

Nuclear, Missile & Space Digest

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A Fortnightly Newsletter from the Indian Pugwash Society

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A. India

IAEA Mission Finds Solid Regulatory Arrangements in India, Notes Areas for Improvement

IAEA, June 20, 2022

An International Atomic Energy Agency (IAEA) mission said India's regulator showed a strong commitment and professionalism to ensure nuclear and radiation safety in the country. The team also noted areas where improvements can be made to strengthen the radiation safety regulatory oversight programme for all facilities and activities using radiation sources. The Integrated Regulatory Review Service (IRRS) team today concluded a twelve-day follow-up mission to review progress in India's implementation of recommendations and suggestions made during an initial IRRS mission in 2015, which covered regulatory activities in relation to the country's nuclear power plants. The follow-up mission had an extended scope, also reviewing radiation sources. Such sources are used in facilities and in activities in the country in the field of research, industry, medicine and agriculture.

<https://www.iaea.org/newscenter/pressreleases/iaea-mission-finds-solid-regulatory-arrangements-in-india-notes-areas-for-improvement>

GE Steam Power signs \$165 mn contract with BHEL for 3 nuclear steam turbines

Livemint, June 21, 2022

GE Steam Power has signed a \$165 million contract with BHEL for the supply of three nuclear steam turbines out of the six units for NPCIL's domestic nuclear program-phase 1 being developed at Gorakhpur, Haryana (units - 1 to 4 (GHAVP)) and Kaiga (Kaiga-5&6) Karnataka, India. This domestic program includes 12 units of 700 MWe being developed by NPCIL with their own nuclear reactor technology i.e., Pressurized Heavy Water Reactors (PHWR). In total, it will represent 8.4GW of CO2 free

electricity for the country, enough to power more than 14 million homes. In 2018, GE and BHEL had signed a business cooperation agreement and a License and Technology Transfer Agreement to enable them to manufacture nuclear steam turbines of 700 MW. Under this partnership, the two companies have positioned themselves to respond to the country needs for lower carbon source of energy.

<https://www.livemint.com/companies/news/ge-steam-power-signs-165-mn-contract-with-bhel-for-3-nuclear-steam-turbines-11655797343050.html>

Hyderabad: DRDL engineer leaked data on nuke-capable missiles

The Times of India, June 21, 2022

The engineer with Defence Research & Development Laboratory (DRDL), who was honey trapped by a Pakistani spy with the lure of love and marriage, had leaked classified information on India's missile programme, including development of nuclear-capable intercontinental ballistic missiles and submarine-launched missiles, said top police sources. He was arrested on Friday after a tip-off by intelligence agencies. The accused, D Mallikarjuna Reddy, 29, worked in the Advanced Naval System Program at DRDL's Research Centre Imarat complex in Hyderabad since 2018. Charged with espionage, Reddy spilled the beans during interrogation and police are planning to seek his custody to elicit more information. The accused shared data on technical components of surface-to-surface Agni missiles and the K-series missiles (named after scientist and former president APJ Abdul Kalam). The K-series missiles are specifically manufactured for Navy's Arihant-class nuclear-powered ballistic missile submarines.

<https://timesofindia.indiatimes.com/city/hyderabad/drld-engineer-leaked-data-on-uke-capable-missiles/articleshow/92347466.cms>

Vertical Launch Short Range Surface to Air Missile successfully flight-tested by DRDO & Indian Navy off Odisha coast

PIB, June 24, 2022

Vertical Launch Short Range Surface to Air Missile (VL-SRSAM) was successfully flight-tested by Defence Research & Development Organisation (DRDO) and the Indian Navy from an Indian Naval Ship at Integrated Test Range (ITR), Chandipur off the coast of Odisha on June 24, 2022. The VL-SRSAM, a ship borne weapon system, is meant for neutralising various aerial threats at close ranges including sea-skimming targets. The launch of the system was conducted against a high speed aerial target mimicking aircraft, which was successfully engaged. The flight path of the vehicle along with health parameters were monitored using a number of tracking instruments deployed by ITR, Chandipur. The test launch was monitored by senior officials from DRDO & the Indian Navy.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1836721>

Huge deposits of uranium found in Rajasthan's Sikar

The Free Press Journal, June 26, 2022

After the uranium was discovered in Jharkhand and Andhra Pradesh, huge deposits of the mineral have recently been found in Rajasthan. In a boost to its indigenous nuclear power program, India has discovered large uranium deposits in Rajasthan's Sikar district. The state government has issued a Letter of Intent (LOI) of mining lease to Uranium Corporation of India for the mining of uranium ore at Rohil in Khandela tehsil near Sikar. Additional Chief Secretary Mines, Petroleum, Dr Subodh Agrawal informed that huge deposits of uranium have been found in the 1086.46-hectare area in Rohil of Khandela tehsil of Sikar district. According to preliminary estimates, about 12 million tonnes of uranium reserves are expected in this area. The Uranium Corporation of India is likely to invest Rs 3,000 crores from which about 3,000

people will get direct and indirect employment.

<https://www.freepressjournal.in/india/huge-deposits-of-uranium-found-in-rajasthans-sikar>

Indigenously-developed Laser-Guided ATGM successfully tested by DRDO & Indian Army

PIB, June 28, 2022

Indigenously-developed Laser-Guided Anti-Tank Guided Missile (ATGM) was successfully test-fired from Main Battle Tank (MBT) Arjun by Defence Research and Development Organisation (DRDO) and Indian Army at KK Ranges with support of Armoured Corps Centre & School (ACC&S) Ahmednagar on June 28, 2022. In the test, the ATGM hit the bull's eye with textbook precision and successfully defeated the target at minimum ranges. Telemetry systems recorded the satisfactory flight performance of the missile. The all-indigenous ATGM employs a tandem High Explosive Anti-Tank (HEAT) warhead to defeat Explosive Reactive Armour (ERA) protected armoured vehicles. The ATGM has been developed with multi-platform launch capability and is currently undergoing technical evaluation trials from 120 mm rifled gun of MBT Arjun.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1837753>

High speed Expendable Aerial Target - ABHYAS - successfully flight-tested off Odisha coast

PIB, June 29, 2022

High speed Expendable Aerial Target (HEAT) was successfully flight-tested from the Integrated Test Range (ITR), Chandipur off the coast of Odisha on June 29, 2022. The performance of the aircraft at low altitude including sustained level and high manoeuvrability was demonstrated during the test flight. The target aircraft was flown from a ground based controller in a pre-designated low altitude flight path, which was monitored by various tracking sensors deployed by

ITR, including radar and electro-optical targeting system. ABHYAS is designed & developed by Aeronautical Development Establishment of Defence Research and Development Organisation (DRDO). The air vehicle was launched using twin under-slung boosters which provide the initial acceleration to the vehicle. It is powered by a small gas turbine engine to sustain a long endurance flight at high subsonic speed.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1837881>

B. Russia

Russia Says Destroyed NATO Arms Depot in Western Ukraine

The Moscow Times, June 15, 2022

Russia said Wednesday its forces destroyed a depot containing NATO-supplied arms in western Ukraine as President Volodymyr Zelensky urged Western allies to speed up arms deliveries to his country.

<https://www.themoscowtimes.com/2022/06/15/russia-says-destroyed-nato-arms-depot-in-western-ukraine-a78005>

Ukraine Dependent on Arms From Allies After Exhausting Soviet-Era Weaponry

The Moscow Times, June 10, 2022

Ukraine has depleted its stocks of Soviet and Russian-designed weaponry and is now completely dependent on allies for arms to defend against Russia's invasion, U.S. military sources say.

