built at Hinkley Point in Somerset, southwest England, will start operating a year later than planned and will cost an extra £3bn, it has been announced. The French state energy company EDF published the findings of a review into the cost and schedule of the two-unit power station taking account of the continuing impact of the Covid-19 pandemic. The delay means the first EPR plant is now scheduled to start operating in June 2027, a year later than planned, with costs estimated between £25bn and £26bn. EDF said this would not affect the cost to

British consumers or taxpayers, but added it assumes assuming the absence of a new pandemic wave and no additional effect of the war in Ukraine.

<https://www.nucnet.org/news/uk-nuclear-power-station-delayed-and-will-cost-extra-gbp3-billion-5-5-2022>

Government To Put Forward Proposals For New Nuclear At Trawsfynydd

Nucnet, May 20, 2022

Rolls-Royce has welcomed an announcement that the UK will work on proposals for the siting of a new nuclear development at Trawsfynydd, North Wales, hailing the decision as "a key milestone" as the company seeks opportunities for deployment of its small modular reactor technology. Rolls-Royce SMR's chief executive, Tom Samson, said identifying sites is a key milestone and this location offers existing grid connection, infrastructure, access to a highly skilled workforce and strong relationships with a supportive engaged community.

"The land around the Magnox site at Trawsfynydd has great potential for small modular reactors," Mr Samson said.

<https://www.nucnet.org/news/government-to-put-forward-proposals-for-new-nuclear-at-trawsfynydd-5-5-2022>

Putin's nuclear threat exposed: How UK, US and their allies could retaliate with force

Daily Express, May 21, 2022

Before the end of April, Russian President Vladimir Putin said his country would respond in "lightning-fast" style if the UK, US and their allies crossed the line with military intervention in Ukraine. The 69-year-old has engaged in a series of sabre-rattling exercises to deter support for Kyiv, with the topic of nuclear weapons regularly being threatened in the direction of the West. President Putin told Russian lawmakers a fortnight ago: "If someone intends to intervene in the

ongoing events from the outside and create strategic threats for Russia that are unacceptable to us, they should know that our retaliatory strikes will be lightning-fast. “We have all the tools for this, things no one else can boast of having now. And we will not boast, we will use them if necessary. And I want everyone to know that.”

<https://www.express.co.uk/news/science/1604168/Vladimir-Putin-nuclear-threat-uk-us-allies-response-evg>

L. Hungary

Budapest Pushes Russia For New Reactors ‘As Soon As Possible’

Nucnet, May 9, 2022

Hungary and Russia have held talks on plans to build new reactors at the Paks nuclear power station with Budapest saying the two blocks need to be completed “as soon as possible”. Péter Szijjarto, Hungary’s foreign minister, confirmed on social media that talks had taken place in Istanbul, Turkey, with Alexey Likhachev, chief executive officer of Russia’s state nuclear corporation Rosatom. He said the construction of new reactors at Paks, which already has four operational plants, is vital for the country’s energy security. “The more energy Hungary is able to generate on its own, the more protected it is from the turbulence of the global energy market,” Mr Szijjarto said on Facebook.

<https://www.nucnet.org/news/budapest-pushes-russia-for-new-reactors-as-soon-as-possible-5-1-2022>

M. Czech Republic

Nuclear Fuel Negotiations Begin As Czech Republic Aims To Shut Out Russia

Nucnet, May 10, 2022

Negotiations have begun for the Czech Republic’s Dukovany nuclear power station to stop using Russian supplier Tvel because of Russia’s war in Ukraine, Czech news

agency CTK reported. Dana Drábová, chairperson of the State Office for Nuclear Safety, told a seminar of the Civil Safety Commission at Dukovany that “in the coming months, the Dukovany Nuclear Power Plant will face the decision to secure fuel supplies from companies other than Russia’s Tvel”. However, she said this should happen in a similar way to the Temelín power station, for which fuel will be supplied by US-based Westinghouse and France’s Framatome for 15 years from 2024.