<https://www.themoscowtimes.com/2022/06/10/ukraine-dependent-on-arms-from-allies-after-exhausting-soviet-era-weaponry-a77961>

Putin Warns of Strikes Over Missile Supplies as Blasts Rock Kyiv

The Moscow Times, June 05, 2022

Russian President Vladimir Putin warned Sunday that Moscow will hit new targets if the West supplies Ukraine with long-range missiles, hours after several explosions rocked the Ukrainian capital Kyiv.

<https://www.themoscowtimes.com/2022/06/05/>

putin-warns-of-strikes-over-missile-supplies-as-blasts-rock-kyiv-a77897

Russia is fulfilling contract to deliver Mi-28NE Night Hunter choppers to Uganda.

TASS, 22 JUN, 2022

At present, Russia is fulfilling the contract to deliver Mi-28NE Night Hunter attack helicopters to Uganda, a military-diplomatic source has told TASS. "The contract is being implemented. The first batch of Mi-28NE has already been delivered," he said. "Deliveries of all aircraft under the contract are due in early 2023."

<https://tass.com/defense/1469437>

Over 3,470 hectares cleared of mines by Russian specialists in Donbass – defense ministry

TASS, 22 JUN, 2022

Russian mine disposal specialists have cleared of mines an area of more than 3,470 hectares in the Donetsk and Lugansk People's Republics (DPR and LPR), Mikhail Mizintsev, the headquarters head and chief of Russia's National Defense Management Center, said on Tuesday.

<https://tass.com/defense/1469341>

Defense chief highlights army's determination to ensure Russia's military security

TASS, 21 JUN, 2022

Russian army officers will do everything to ensure the country's military security, Defense Minister Army General Sergey Shoigu said. He pointed out at a Kremlin ceremony honouring military college graduates that "the country's leadership may rest assured that army officers will make every possible effort to ensure the country's military security, and combat new threats and challenges."

<https://tass.com/defense/1469155>

Russia to keep reinforcing its Armed Forces with consideration of new threats – Putin

TASS, 21 JUN, 2022

Russia intends to keep reinforcing its Armed Forces with consideration of potential threats and risks, Russian President Vladimir Putin said during the meeting with military college graduates Tuesday.

<https://tass.com/defense/1469001>

Talks on new arms deal with US look odd amid Russia's Sarmat ICBM tests, says Rogozin

TASS news agency, 20 JUN, 2022

Negotiating a new strategic arms reduction deal with the United States looks strange amid Russia's tests of its new state-of-the-art Sarmat intercontinental ballistic missile (ICBM), Head of the State Space Corporation Roscosmos Dmitry Rogozin said on Monday.

<https://tass.com/defense/1468615>

'Severodvinsk,' 'Smolensk' submarines practice fire cruise missiles in Barents Sea

TASS news agency, 20 JUN, 2022

Atomic submarine cruisers 'Severodvinsk' and 'Smolensk' fired Kalibr and Granit cruise missiles at mock targets in the Barents Sea, Northern Fleet press office said Sunday. "The complex target position, imitating a squadron of mock enemy's landing ships, was successfully hit with Kalibr and Granit missiles at a range of about 200 km," the Fleet said.

<https://tass.com/defense/1468249>

Russian defense ministry posts video of Kalibr missile launch at Ukraine's army targets

TASS news agency, 19 JUN, 2022

Russia's defense ministry on Sunday posted a video of the launch of Kalibr cruise missiles from a ship in the Black Sea at Ukrainian military infrastructure facilities.

<https://tass.com/defense/1468161>

Over 1,000 explosive devices disarmed in Donbass in past day – Defense Ministry

TASS news agency, 19 JUN, 2022

Military engineers of the Russian Armed Forces and Emergencies Ministry have defused more than 1,000 explosive devices, Colonel-General Mikhail Mizintsev, the chief of Russia's National Defense Management Center, said on Saturday.

<https://tass.com/defense/1468073>

Russia says its aircraft hit 62 Ukrainian military clusters, destroyed three arms depots

TASS news agency, 19 JUN, 2022

Russian Defense Ministry Spokesman Major General Igor Konashenkov on Saturday said Russian aircraft struck 62 Ukrainian military clusters, destroyed troops, vehicles and three arms depots over the past day.

<https://tass.com/defense/1467981>

Russia says its troops destroyed fuel storage tanks for Ukrainian military vehicles

TASS news agency, 18 JUN, 2022

Russian Defense Ministry Spokesman Major General Igor Konashenkov on Saturday said the Russian armed forces used high-precision missiles to take out oil refining facilities and fuel storage tanks in the area of Kremenchug and Lisichansk.

<https://tass.com/defense/1467975>

Russia says its aerospace forces struck four M777 howitzer platoons provided by West

TASS news agency, 18 JUN, 2022

Russian Defense Ministry Spokesman Major General Igor Konashenkov on Saturday said Russian aerospace forces struck 12 firing positions of Ukrainian artillery and mortars including M777 howitzers.

<https://tass.com/defense/1467973>

Arms supplies to Kiev lead to direct military confrontation – Russian ambassador

TASS news agency, 18 JUN, 2022

Pumping up the Kiev government with US-made weapons are a road to direct military confrontation between the two biggest nuclear superpowers, Russian Ambassador to the United States Anatoly Antonov wrote in his article.

<https://tass.com/defense/1467883>

Investigators gather evidence that 155-mm weapons were used to shell Donbass

TASS news agency, 18 JUN, 2022

Russian law enforcement officers have gathered material evidence proving that 155-mm projectiles, in service with the NATO countries, have been used in Donbass, a law enforcement source has told TASS.

<https://tass.com/defense/1467865>

Russia says fighters placed armed vehicles, artillery, MLRS at Nikolayev schools

TASS news agency, 17 JUN, 2022

Mikhail Mizintsev, head of Russia's National Defense Management Center, on Thursday said nationalists placed artillery, multiple launch rocket systems and armored vehicles at two schools in Nikolayev.

<https://tass.com/defense/1466573>

Russian Armed Forces shot down three Ukrainian Su-25 aircraft over day

TASS news agency, 12 JUN, 2022

Russian air defense systems and fighter aircraft shot down three Sukhoi Su-25 attack aircraft of the Ukrainian Air Force in a day, official representative of the Russian Ministry of Defense, Lieutenant-General Igor Konashenkov announced on Sunday.

<https://tass.com/defense/1464017>

Russian air defense forces shot down 8 UAVs of Ukrainian Armed Forces over day

TASS news agency, 12 JUN, 2022

Russian air defense forces shot down eight Ukrainian unmanned aerial vehicles (UAVs), official representative of the Russian Ministry of Defense, Lieutenant-General Igor Konashenkov announced on Sunday.

<https://tass.com/defense/1464015>

Russian air defenses down MiG-29, Su-25 aircraft - Defense Ministry

TASS news agency, 12 JUN, 2022

Russia's air defenses downed a Mikoyan MiG-29 and a Sukhoi Su-25 aircraft in the past day, Russian Defense Ministry Spokesman Lieutenant General Igor Konashenkov said on Saturday.

<https://tass.com/defense/1463849>

Harpoon missiles pose a threat to Russian Navy, Black Sea coastal area, expert says

TASS news agency, 09 JUN, 2022

Harpoon anti-ship cruise missiles that Kiev has received for what Ukrainian Defense Minister Alexey Reznikov claims to be coastal defense pose a serious threat to Russia's Black Sea Fleet and its shores, Head of the Bureau of Military and Political Analysis Alexander Mikhailov told TASS on Thursday.

<https://tass.com/defense/1463043>

Kamikaze drones successfully used in Russia's special operation in Ukraine – defense firm

TASS news agency, 08 JUN, 2022

The Russian KUB and Lancet kamikaze drones are intensively employed in combat operations in Ukraine, the state tech corporation Rostec told TASS on Wednesday. "The KUB and Lancet drones

have proven their worth in combat conditions. Both drones are quite quick, quiet, easy to use, capable of covering a distance of tens of kilometers and feature high accuracy," Rostec said.

<https://tass.com/defense/1462311>

It is vital for Russian troops to wipe out West-supplied rocket launchers, says expert

TASS news agency, 06 JUN, 2022

M270 and M142 HIMARS rocket systems that the West is supplying to Ukraine under a new military aid package are the most formidable weapons of all the armaments handed over to Kiev before but Russian forces are capable of destroying them, missile and artillery troops reserve officer, army veteran Alexey Sakantsev told TASS on Monday.

<https://tass.com/defense/1461245>

C. China

Elimination of nuclear weapons an urgent need, UN chief warns

South China Morning Post, June 16, 2022

The United Nations Secretary General Antonio Guterres said that there is an "urgent need" for a total ban on nuclear weapons amid heightened tensions stemming from Russia's invasion of Ukraine, with Japan able to play an important role in achieving that goal. There is also disquietude over efforts by China and North Korea to expand their nuclear capabilities, with the United States warning Pyongyang may conduct its seventh nuclear test soon.

<https://www.scmp.com/news/world/article/3181978/elimination-nuclear-weapons-urgent-need-un-chief-warns>

US conveyed concerns over N. Korean nuclear weapon test to China

The Korea Times, June 17, 2022

The United States has discussed with China the growing concerns over a possible North

Korean nuclear weapon test, U.S. national security advisor Jake Sullivan said. He also reiterated U.S. concerns over what will be North Korea's seventh nuclear test. "On North Korea, we have expressed our concern that North Korea is preparing to conduct another nuclear test. We have said that publicly. We have communicated that to China," Sullivan said in an online discussion session hosted by the Center for a New American Security (CNAS), a Washington-based think tank. The remarks come after Sullivan met with Yang Jiechi, head of the Chinese Community Party's Foreign Affairs Bureau, in Europe.

http://www.koreatimes.co.kr/www/nation/2022/06/103_331185.html

China launches EM catapults-equipped 3rd aircraft carrier in Shanghai

Global Times, June 17, 2022

China launched the country's third aircraft carrier and also its second domestically developed one in Shanghai, a move experts said is a milestone for the vessel's construction and future commissioning. Having a displacement of more than 80,000 tons, the carrier, named Fujian, is the country's first one equipped with electromagnetic catapults and arresting devices. As a key landmark in the Chinese People's Liberation Army (PLA) Navy's pursuit to become a blue-water navy, the third carrier is larger, more powerful and more advanced than the previous two, making it the first Chinese aircraft carrier to come close to rival its US counterparts thanks to technologies it uses like catapults, analysts said.

<https://www.globaltimes.cn/page/202206/1268368.shtml>

China's commercial space telescope completes all-sky optical survey

Xinhua, June 17, 2022

China's commercial space telescope Yangwang-1 has completed an optical

survey of the whole sky, according to its developer. The telescope, launched into orbit from the Taiyuan Satellite Launch Center in northern Shanxi Province on June 11, 2021, is developed by Shenzhen-based Origin Space Technology Co., Ltd. for asteroid resource exploration and research. During its stay in orbit, Yangwang-1 carried out sky survey observation, atmospheric luminous observation, night remote monitoring and asteroid observation, according to Su Meng, founder and CEO of Origin Space.

<https://english.news.cn/20220617/7f2d5be123d74dba820f8f1765a54a0b/c.html>

China Tests Tech That Could Beam Solar Power From Space to Earth

Bloomberg, June 18, 2022

Chinese researchers have successfully tested a full-system model of technology that could one day wirelessly transmit solar power from outer space to Earth. A model power station at Xidian University in Shaanxi province captures sunlight high above the ground and converts it into microwave beams. It then transmits through the air to a receiver station on the ground, where it can be converted back to electricity. While the model only sends the energy 55 meters through the air, the researchers hope the technology could one day be expanded to send power from orbiting solar panels to Earth.

<https://www.bloomberg.com/news/articles/2022-06-17/china-tests-tech-that-could-beam-solar-power-from-space-to-earth>

China holds latest antiballistic missile technical test, 'proves reliability amid improving technologies'

Global Times, June 19, 2022

China carried out a land-based, mid-course antiballistic missile (ABM) technical test, with analysts saying the successful interception proved the reliability of the country's antiballistic missile umbrella at a time when technologies on both ballistic missiles and antiballistic missile interceptors

are improving. Conducted at night within the Chinese border, the test reached its desired objective, China's Ministry of National Defense announced in a press release late on Sunday. The test is of defensive nature and is not aimed at any country, the Chinese Defense Ministry said. It marks a consecutive year China has conducted this kind of test. A similar test was held in February 2021, according to an announcement of the Chinese Defense Ministry at the time.

<https://www.globaltimes.cn/page/202206/1268502.shtml>

Chinese ground-based midcourse antiballistic missile test

CGTN, June 20, 2022

The ground-based midcourse antiballistic missile flight has three phases: the boost phase when the rocket booster pushes the missile to the sky, the midcourse phase where missile travels outside of the atmosphere, and the terminal phase where the missile re-enters the atmosphere and hits the target. There are pros and cons of intercepting an intercontinental missile in different phases while it's relatively easy to intercept a ballistic missile in the boost phase as it's close to the ground and still speeding up. Intercepting a ballistic missile in the midcourse phase can be quite challenging as the missile travels with nuclear warheads at a high altitude outside of the atmosphere at a very high speed, the Global Times quoted experts as saying. Intercepting it in terminal phase is not easy either as the missile travels at a high speed, they added.

<https://news.cgtn.com/news/2022-06-20/China-conducts-ground-based-midcourse-antiballistic-missile-test-1b0BnouwkmY/index.html>

China Focus: China looks set to build space solar power station

Xinhua, June 21, 2022

China has made a milestone advance in its effort to build a solar power station in space to convert the sunlight in outer space into an electrical supply to drive the

satellites in orbits or transmit power back to the Earth. A research team from Xidian University has wrapped up the world's first full-chain, system-wide ground verification for space solar power station, displaying multiple key know-hows for the futuristic project known as Zhuri or chasing the sun. The Space Solar Power Station (SSPS), a hotspot technology, is a space-based power generation system used to collect solar energy before converting it to electricity and then to microwaves. The sunlight is brighter outside the atmosphere and shines almost all day. Next, the energy in microwaves is to be transmitted to and harvested by the receiving antenna either in space or on the Earth's surface, which converts microwaves back to electricity.

<https://english.news.cn/20220621/ace04f5dfb644365ba57052cedf2ef84/c.html>

China successfully launches Tianxing-1 test satellite atop Kuaizhou-1A carrier rocket

CGTN, June 22, 2022

China successfully launched the Tianxing-1 test satellite into space atop the Kuaizhou-1A carrier rocket June 22. The rocket blasted off from Jiuquan Satellite Launch Center in northwest China's Gobi Desert at 1008h Beijing Time. The satellite entered the pre-determined orbit, and the launch mission was a complete success. The satellite is mainly used to carry out experiments such as space environment detection. This mission is the 15th flight of the Kuaizhou-1A carrier rocket.

<https://news.cgtn.com/news/2022-06-22/China-successfully-launches-Tianxing-1-test-satellite-1b4do0X1dUk/index.html>

China tests midcourse missile interception system

Asia Times, June 22, 2022

On June 19, China conducted an anti-ballistic missile (ABM) test within its borders. China's Defense Ministry briefly described it as a successful land-based midcourse missile interception test, emphasizing that it was defensive in nature and not aimed at

any other country. However, the Chinese state-owned Global Times took a more hawkish tone, saying that the test demonstrates the reliability of China's missile shield against US nuclear-tipped intercontinental ballistic missiles (ICBM) and intermediate-range ballistic missiles (IRBM) in the Pacific. This test may show China's increasing efforts to protect its land-based nuclear arsenal. "The development of our nuclear force is very limited. That means we must ensure the survivability of our nuclear force," said Shao Yongling, a military expert who was previously with the People's Liberation Army missile force.