<https://www.nucnet.org/news/nuclear-fuel-negotiations-begin-as-czech-republic-aims-to-shut-out-russia-5-2-2022>

N. Denmark

IAEA Mission Finds Progress in Waste Management in Denmark, Sees Specific Areas for Improvement

IAEA, May 12, 2022

An International Atomic Energy Agency (IAEA) team of experts said that Denmark has developed and implemented a robust and well-functioning system for maintaining and further enhancing the safety and effectiveness of spent fuel and radioactive waste management. The team also noted that the national programme for the management of radioactive waste should be further developed and its implementation requires significant efforts. The Government of Denmark requested the IAEA Integrated Review Service for Radioactive Waste and Spent Fuel Management, Decommissioning and Remediation (ARTEMIS) mission to provide an independent international evaluation of Denmark’s radioactive waste and spent fuel management, based on the relevant IAEA Safety Standards and proven international practices.

<https://www.iaea.org/newscenter/pressreleases/iaea-mission-finds-progress-in-waste-management-in-denmark-sees-specific-areas-for-improvement>

O. United States

American Nuclear Society CEO / Russia's Actions In Ukraine Have Done 'Material Damage' To Domestic Reactor Industry

Nucnet, May 13, 2022

Russia's actions in Ukraine have done "material damage" to the reputation of its own commercial nuclear enterprise with multilateral economic sanctions likely to significantly degrade Moscow's ability to provide state-sponsored financing for new nuclear builds, a key competitive advantage it enjoyed before the war in Ukraine began, American Nuclear Society chief executive officer Craig Piercy wrote for Nuclear Newswire.

<https://www.nucnet.org/news/russia-s-actions-in-ukraine-have-done-material-damage-to-domestic-nuclear-industry-5-5-2022>

Unity among nations, in push for greater space security at UN-led talks

UN News, May 13, 2022

The first Open-ended Working Group on Reducing Space Threats that's been meeting all week in the Swiss city, is the result of a UN General Assembly resolution last December, seeking to promote "norms, rules and principles of responsible behaviours" among countries already present in the cosmos - or which are planning to have a presence in space.

"The situation has changed dramatically in the last few decades. We have so many space activities there is a growing number of space-faring nations - and even those that are not space-faring are sending their own satellites," explained Hellmut Lagos, chair of the working group talks.

"There are so many activities and the regulations ...are not enough to deal with the different risks and threats to the security of all those activities."

<https://news.un.org/en/story/2022/05/1118202>

US Army conducts 'static' test with ramjet for future Precision Strike Missile

Janes, May 13, 2022

Advancements in designing and testing a potential ramjet for the US Army Precision Strike Missile (PrSM) could extend the weapon's range up to 1,000 kilometers, and a prototype could be ready for testing in 2026, according to Major General John Rafferty, head of the service's Long-Range Precision Fires Cross-Functional Team, and budget documents. Lockheed Martin's PrSM is set to replace the MGM-140 Army Tactical Missile System (ATACMS) and the army is preparing to deliver an initial version of the weapon (with Northrop Grumman's rocket motor) to soldiers in fiscal year 2023. Although the service has not disclosed the range of this missile, Army Chief of Staff General James McConville told lawmakers on 12 May that it will exceed 500 km.

<https://www.janes.com/defence-news/industry-headlines/latest/us-army-conducts-static-test-with-ramjet-for-future-precision-strike-missile>

Kaman Kargo UAV full-scale test expected in second half of 2022

Janes, May 13, 2022

Aerospace company Kaman said it is on track to fly a full-scale model of its Kargo unmanned aerial vehicle (UAV) in the latter half of third quarter. Kaman flew a half-size model in June 2021 to test the new drivetrain designed for the UAV. The transmission for the full-size model is in manufacturing and will be delivered to Kaman "very soon", Romin Dasmalchi, Kaman's senior director of government relations, told Janes during the Modern Day Marine 2022 conference in Washington, DC on 10 May.

<https://www.janes.com/defence-news/air-platforms/latest/kaman-kargo-uav-full-scale-test-expected-in-second-half-of-2022>

General Atomics announces MQ-9B STOL upgrade for carrier operations

Janes, May 13, 2022

General Atomics Aeronautical Systems, Inc (GA-ASI) said on 10 May that it is developing a kit to provide short take-off and landing (STOL) capability on its MQ-9B SkyGuardian and SeaGuardian unmanned aerial systems (UASs). The MQ-9B STOL option will utilise a wing and tail kit that can be installed on the platform in the hanger or on a flight line in less than a day, according to the company. The unmanned aerial vehicle's (UAV's) endurance will be affected by the STOL capability GA-ASI expects

<https://www.janes.com/defence-news/air-platforms/latest/general-atomics-announces-mq-9b-stol-upgrade-for-carrier-operations>

U.S. Commits to ASAT Ban

May 2022

The United States has become the first space-faring nation to declare a ban on anti-satellite (ASAT) weapons testing. In a statement on April 18, the Biden administration said the United States would commit "not to conduct destructive, direct-ascent [ASAT] missile testing, and that [it] seeks to establish this as a new international norm for responsible behavior in space."