<https://asiatimes.com/2022/06/china-tests-midcourse-missile-interception-system/>

North-eastern China's first nuclear power plant becomes fully operational: media report

Global Times, June 24, 2022

Unit 6 of the Hongyanhe nuclear power plant, in Northeast China's Liaoning Province, received the qualification for commercial operation, marking an important milestone with all the six units of the first nuclear power plant in the northeast of the country is fully operational, according to media reports. Starting construction in August 2007, the Hongyanhe nuclear power plant uses nuclear power technology developed by the China General Nuclear Power Corporation (CGN) in the four power units of its phase one project. The phase one project was put into commercial operation in September 2016. Construction of the phase two project of units 5 and 6 started in 2016 and used CGN's third generation nuclear power technology. With Unit 6 also ready for commercial operation, the Hongyanhe nuclear power plant has become the largest operational nuclear power plant in China with a total installed capacity exceeding 6.71 million kilowatts.

<https://www.globaltimes.cn/page/202206/1268930.shtml>

China completes main structure of its neutrino detector

CGTN, June 25, 2022

China has achieved a major breakthrough in the building of its next-generation neutrino detector, Jiangmen Underground Neutrino Observatory (JUNO), with the completion of the detector's main structure, some 700 meters underground in Jiangmen City, south China's Guangdong Province. The main structure, a huge spherical stainless-steel grid, China's largest so far, will support the core of JUNO, a 13-story-tall spherical detector which will be covered by 20,000 light detecting photomultiplier 20-inch (50.8cm) tubes and filled with 20,000 tonnes of specially formulated liquid. The whole structure is constructed at the center of a water pool under a huge cave in Jiangmen.

<https://news.cgtn.com/news/2022-06-25/China-completes-main-structure-of-its-neutrino-detector-1b9KuWBXWYA/index.html>

China launches new Earth observation satellite

CGTN, June 28, 2022

China sent a new Earth observation satellite into space from Jiuquan Satellite Launch Center in north-western China. The satellite, Gaofen-12 03, was launched atop a Long March-4C carrier rocket at 2346h (Beijing Time) on June 27 and entered the planned orbit successfully. It will be used in a variety of fields, including land surveys, urban planning, road network design, crop yield estimation and disaster relief. The launch marked the 425th flight mission of the Long March series carrier rockets.

<https://news.cgtn.com/news/2022-06-28/China-launches-new-Earth-observation-satellite-1bdUfAitxNC/index.html>

70% of Australians support nuclear submarines under AUKUS

Nikkei Asia, June 29, 2022

Australia's plan to acquire nuclear submarines under the AUKUS trilateral security partnership enjoys support from 70% of the country's public, a poll released

Tuesday shows, as a growing number of people view Russia and China as threats. China's foreign policy was seen as a critical threat by 65%. This edged a military clash between the U.S. and China over Taiwan, which came in at 64% of respondents. When it comes to countries that can be trusted to act responsibly in global affairs, the U.K. and Japan topped the list with a score of 87% each. France ranked third at 82%, while the U.S. was fourth at 65%. China trailed at 12%, slipping by 4 points from last year's poll. Russia lost 21 points to sink to 5%. The poll collected responses from roughly 2,000 Australian adults, mostly in March.

<https://asia.nikkei.com/Politics/International-relations/Indo-Pacific/70-of-Australians-support-nuclear-submarines-under-AUKUS>

China's Tianwen-1 Mars probe accomplishes all assigned tasks: CNSA

Global Times, June 29, 2022

China National Space Administration (CNSA) released the latest batch of Mars images taken by the country's Tianwen-1 probe and announced that the mission has accomplished all its assigned tasks, obtaining data of medium-resolution covering the entire red planet and achieving exploration assignments with a variety of scientific payload. After two years' operation and explorations of the planet by Tianwen-1 Mars probe, the 13 pieces of scientific payload installed on the probe have obtained 1,040 gigabytes of original scientific data. The data, after being processed by the ground team, formed standard scientific products and have been handed over monthly to scientific research teams for further analyses and studies. Relevant scientific achievements have been published in well-known academic journals both at home and abroad. The scientific data will be available to scientists around the world at an appropriate time and scientists are welcome to apply for research over the data so as to jointly promote mankind's exploration of the universe, the CNSA said.

<https://www.globaltimes.cn/page/202206/1269329.shtml>

US sanctions 25 more Chinese entities, including firm that touted its technology could help Russia monitor Ukraine's submarines and frogmen

South China Morning Post, June 30, 2022

A Chinese marine technology company, which said in February that its technology could help Russia monitor submarines and frogmen defending Ukraine's coastal cities, was among the latest batch of 25 mainland entities that the US government has added to its trade blacklist. Beijing Highlander Digital Technology Co has confirmed that it was added to Washington's Entity List, following the US Department of Commerce's earlier announcement that the firm allegedly acquired US-origin items for use in military applications, which made it a national security threat, according to a report in a social media channel run by local media outlet Zhejiang Daily. Highlander is primarily engaged in the research, development and production of electronic navigation and communications equipment, and automation systems for the marine industry, as well as maritime electronic surveillance systems. Its Hong Kong-based subsidiary, Laurel Technologies Co, is one of China's leading suppliers of hydrographic survey and ocean mapping instruments and services.

<https://www.scmp.com/tech/tech-war/article/3183554/us-sanctions-25-chinese-entities-including-firm-touted-its-technology>

US surveillance satellite probe poses big security threat: experts

Global Times, June 30, 2022

US media reported a recent event in which a pair of Chinese satellites evaded a probe attempt by a US space surveillance satellite, with Chinese experts saying that the US spying activities in space pose enormous security threats to many countries including China. They said the US media's hyping of Chinese satellites' defensive measures is a vile trick. Early this year, US space surveillance

satellite USA 270 maneuvered to get a closer look at Chinese satellites the Shiyuan-12-01 and the Shiyuan-12-02, soon after the latter reached geostationary orbit. As the US satellite closed in, the Chinese satellites took off in opposite directions, with the Shiyuan-12-02 moving into position to get a sunlit view of the US surveillance satellite, US magazine SpaceNews reported in its June issue. "This sort of geostationary orbit cat and mouse is happening with greater frequency than ever before," SpaceNews said, citing space traffic experts.

<https://www.globaltimes.cn/page/202206/1269389.shtml>

D. Pakistan

NPPs capacity shows 39 % increase during FY 2021-22

Daily Times, June 16, 2022

The gross capacity of nuclear power plants (NPPs) witnessed 39 per cent increase during a period of July-March (fiscal year 2021-22) as compared to the last fiscal year 2020-21. According to the official data, the total generation from various nuclear plants stood at 3,530 MW which supplied 12,885 million units of electricity to the national grid during July-March FY2022. "This shows an increase of 39 per cent in terms of MW and 82 per cent increase in terms of units supplied," it further said. During a period of July-March (FY 2020/21), the gross capacity of the nuclear power plants was 2,530 MW which transmitted about 7,076 million units to the national grid. The government has formulated several policies for the development of the power sector in the past which aimed at eliminating inefficiencies in existing generation, transmission and distribution systems, as well as diversification of the energy generation mix with maximum utilization of indigenous energy resources to supply reliable, affordable and clean electricity.

<https://dailytimes.com.pk/952981/npps-capacity-shows-39-increase-during-fy-2021-22/>

Experts Assess Implementation of International Conventions on Nuclear Emergency Response

IAEA, June 20, 2022

Countries need to work closely together in the event of a nuclear emergency, so sharing experience and improving emergency preparedness are key tasks stemming from the IAEA's mandate. Those responsible for emergency preparedness at the national level – officially referred to as Competent Authorities – met in Vienna last week at the 11th Meeting of the Representatives of Competent Authorities identified under the Early Notification Convention and the Assistance Convention, and discussed ways to ensure that the necessary expertise, services and equipment are available promptly upon request by any government in the event of a nuclear or radiological emergency. A strong and integrated international framework for notification and assistance in the event of a nuclear emergency is essential to protect people and the environment from the harmful effects of ionizing radiation, said the meeting's Chair, Faizan Mansoor, Head of the Pakistan Nuclear Regulatory Authority. "This meeting is essential, since it gathers the world's experts in nuclear emergency preparedness and response to determine if our arrangements remain effective when emergencies occur under increasingly complex conditions," he said.

<https://www.iaea.org/newscenter/news/experts-assess-implementation-of-international-conventions-on-nuclear-emergency-response>

Revised nuclear, biological weapon control list notified

Daily Times, June 28, 2022

Islamabad on Monday notified a revised control list of goods, technologies, materials and equipment for export, re-export, transshipment and transit of goods related to nuclear and biological weapons and their delivery systems. The lists and export control regimes are part of the government's efforts to comply with the requirements of international groups of nuclear material exporters and non-proliferator of which

Pakistan desires to become a member. In a statement issued by the Ministry of Foreign Affairs (MoFA) on Monday, as part of a regular review process, the Strategic Export Control Division (SECDIV) of MoFA, Pakistan revised and updated the control lists, in consultation with other relevant ministries and departments. The list includes items which are subject to a SECDIV license for export. The revision, it said, was made in compliance with the Export Control on Goods, Technologies, Material and Equipment related to Nuclear and Biological Weapons and their Delivery Systems Act 2004. The revised control lists, it said, have been notified via a special regulatory order 551(I)/2022 from April 2022.

<https://dailytimes.com.pk/958941/revised-nuclear-biological-weapon-control-list-notified/>

Pakistan countering 'West-backed' Indian military build-up: National Command Authority aide

Dawn, June 29, 2022

Adviser National Command Authority retired Lt Gen Mazhar Jamil said on Tuesday that Western support to India was allowing it to build its conventional and nuclear arsenals, and that Pakistan had no choice but to take countermeasures against Indian attempts to create an imbalance in the region and launch a military misadventure. He was speaking at a 'National Security Imperatives – A Comprehensive Framework of Traditional and Non-Traditional Security Determinants', a seminar hosted by the Center for International Strategic Studies (CISS) in collaboration with Karakoram International University.

<https://www.dawn.com/news/1697282>

'Slim chances for India, Pakistan to sign non-proliferation treaty'

Anadolu Agency, June 30, 2022

Despite possessing nuclear arsenals of comparable size, there are slim chances for India and Pakistan to sign the Non-

Proliferation Treaty (NPT) in the near future. Security experts in both countries believe that the treaty was “discriminatory”. On the eve of the anniversary signing of the NPT – a landmark international treaty whose aim is to prevent the spread of nuclear weapons and weapons technology – which is being observed on Friday, experts say the security environment in South Asia will not allow both countries to sign the treaty. The treaty which opened for signature on July 1, 1968, entered into force in 1970.

Speaking to Anadolu Agency Samar Mubarakmand, former chairman of the Pakistan Atomic Energy Commission (PAEC), and head of a team of scientists that conducted six nuclear tests in 1998, said that nuclear disarmament is only possible if it is universal. “If it is essential to de-nuclearize the world then all the 7/8 nuclear countries should sign NPT and disarm all their nuclear weapons transparently,” he said.

<https://www.aa.com.tr/en/asia-pacific/-slim-chances-for-india-pakistan-to-sign-non-proliferation-treaty/2626500>

E. Europe

IAEA Completes Nuclear Security Advisory Mission in Finland

IAEA, June 17, 2022

An International Atomic Energy Agency (IAEA) team of experts completed today a nuclear security advisory mission in Finland. The mission was carried out at the request of the Finnish Government and hosted by the Radiation and Nuclear Safety Authority (STUK). The International Physical Protection Advisory Service (IPPAS) mission, conducted from 6 to 17 June, was the third such mission in Finland. Finland invited the first IPPAS mission in 2009 and a follow-up in 2012. The scope of the mission included a review of the legislative and regulatory framework for the physical protection of nuclear and other radioactive material and associated facilities and activities. The team reviewed computer and information security arrangements; regulatory practices in licensing, inspections and enforcement; coordination between

stakeholders involved in nuclear security; and the interface between nuclear material accounting and control and nuclear safety.

<https://www.iaea.org/newscenter/pressreleases/iaea-completes-nuclear-security-advisory-mission-in-finland>

F. Germany

German nuclear power debate resurfaces over Russian gas threat

The local, June 23, 2022

Germany should extend the lifetime of its nuclear plants to avoid an “extreme scenario” in which a Russian gas stop could wipe 12 percent off the economy, a government advisor said Thursday.

<https://www.thelocal.de/20220623/german-nuclear-power-debate-resurfaces-over-russian-gas-threat/>

German ministries back nuclear exit despite energy woes

The local, June 08, 2022

Germany should not extend the life of its remaining nuclear power plants, two ministries said on Tuesday, as Europe’s largest economy wrestles with its dependence on Russian energy imports following the invasion of Ukraine.

<https://www.thelocal.de/20220308/german-ministries-back-nuclear-exit-despite-energy-woes/>

G. Ukraine

Update 82 – IAEA Director General Statement on Situation in Ukraine

IAEA, June 24, 2022

The International Atomic Energy Agency (IAEA) is increasingly concerned about the difficult conditions facing staff at Ukraine’s Zaporizhzhya Nuclear Power Plant (ZNPP) and it must go there as soon as possible to address this and other urgent issues, Director General Rafael

Mariano Grossi said today. Director General Grossi said he was continuing his determined efforts to agree, organize and head an IAEA-led international mission to conduct essential nuclear safety, security and safeguards activities at the ZNPP, stressing again that “other considerations should not prevent” it from taking place. The IAEA is aware of recent reports in the media and elsewhere indicating a deteriorating situation for Ukrainian staff at the country’s largest nuclear power plant (NPP), Director General Grossi said.

<https://www.iaea.org/newscenter/pressreleases/update-82-iaea-director-general-statement-on-situation-in-ukraine>

Update 83 – IAEA Director General Statement on Situation in Ukraine

IAEA, June 27, 2022

Ukraine informed the International Atomic Energy Agency (IAEA) that shelling had caused additional damage to a nuclear research facility in the north-eastern city of Kharkiv on 25 June, but that radiation levels at the site remained normal, Director General Rafael Mariano Grossi said today. The facility is designed to conduct research – in areas such as nuclear physics, radiation materials science, biology and chemistry – and radioisotope production for medical applications. Its nuclear assembly is subcritical, and the radioactive inventory is low. Before the conflict, the facility was under commissioning, but it is not currently operating. The facility has been hit previously during the conflict and it lost its external power supply in March.

<https://www.iaea.org/newscenter/pressreleases/update-83-iaea-director-general-statement-on-situation-in-ukraine>

Update 84 – IAEA Director General Statement on Situation in Ukraine

IAEA, June 29, 2022

The International Atomic Energy Agency has once again lost the remote connection to its safeguards surveillance systems installed at Ukraine’s Zaporizhzhya

Nuclear Power Plant (ZNPP), further underlining the need for the IAEA to go there very soon, Director General Rafael Mariano Grossi said today. The IAEA has not been able to visit the ZNPP since before the current military conflict in Ukraine. Russian forces took control of the plant nearly four months ago, but its Ukrainian staff are continuing to operate it. Director General Grossi has repeatedly stressed his determination to agree, organize and head an IAEA-led international mission to conduct essential nuclear safety, security and safeguards activities at the ZNPP, Ukraine’s largest such facility with six reactors.