Destructive ASAT tests "jeopardize the long-term sustainability of outer space and imperil the exploration and use of space by all nations," the White House said in an April 18 fact sheet on national security norms in space.

<https://www.armscontrol.org/act/2022-05/news/us-commits-asat-ban>

WingXpand begins trials of its expandable wing UAV

Janes, May 17, 2022

A new WingXpand unmanned aerial vehicle (UAV) is to be unveiled at the Special Operations Forces Industry Conference in Tampa, Florida, WingXpand told Janes on

11 May ahead of the event. The WingXpand UAV is a new type of fixed-wing platform with a patented expandable wing that is fully collapsible. Its original 2.13 m (7 ft) wingspan can be reduced by 60% in less than two minutes to fit the UAV into a backpack. It has a monocoque straight tapered wing integrated with a snap attach-and-locking mechanism for wing expansion, maintaining wing stability. It uses an open architecture system with modular payload capability, to service civil and military aviation sectors in surveillance and reconnaissance roles. The UAV can support public safety and defence, survey and inspection, damage assessment, and logistics operations. It uses smart sensing recognition via Edge artificial intelligence (AI) payloads.

<https://www.janes.com/defence-news/air-platforms/latest/wingxpand-begins-trials-of-its-expandable-wing-uav>

US Selects Nuclear-Powered Spacecraft Designs For Demonstrations

Nucnet, May 19, 2022

Ultra Safe Nuclear Corporation and Avalanche Energy will develop small, nuclear-powered spacecraft prototypes for space missions under contracts awarded by the Department of Defense's (DoD) Defense Innovation Unit (DIU), with in-space demonstrations set for 2027. Space News reported that USNC is proposing a chargeable, encapsulated nuclear radioisotope battery called EmberCore, while Avalanche will demonstrate Orbitron, a handheld micro-fusion reactor. DIU, a Silicon Valley-based Pentagon organisation that works with commercial industries and startups, awarded both companies "other transaction" contracts to demonstrate nuclear propulsion and power technology for future DoD space missions.

<https://www.nucnet.org/news/us-selects-nuclear-powered-spacecraft-designs-for-2027-demonstrations-5-4-2022>

Northrop Grumman finalises development of Hatchet miniature strike munition

Janes, May 20, 2022

Northrop Grumman has declared the development of its Hatchet miniature precision strike munition 'finalised' following a series of end-to-end live all-up round (AUR) tests at an undisclosed US government test range on 11 May.... These were the first Hatchet release demonstrations using a live warhead," a Northrop Grumman spokesperson told Janes. "The purpose of the tests was to evaluate the capability of live AURs delivered from a tactical platform. The multiple drops proved 100% reliable for the warhead function, with an ISO container 'target' utilised to enable our engineers to evaluate the pattern of fragmentation from a live release. Hatchet is designed for precision strike engagements of two metres or less, and this was also verified in each of the releases."

<https://www.janes.com/defence-news/air-platforms/latest/northrop-grumman-finalises-development-of-hatchet-miniature-strike-munition>

USSOCOM progresses Maritime Precision Engagement-Munition programme

Janes, May 20, 2022

US Special Operations Command (USSOCOM) is preparing to conduct development tests with the Altius 700 airframe as part of the Maritime Precision Engagement-Munition (MPE-M) programme, officials have confirmed. Addressing delegates at the Special Operations Forces Industry Conference (SOFIC) on 17 May, representatives from the Program Executive Office (PEO) of Special Operations Forces (SOF) Warrior said the Area-I Altius 700 - a new 30 lb kinetic payload solution - would support Block 1 of the MPE-M programme. The news follows the completion of software and integration risk reduction activities for the Altius 600 payload for MPE-M.