<https://www.iaea.org/newscenter/pressreleases/update-84-iaea-director-general-statement-on-situation-in-ukraine>

West Asia

H. Iran

Iran’s Home-Made ‘Zoljanah’ Satellite Carrier under Launch Tests

Fars News Agency, June 16, 2022

Spokesman of the Space Department of the Iranian Defense Ministry Ahmad Hosseini said that the country plans to test its domestically-developed Zoljanah satellite carrier. “Three launches of the Zoljanah satellite carrier were planned for research; one has so far been conducted and two others will be carried out later,” Hosseini said on Wednesday. The performance of the three-stage carrier, which uses compound fuel, can be evaluated in each launch, he said. The satellite carrier weighs 52 tons and is 25.5 meters in length. It can carry loads of up to 220 kilograms at an orbit of 500 kilometers above the surface, Hosseini said. Last week, the Iranian Space Agency said work has been underway to prepare seven more satellites for launch into the orbit.

<https://www.farsnews.ir/en/news/14010326000309/Iran's-Hme-Made-'Zljanah'-Saellie-Carrier-nder-Lanch-Tess>

AEOI Spokesman: IAEA Notified of Iran's Natanz Construction Work

Fars News Agency, June 18, 2022

Atomic Energy Organization of Iran Spokesman Behrouz Kamalvandi confirmed that Iran had notified the International Atomic Energy Agency (IAEA) of AEOI's plan to relocate the activities of the TESA complex in Karaj to the Natanz facility. The AEOI spokesman's remarks came in response to reports by the western media about construction activities near the Natanz nuclear site. Kamalvandi underlined that the relocation was taken to intensify security measures around Iran's nuclear facilities. "Even though Iran has no obligation to provide such information to the IAEA, the agency had been informed of the same," he added. Referring to last year's sabotage at the TESA complex, the AEOI spokesman said the transfer of some of the activities to an area near the Natanz nuclear site aims to prevent the recurrence of such attacks. The complex in Karaj, on the outskirts of Tehran, saw a sabotage attack in June last year, which Iranian authorities blamed the Israeli regime for it. The attack damaged surveillance cameras at the site.

<https://www.farsnews.ir/en/news/14010328000430/AEOI-Spkeman-IAEA-Nified-f-Iran's-Naanz-Cnsrcin-Wrk>

Spokesman: Iran Determined to Materialize Technical N. Rights

Fars News Agency, June 22, 2022

Spokesman of the Atomic Energy Organization of Iran (AEOI) Behrouz Kamalvandi underlined that Tehran is serious about materializing its rights in technical fields according to the safeguards agreements. Rapporteur of the Iranian Parliament's Energy Commission Malek Shariati quoted Kalmalvandi as saying in a meeting with the Commission members that Iran is determined to materialize the inalienable rights of the country in the technical and safeguards agreements fields. The legislator told MNA that Kamalvandi had participated in a meeting of the Commission on Tuesday evening to review the recent decisions adopted by the AEOI

against the International Atomic Energy Agency (IAEA)'s excessive demands. After hearing a report by Kamalvandi, members of the parliament's Energy Commission unanimously condemned the recent anti-Iran draft resolution issued at the IAEA's Board of Governors, and stated that the IAEA issued anti-Iran resolution under the influence and political pressures of the world powers, Shariati said.

<https://www.farsnews.ir/en/news/14010401000313/Spkesman-Iran-Deermined-Maerialize-Technical-N-Righs>

Concrete Pouring Operations Starts at 2nd Unit of Iran's Bushehr N. Power Plant

Fars News Agency, June 25, 2022

Iran started concrete pouring operations at the second unit of its nuclear power plant in Bushehr, Head of the Atomic Energy Organization of Iran (AEOI) Mohammad Eslami said. Eslami said that Iran began pouring concrete for the wall of the reactor of the second unit of its Bushehr Nuclear Power Plant aimed at expanding the site in the South of the country. He added that the concrete pouring operation starts from the - 4.5 to the 0 level. He added that in that vein, necessary plans have been put in place to expedite the construction of the second and third reactors of the Bushehr Power Plant. Eslami noted that Iran is also building a water desalination unit at the power plant, saying a team of experts was accompanying him on his visit to Bushehr for conducting complementary studies on the project.

<https://www.farsnews.ir/en/news/14010404000286/Cncree-Pring-Operains-Sars-a-2nd-Uni-f-Iran's-Bshehr-N-Pwer-Plan>

DM: Iran, Pakistan Defense Cooperation Benefits Regional Security

Fars News Agency, June 29, 2022

Iranian Defense Minister Brigadier General Mohammad Reza Ashtiani called for booting defense cooperation between

Tehran and Islamabad to establish security in West Asia. General Ashtiani made the remarks in a meeting with visiting Chairman of the Joint Chiefs of Staff Committee of Pakistan General Nadeem Raza in Tehran on Tuesday. "We are still far from the desired situation (in the region)," he said. "But there is no doubt that cooperation between Iran and Pakistan in various defense domains in such tense conditions can be an effective contribution to improving the security situation in the West Asian region." General Ashtiani also warned of attempts made by "meddlesome countries" to influence Tehran-Islamabad ties, saying Tehran attaches great importance to the deepening of relations with neighbouring and regional countries.

<https://www.farsnews.ir/en/news/14010408000441/DM-Iran-Pakistan-Defense-Coperation-Benefits-Regional-Security>

AEOI Chief: New Centrifuges Installation Part of Strategic Action Plan

Fars News Agency, June 30, 2022

Head of the Atomic Energy Organization of Iran (AEOI) Mohammad Eslami underlined that the moves by Iran to install new centrifuges at the Fordow Nuclear Facility is happening under the Strategic Action Plan of the Iranian Parliament. "This issue has been pursued within the Iranian Parliament's Strategic Action Plan to Lift Sanctions and Protect Iranian Nation's Interests, which was approved in late 2020," Eslami said while referring to installation of new centrifuges in Fordow Facility. The AEOI chief reiterated that his organization will move according to the plans.

<https://www.farsnews.ir/en/news/14010408000633/AEOI-Chief-New-Centrifuges-Installation-Part-of-Strategic-Action-Plan>

I. Israel

Military Intelligence, Mossad at odds over Iran deal - report

The Jerusalem Post, June 27, 2022

As Western powers are set to return to the negotiating table with Iran over its nuclear

program, the Israeli defense establishment is at odds over whether a deal would be good for the country, according to a report in *Yediot Aharonot*. Several Israeli generals, including OC Military Intelligence Maj.-Gen. Aharon Haliva, are in favour of a return to a deal with Tehran, in opposition to IDF Chief of Staff Lt.-Gen. Aviv Kohavi and Israel's official policy, the report said.

<https://www.jpost.com/israel-news/article-710479>

IAI extends lifespan of VENUS satellite

The Jerusalem Post, June 23, 2022

Israel Aerospace Industries (IAI) doubled the lifespan of the Venus satellite by adjusting its altitude in space from 410 km (255 mi) above Earth to 560 km (348 mi). The satellite, which was originally intended to return to Earth, will instead continue its mission to monitor vegetation on Earth using a camera with 12 spectral bands developed by EL-OP and a propulsion system built by Rafael Advanced Defense Systems.

<https://www.jpost.com/israel-news/article-710241>

Zelensky: Israel must join international sanctions regime against Russia

The Jerusalem Post, June 23, 2022

Israel must join the international sanctions regime against Russia and allow visa-free entry for refugees fleeing Moscow's aggression, Ukrainian President Volodymyr Zelensky told students at the Hebrew University of Jerusalem during a special video address on Thursday. "Unfortunately, we have not yet seen Israel join the sanctions regime," said Zelensky, whose words were translated from Ukrainian into English. It is about values and general security. This is about everyone who is willing to destroy another nation [being] held accountable.

<https://www.jpost.com/israel-news/article-710185>

Gantz: Israel building regional air defense alliance under US

The Jerusalem Post, June 20, 2022

Israel is building a US-sponsored regional air defense alliance, the Israeli defense minister said on Monday, adding that the apparatus has already foiled attempted Iranian attacks and could be boosted by President Joe Biden's visit next month. Drawing closer in recent years to US-aligned Arab states which share their concerns over Iran, Israel has offered them defense cooperation. They have been publicly reticent on the idea.

<https://www.jpost.com/breaking-news/article-709885>

Israel to ask Biden for okay to provide air defense laser to Saudi Arabia - report

The Times of Israel, June 28, 2022

Israel intends to ask US President Joe Biden to approve the delivery of an Israeli laser-powered air defense system to Arab countries aligned against Iran, including Saudi Arabia, according to a Monday report. The move would be part of a US-led effort to establish regional cooperation against the threat of Iranian attack drones and missiles. Recent reports have said the parties include the United Arab Emirates, Egypt, Jordan, Bahrain, Saudi Arabia, and Qatar.

<https://www.timesofisrael.com/israel-to-ask-biden-for-okay-to-provide-air-defense-laser-to-saudi-arabia-report/>

Gantz: Israel is building a Middle East air defense alliance against Iran

The Times of Israel, June 27, 2022

Israel is building a regional air defense alliance to defend its members from Iran, Defense Minister Benny Gantz said Monday, appearing to confirm, at least in part, a report that the Israeli military was in talks with its Saudi and Qatari counterparts on the matter. "We are building our wide partnership with additional countries in the region to ensure a secure, stable and prosperous Middle East. Among other

things, this also includes aerial defense," Gantz said.

<https://www.timesofisrael.com/gantz-israel-is-building-a-middle-east-air-defense-alliance-against-iran/>

J. Jordan

IAEA Completes Nuclear Security Mission in Jordan

IAEA, June 30, 2022

An International Atomic Energy Agency (IAEA) team of experts has completed a nuclear security mission in Jordan. The team said Jordan had made progress in strengthening the country's nuclear security infrastructure set up to prevent and detect nuclear and other radioactive material out of regulatory control. It encouraged Jordan to further improve its nuclear security capabilities. The International Nuclear Security Advisory Service (INSServ), conducted from 20 to 30 June, was the first such IAEA mission in Jordan with the aim to help identify measures needed to prevent, detect and respond to criminal and other intentional unauthorized acts involving nuclear and other radioactive material out of regulatory control. The mission was carried out at the request of the Government of Jordan and hosted by the Energy and Minerals Regulatory Commission (EMRC), the national nuclear regulator.

<https://www.iaea.org/newscenter/pressreleases/iaea-completes-nuclear-security-mission-in-jordan>

K. Saudi Arabia

Secret talks between Israel, Saudi military chiefs, WSJ reveals

Middle East Monitor, June 27, 2022

For the first time, an Israeli army chief held talks with his Arab counterparts, including Saudi Army Chief Fayyad Bin Hamed Al-Ruwaili, in Egypt's resort city of Sharm El-Sheikh, *the Wall Street Journal* revealed yesterday. The talks, held under the auspices of the United States in March, included discussions on how to explore

coordination possibilities against Iran's alleged nuclear missile and drone threats. According to the WSJ, it was for the first time that such high ranking Israeli and Arab officers have met under US military auspices to discuss how to defend themselves against a common threat. In addition to Saudi's Al-Ruwaili and Israel's Aviv Kochavi, top military officials from Qatar, Jordan, Egypt, the UAE and Bahrain attended the talks.

<https://www.middleeastmonitor.com/20220627-secret-talks-between-israel-saudi-military-chiefs-wsj-reveals/>

India, Saudi Arabia hold talks to boost defence cooperation.

The Economic Times, June 29, 2022

India and Saudi Arabia on Wednesday held wide-ranging talks to further bolster bilateral defence cooperation. It is learnt that both sides explored the possibility of cooperation between the defence firms of the two countries. Officials said the main focus of the deliberations was to expand overall defence and security cooperation between the two sides. The talks were held in Delhi and were co-chaired by Joint Secretary in the defence ministry Dinesh Kumar and Saudi Arabia's Deputy Minister of Defence and Strategic Affairs Ahmed A Aseeri, officials said. Deputy Minister of Defence and Strategic Affairs Ahmed A Aseeri, officials said.

https://economictimes.indiatimes.com/news/defence/india-saudi-arabia-hold-talks-to-boost-defence-cooperation/articleshow/92554298.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

L. United Arab Emirates

UAE licenses third unit of Barakah nuclear power plant

Reuters, June 17, 2022

The United Arab Emirates (UAE) has licensed the third unit of its Barakah Nuclear Energy Plant, the UAE's permanent representative to the International Atomic Energy Agency, Hamad Al Kaabi, told reporters on Friday. Construction of the unit in Abu Dhabi's Al Dhafra region was completed last year and it is on track to start

up and deliver clean electricity in 2023, according to the UAE's Nuclear Energy Corporation (ENEC). The Barakah nuclear plant is the Arab world's first multi-unit operating nuclear energy plant.

<https://www.reuters.com/world/middle-east/uae-licenses-third-unit-barakah-nuclear-power-plant-2022-06-17/>

UAE's Barakah nuclear plant to begin fuel loading in unit 3

S&P Global, June 19, 2022

The UAE's Barakah nuclear power plant will begin fuel loading for its third reactor, the country's atomic regulatory said in a statement on June 19, as the OPEC producer diversifies its electricity mix away from hydrocarbons. The Federal Authority for Nuclear Regulation will deploy inspectors to oversee the fuel loading "to ensure the fuel load and testing processes are completed according to requirements," it said. On June 17, the FANR granted Nawah Energy Co., the operations and maintenance unit of Emirates Nuclear Energy Corp., the license to operate the third of four units at the Barakah nuclear power plant located in the emirate of Abu Dhabi. FANR expects to start looking at the operating license application for the fourth and final unit in the fourth quarter of 2022.

<https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/electric-power/061922-uaes-barakah-nuclear-plant-to-begin-fuel-loading-in-unit-3>

M. United States of America

As Russian forces fortify a Ukrainian nuclear power plant, employees are fleeing repression, local officials say.

The New York Times, June 24, 2022

The Zaporizhzhia Nuclear Power Plant, Europe's largest, lies in southern Ukraine in a strategically important spot. Russian soldiers who control a giant nuclear power plant in Ukraine are detaining workers and subjecting them to brutal interrogations in a search for possible saboteurs, prompting

many employees to leave and raising concerns about safety, Ukrainian officials say.

As Russia Fortifies Ukrainian Nuclear Plant, Workers Flee Repression, Officials Say - The New York Times (nytimes.com)

Trump's Shadow Looms Over Fading Iran Nuclear Talks

The New York Times, June 19, 2022

With no compromise in sight and Iran making steady progress toward nuclear capability, the Biden administration could soon face a stark choice. Many factors are to blame for the dying prospects of reviving the 2015 Iran nuclear deal. But perhaps nothing has hobbled the Biden administration's efforts more than the legacy of President Donald J. Trump.

Trump's Shadow Looms Over Fading Iran Nuclear Talks - The New York Times (nytimes.com)

Fears Grow Over Iran's Nuclear Program as Tehran Digs a New Tunnel Network

The New York Times, June 17, 2022

The conflict over the program is about to flare again as President Biden travels next month to Israel and Saudi Arabia, Iran's two biggest regional rivals. Israeli and American intelligence officials have been watching each day as Iran digs a vast tunnel network just south of the Natanz nuclear production site, in what they believe is Tehran's biggest effort yet to construct new nuclear facilities so deep in the mountains that they can withstand bunker-busting bombs and cyberattacks.