<https://www.janes.com/defence-news/air-platforms/latest/ussocom-progresses-maritime-precision-engagement-munition-programme>

West Asia

P. Iran

EU resumes push to revive JCPOA with last-ditch attempt

Tehran Times, May 7, 2022

The talks came to a standstill in March after the U.S. refused to make political decisions regarding some terrorism-related sanctions that Iran believes were imposed in the first place to make the revival of the 2015 nuclear deal, formally called the Joint Comprehensive Plan of Action (JCPOA), ever more difficult. In the last round of talks, Iran demanded that the Biden administration remove the Islamic Revolution Guards Corps (IRGC) from the U.S. State Department Foreign Terrorist Organizations. The U.S. rejected the demand and blamed Iran for the delay in concluding the talks.

<https://www.tehrantimes.com/news/472345/EU-resumes-push-to-revive-JCPOA-with-last-ditch-attempt>

Iran begins procedures to build a fully domestic nuclear reactor

Tehran Times, May 7, 2022

An Iranian official with the Atomic Energy Organization of Iran (AEOI) has said that Iran is planning to build a nuclear plant by using domestic knowledge. Pejman Jamshidi, deputy head of the AEOI, announced that Iran is seeking to build a fully Iranian-made nuclear reactor and that planning for the project is underway. Jamshidi said in an interview with Fars that Iran possesses the full cycle of nuclear fuel production, and this cycle has been fully localized from the stage of raw materials discovery to the treatment of nuclear waste. Jamshidi also revealed that Iran plans to build a large facility for the production of radioactive drugs to meet the domestic need and increase exports until the end of the next Iranian year.

<https://www.tehrantimes.com/news/472339/iran-begins-procedures-to-build-a-fully-domestic-nuclear-reactor>

Iranian resistance warns Iran's primary goal is to build a nuclear weapon

Arab News, May 8, 2022

Iran is close to building a nuclear weapon and is using negotiations with the West to give them more time to achieve that goal, according to Shahin Gobadi, the spokesperson for the National Council of Resistance of Iran (NCRI). A thermal nuclear scientist who first joined the resistance while a college student at UCLA 40 years ago, Gobadi, 60, said the NCRI, which is based in Paris, works with the People's Mojahedin Organization of Iran (PMOI/MEK). The PMOI/MEK operates inside Iran taking great risks to expose Iran's nuclear weapons program, Gobadi said.

<https://www.arabnews.com/node/2077301/world>

Iran FM underlines red lines in Vienna talks

Tehran Times, May 11, 2022

Iranian Foreign Minister Hossein Amir Abdollahian has said that Iran still pursues the path of negotiations but the lifting of U.S. sanctions on Iran should be done in line with Iran's red lines. "Both paths of neutralizing sanctions and lifting them are being pursued," Amir Abdollahian said on Twitter. "The talks to lift sanctions are being pursued through sticking to Iran's red lines for reaching a good, strong and lasting agreement," Amir Abdollahian noted. The tweet comes as the European Union's coordinator of the Vienna talks, Enrique Mora, is in Tehran for talks over how to resume the stalled talks. In Tehran, Mora met with Iran's chief negotiator, Ali Bagheri Kani. "Travelling again to Tehran for meetings with Bagheri Kani and other officials on the Vienna talks and other issues. Work on closing the remaining gaps of this negotiation continues," Mora said on Twitter before heading to Tehran.

<https://www.tehrantimes.com/news/472504/Iran-FM-underlines-red-lines-in-Vienna-talks>

UN nuclear agency 'extremely concerned' by Iranian silence on undeclared sites

Times of Israel, 11 May 2022

The UN atomic energy watchdog chief said Tuesday that he was "extremely concerned" about Iran's lack of cooperation as the EU seeks to unblock talks to revive the 2015 nuclear deal. Talks between world powers and Iran have stalled since mid-March as negotiators seek to return to the landmark accord that curtailed the Islamic republic's nuclear program in exchange for sanctions relief. The International Atomic Energy Agency is "trying to clarify a number of still open matters with Iran," IAEA head Rafael Grossi told a European Parliament committee.

<https://www.timesofisrael.com/un-nuclear-agency-extremely-concerned-by-iranian-silence-on-undeclared-sites/>

Amir Abdollahian: Good agreement within reach if U.S. makes 'political decision'

Tehran Times, May 13, 2022

Iranian Foreign Minister Hossein Amir Abdollahian said on Friday that a good and reliable agreement is within reach if the U.S. makes a "political decision" and follows through on its obligations. "After my meetings with Josep Borrell, Mr. Mora's visit and talks with Mr. Bagheri were another opportunity to work on steps to overcome the remaining concerns," Amir Abdollahian stated on Twitter. He went on to say that "a good and trustworthy outcome is within reach if the U.S. takes its political decision and follows through on its obligations." On Wednesday, Iranian top nuclear negotiator Ali Bagheri Kani met in Tehran with Enrique Mora, the deputy EU foreign policy chief, who acts as the Iran nuclear talks coordinator.

<https://www.tehrantimes.com/news/472547/Amir-Abdollahian-Good-agreement-within-reach-if-U-S-makes-political>

Q. Saudi Arabia

CENTCOM chief hits out at Iran, says US committed to Middle East partners Alarabiya,

May 12, 2022

The top US military general for the Middle East said in a recent interview that Iran was the “most destabilizing force” in the region, noting that countering this threat needed regional cooperation. “I view Iran as the most destabilizing force in the Middle East. The United States’ position is that we will not allow a nuclear Iran. However, our concerns about Iran go beyond its nuclear capability,” US Central Command (CENTCOM) chief Gen. Erik Kurilla told Al Arabiya during Tuesday’s interview in Saudi Arabia. Asked about his trip to Saudi Arabia, the US general said it was part of a “listening tour” and that he would be making several more trips back to the kingdom. He was in Egypt before heading to Saudi Arabia. “This visit to the CENTCOM region... is largely an opportunity to glean insights from our partners here. In so doing, I’m looking for gaps, risks, and opportunities in security for our partners and for the region,” Gen. Kurilla said.

<https://english.alarabiya.net/News/middle-east/2022/05/12/CENTCOM-chief-hits-out-at-Iran-says-US-committed-to-Middle-East-partners>

R. Israel

Ambassador Herzog says Israel maintains freedom to act apart from Iran deal

The Jerusalem Post, 12 May 2022

The Jewish Federations of North America held its Washington Conference on Wednesday and Thursday, featuring US senators and Israeli officials. Israeli Ambassador to Washington Mike Herzog, in his remarks about the Abraham Accords, said that the agreements were “really an amazing achievement and a key to a better future in our region.” “This is a warm peace, it’s not just a cold peace between governments,” he said. “The sky’s the limit,

it really is a success story, and people look at it and say ‘We want to join.’ We are now looking to deepen the agreements but also to expand them and to add additional countries.

<https://www.jpost.com/israel-news/article-706578>

S. Turkey

Turkiye to produce drone in Kazakhstan

Anadolu Agency, May 11, 2022

Turkiye will produce its drone at a facility soon to be established in Kazakhstan. Anka, an unmanned aerial vehicle (UAV) exported to Kazakhstan, will be jointly produced by Turkish and Kazakh experts, according to a statement by the Turkish Aerospace Industries (TUSAS). The company signed a memorandum of understanding with state-owned Kazakhstan Engineering on technology transfer, including maintenance and repair. The latest development will make Kazakhstan the first production base of Anka outside of Turkiye.

<https://www.aa.com.tr/en/economy/turkiye-to-produce-drone-in-kazakhstan/2584822>

Turkey integrates S. Korean engine with MBT Altay, tests continue

Daily Sabah, May 15, 2022

The engine of Turkey’s indigenously developed domestic main battle tank (MBT) Altay, which arrived from South Korea in March, has been integrated into the tank, while the mass production of the tank is expected to begin within two years, according to the Turkish daily Sabah Sunday. Turkish land vehicle manufacturer BMC, the company that heads the Altay project, previously signed an agreement with two South Korean companies, Doosan Infracore Co. and S&T Dynamics Co., for the engine and transmission. Work on the development of a domestic engine, on the other hand, has

also gained momentum as it was repeatedly stated that the next versions of the Altay would bear a domestic engine.

<https://www.dailysabah.com/business/defense/turkey-integrates-s-korean-engine-with-mbt-altay-tests-continue>

East Asia

T. Japan

Japanese radioactive waste puts ocean at risk

Global Times, May 8, 2022

Japan's plan to dump radioactive waste water from its crippled Fukushima Daiichi nuclear power plant into the Pacific Ocean will endanger marine products and contaminate the ocean further, a South Korean green activist has said. "Eleven years has passed since the Fukushima power plant accident occurred, but its radioactive contamination has not been mitigated much," Ahn Jae-hun, energy and climate change director at the Korea Federation for Environment Movement, a green advocacy group in Seoul, told the Xinhua News Agency recently. The group's analysis of the 2021 data from Japan's Ministry of Health, Labor and Welfare showed that cesium was detected from 8 percent of Japanese fishery products.

<https://www.globaltimes.cn/page/202205/1265042.shtml>

Japan nuclear regulator OKs plan to release treated Fukushima water

Nikkei Asia, May 18, 2022

Japan's Nuclear Regulation Authority on Wednesday endorsed a plan to discharge treated water stored at the crippled Fukushima Daiichi nuclear power plant into the sea. The plan to release the low-level radioactive water starting around next spring will be officially approved after the regulator hears submissions from the public. The plant's operator, Tokyo Electric Power Co. Holdings, will need to gain consent from municipalities hosting the power complex

to start construction of the water discharge facilities.

<https://asia.nikkei.com/Business/Energy/Japan-nuclear-regulator-OKs-plan-to-release-treated-Fukushima-water>

U. South Korea

Yoon Suk-yeol sworn in, hints at denuclearization perks for North

Nikkei Asia, May 10, 2022

Yoon Suk-yeol was sworn in as South Korea's president on Tuesday, opening a new era for a country facing threats from North Korea's military, an economic slowdown and high inflation.

<https://asia.nikkei.com/Politics/Yoon-Suk-yeol-sworn-in-hints-at-denuclearization-perks-for-North>

South Korea's Yoon faces early test as it braces for North Korea nuclear test

The Jakarta Post, May 11, 2022

South Korean President Yoon Suk-yeol's plans to offer economic aid in return for denuclearisation could face an early challenge amid signs of an imminent North Korean nuclear test - and such proposals have been rebuffed before, analysts say. Yoon has warned of a "tense" security environment, citing the possible nuclear test, which US and South Korean officials have said could occur as early as this month after Pyongyang broke a 2017 moratorium on long-range missile testing in March. Yoon and his team have given few details on how they would bring back Pyongyang to the negotiating table. But some analysts said North Korea is unlikely to accept any aid-for-denuclearisation deal, as its nuclear and missile programmes are mature and still advancing.

<https://www.thejakartapost.com/world/2022/05/11/south-koreas-yoon-faces-early-test-as-it-braces-for-north-korea-nuclear-test.html>

South Korea, US on alert for possible North Korean ICBM test: official

The Korea Times, May 18, 2022

South Korea and the United States are keeping close tabs on the possibility of another long-range missile launch by North Korea, a Seoul official said Wednesday, amid a news report that the recalcitrant regime may be preparing some kind a provocation before or during President Joe Biden's upcoming trip to Northeast Asia. Citing a U.S. official, CNN reported Tuesday that the North appears to be preparing for a possible intercontinental ballistic missile (ICBM) test within the "next 48 to 96 hours" as U.S. President Joe Biden is set to begin a five-day trip to South Korea and Japan, Friday. "The intelligence authorities of South Korea and the U.S. are paying close attention to related movements while maintaining a firm readiness posture," the official told Yonhap News Agency on condition of anonymity.

https://www.koreatimes.co.kr/www/nation/2022/05/103_329375.html

V. North Korea

North Korea fires short-range ballistic missile: South Korean military

Nikkei Asia, May 7, 2022

North Korea fired a ballistic missile on Saturday, South Korea and Japan said, three days before the inauguration of South Korean president-elect Yoon Suk-yeol, who has vowed to take a hard line against the North. South Korean military said that North Korea fired what is believed to be an submarine-launched ballistic missile (SLBM) into the sea off its east coast around 0507 GMT on Saturday from a submarine around Sinpo, where North Korea keeps submarines as well as equipment for test-firing SLBMs.

Japan's Defence Minister Nobuo Kishi said North Korea's recent development in nuclear missile-related technology and repeated launches of ballistic missiles threatened the region and the international community.

<https://asia.nikkei.com/Spotlight/N-Korea-at-crossroads/North-Korea-fires-short-range-ballistic-missile-South-Korean-military>

North Korea fires 3 ballistic missile off its east coast

Nikkei Asia, May 12, 2022

North Korea fired three ballistic missiles toward the sea off its east coast on Thursday, South Korea said, in the latest such move by the isolated country racing to advance its weapons programs on the day it first reported a COVID-19 outbreak.

Japan's coastguard also confirmed the launch of a ballistic missile by North Korea, citing its military. The projectile appeared to fall outside Japan's exclusive economic zone, public broadcaster NHK said. South Korea's Joint Chiefs of Staff said three short-range ballistic missiles were fired from the Sunan area of the North's capital, Pyongyang, where an international airport is located and where the North had said it fired its largest intercontinental ballistic missile (ICBM), the Hwasong-17, on March 24.

<https://asia.nikkei.com/Spotlight/N-Korea-at-crossroads/North-Korea-fires-3-ballistic-missile-off-its-east-coast>

North Korea ready for nuclear test, missile launch: intelligence agency

The Korea Times, May 19, 2022

North Korea is near completion of another nuclear test or the test-firing of more missiles, or both, despite the national lockdown due to the rapid spread of "stealth Omicron," according to the National Intelligence Service (NIS).

During a closed-door meeting with the members of the National Assembly Intelligence Committee on Thursday, NIS officials were quoted as saying that North Korea's preparations for the next round of provocations are ready.

Therefore, Rep. Kim Byung-kee of the main opposition Democratic Party of Korea (DPK) said the North's next test is simply a matter of time. "We're told that they're in their last stage in the test-firings of the missiles and a nuclear test, so, all I can say is that it would not come as a

surprise even if more missiles are test-fired or another nuclear test is conducted any time," he told reporters.

https://www.koreatimes.co.kr/www/nation/2022/05/103_329458.html

North Korea yet to fully develop hypersonic missile, but its tests raise concerns: US official

The Korea Times, May 19, 2022

North Korea does not appear to have developed a hypersonic missile, but its tests to develop such a system warrant U.S. concern, the head of the U.S. Missile Defense Agency said Wednesday.

Pyongyang claims it successfully tested a new hypersonic missile, Jan. 5 and Jan. 11 (KST). "They claim to have developed hypersonics," Vice Adm. John Hill said when asked if the North was developing hypersonic missiles in a hearing before the Senate Subcommittee on Strategic Forces. "But in terms of what we have seen, in terms of data, I'm not entirely confident that they have that capability today, but the fact that they are testing it ought to be of concern," he added.

https://www.koreatimes.co.kr/www/nation/2022/05/103_329419.html

W. Opinions

Beyond Pakistan: Why India's Nuclear Policy Must Focus On China

(Retd) Lt. Gen. Bhopinder Singh

The Quint, May 11, 2022

Unlike the hush-hush details of actual nuclear warheads, carriers, strategic forces, deployments et al pertaining to nuclear weaponry, the sovereign nuclear doctrine weaponises the security, strategic and reactionary presumptions of a country, and is public. It is not shrouded in secrecy as that defeats the advanced purpose of deterrence. After the demonstration of the Indo-Pak Nuclear Tests of 1998 (Operation Shakti and Chagai-I & II), the protocolisation of the revised Indian intent was asserted and

visibilised in the revised syntax of the nuclear doctrine. But what has happened since then? For one, Pakistan is no longer the primary security threat, China is. The accompanying dynamics with China are completely different vis-à-vis threats emanating from Pakistan. India successfully outsized the Pakistani threat by conventional superiority and the existing nuclear doctrine. But the same strategies won't work for China. A clear China-centric policy needs to be formulated in the tabled doctrine, wherein perhaps the 'no first use' clause could be exceptionally and explicitly dropped for China.

<https://www.thequint.com/voices/opinion/beyond-pakistan-why-indias-nuclear-policy-must-focus-on-china#read-more>

China, India and Pakistan: Tenuous Stability Risks Nuclear War

Daniel Markey, Andrew Scobell, Vikram J. Singh

United States Institute of Peace, 17 May 2022

Over the past decade, long-standing disputes between the nuclear-armed states of Southern Asia have repeatedly veered into deeper hostility and violence. These regional developments reflect and reinforce new and significant geopolitical shifts, starting with the global strategic competition between China and the United States. In Southern Asia, relations between the United States and Pakistan have frayed even as U.S.-India and China-Pakistan ties have strengthened. The region now faces deepening and more multifaceted polarization. Global competition adds fuel to regional conflict and reduces options for crisis mediation. To help keep the peace in Southern Asia, the United States should undertake efforts in three domains: core regional disputes, strategic regional stability and potential crises involving nuclear-armed actors in the region.

<https://www.usip.org/publications/2022/05/china-india-and-pakistan-tenuous-stability-risks-nuclear-war>

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

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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