Fears Grow Over Iran's Nuclear Program as Tehran Digs a New Tunnel Network - The New York Times (nytimes.com)

A Big Step Toward Fusion Energy Is Hailed by a Seattle Start-Up

The New York Times, June 23, 2022

Zap Energy said its experimental reactor core was ready for a milestone test. Skeptics routinely question whether the technology is currently possible. Zap Energy, a fusion

energy start-up working on a low-cost path to producing electricity commercially, said last week that it had taken an important step toward testing a system its researchers believe will eventually produce more electricity than it consumes.

Fusion Energy Advance Is Hailed by a Seattle Start-Up - The New York Times (nytimes.com)

A Secret City With a Secret African American History

The New York Times, June 21, 2022

The U.S. government-built Oak Ridge in 1942 to develop the world's first atomic weapon. When a reported 7,000 African Americans from the Deep South were recruited to work on the Manhattan Project starting in 1942, they knew little except that the positions were well-paid. Drawn by newspaper ads, word of mouth and recruiters subcontracted by the military, the workers arrived by train or bus in a heavily patrolled town outside Knoxville, Tenn. Signage around the plants commanded: "See nothing. Hear nothing. Say nothing."

A Secret City With a Secret African American History - The New York Times (nytimes.com)

Iran-US nuclear talks in Qatar end without making progress

The Washington post, June 29, 2022

Indirect negotiations between Iran and the U.S. over Tehran's tattered nuclear deal with world powers ended Wednesday in Qatar after failing to make significant progress amid a growing crisis over the Islamic Republic's atomic program, diplomats said.

https://www.washingtonpost.com/world/iran-report-nuclear-talks-with-us-end-without-deal-in-qatar/2022/06/29/abb8dde8-f7a3-11ec-81db-ac07a394a86b_story.html

Global nuclear arsenal expected to grow for first time since Cold War

The Washington post, June 14, 2022

The world's nuclear arsenal is set to increase over the next decade as states

modernize weapons stockpiles and sharpen the role nuclear weapons play in their military strategies, an arms research group said in a report this week.

<https://www.washingtonpost.com/world/2022/06/13/global-nuclear-arsenal-russia-ukraine/>

Biden and NATO send Russia a defiant message

The Washington post, June 29, 2022

Under pressure to find new ways to confront Russia as its deadly invasion of Ukraine drags into its fifth month, President Biden and his NATO allies on Wednesday announced a historic surge of forces along Europe's eastern flank and welcomed Finland and Sweden as soon-to-be members as they promised to defend "every inch" of NATO territory.

<https://www.washingtonpost.com/politics/2022/06/29/biden-nato-defiant-russia/>

NATO formally invites Finland and Sweden to join alliance

CNN News, June 29, 2022

NATO formalized its invitation to Sweden and Finland to join its alliance Wednesday, a historic expansion of the defence bloc that directly undercuts Russian President Vladimir Putin's aims as his war in Ukraine grinds ahead.

<https://edition.cnn.com/2022/06/29/politics/joe-biden-nato-day-2/index.html>

Biden says it's 'not likely' he will visit Ukraine on Europe trip

CNN News, June 20, 2022

President Joe Biden said Monday he is "not likely" to visit Ukraine when he travels to Europe for the Group of Seven summit and a meeting of NATO leaders later on this week.

<https://edition.cnn.com/2022/06/20/politics/biden-ukraine-not-likely-europe-trip/index.html>

'How can you trust Russia?' Nervous Lithuanians sign up for border militia

CNN News, June 30, 2022

Having a neighbour like Russia at the end of the street means 59-year-old Vytas Grudzinskas doesn't get much rest. "I can see the soldiers best at night," he says, pointing to a patch of green behind his neighbour's garden.

<https://edition.cnn.com/2022/06/30/europe/lithuania-border-militia-russia-intl/index.html>

Inside the U.S. government project to create tiny nuclear reactors like batteries

CNBC, June 16, 2022

Nuclear reactors have a well-earned reputation for being massive construction projects that frequently run into cost overruns. Plus, once they are eventually constructed, monitoring and maintaining them takes a staff of dozens of trained experts.

<https://www.cnbc.com/2022/06/15/inside-the-marvel-micronuclear-reactor-project-at-idaho-national-lab.html?&qsearchterm=NUCLEAR>

Defence spending: Will the government break its promise?

BBC, June 30, 2022

We will continue to exceed the Nato target of spending 2% of GDP on defence and increase the budget by at least 0.5% above inflation every year of the new parliament." GDP is a measure of the size of the economy.

<https://www.bbc.com/news/61984356>

Increase in defence spending debated at NATO summit

BBC, June 28, 2022

Heads of state and government from NATO's 30 member countries are meeting

in Madrid to decide what the organisation's strategic and spending plan should be for the next 10 years.

<https://www.bbc.co.uk/programmes/p0chmp2v>

US Army acquisition head eyes tenure priorities, lessons learned from time on Capitol Hill

JANES NEWS, June 24, 2022

Douglas Bush's tenure helping guide and craft defence policy from the legislative side of the government is a driving force behind several key priorities guiding his time as the Assistant Secretary of the US Army for Acquisition, Logistics, and Technology, he recently told *Janes*.

<https://www.janes.com/defence-news/c4isr-command-tech/latest/us-army-acquisition-head-eyes-tenure-priorities-lessons-learned-from-time-on-capitol-hill>

US Navy P-8A flies over Taiwan Strait

JANES NEWS, June 28, 2022

A US Navy Boeing P-8A Poseidon maritime reconnaissance aircraft flew over the Taiwan Strait on 24 June in a potential signal to Beijing regarding its aggressive posturing towards Taiwan.

<https://www.janes.com/defence-news/terror-insurgent-group/latest/us-navy-p-8a-flies-over-taiwan-strait>

US launches programme to transform mine sites to clean energy hubs

WNN, June 30, 2022

The USD500 million programme, which is part of President Biden's Bipartisan Infrastructure Law, will place clean energy demonstration projects on current or former mine sites. Advanced nuclear is one of the technologies under consideration.

<https://www.world-nuclear-news.org/Articles/US-launches-programme-to-transform-mine-sites-to-c>

Biden pledges USD14 million for Romanian SMR project

WNN, June 27, 2022

The US government, working with NuScale Power, is to provide USD14 million in support for the Front-End Engineering and Design (FEED) study for Romania's deployment of a first-of-its-kind small modular reactor (SMR) plant as part of a flagship project launched at the Group of Seven (G7) leaders' summit in Germany.

<https://www.world-nuclear-news.org/Articles/Biden-pledges-USD14-million-for-Romanian-SMR-proje>

N. Canada

'We really want to find a long-term solution': Canada inches toward permanent storage of radioactive waste

Financial post, June 17, 2022

Canada has moved one step closer to finding a permanent spot to store the millions of bundles of radioactive waste that have been generated in the nearly half-century since it started producing nuclear energy.

<https://financialpost.com/commodities/energy/renewables/we-really-want-to-find-a-long-term-solution-canada-inches-toward-permanent-storage-of-radioactive-waste>

Canadian-made drones show promising new technology for demining efforts in Ukraine

THE GLOBE AND THE MALE, June 17, 2022

A massive Canadian-made drone rose into the sky over a village near Kyiv on Thursday, and began to scan the ground below for mines and other unexploded ordnance, as the Russian invasion of Ukraine approaches its fifth month.

<https://www.theglobeandmail.com/world/article-canadian-made-drones-show-promising-new-technology-for-demining/>

O. Mexico

IAEA Concludes Long Term Operational Safety Review at Mexico's Laguna Verde Nuclear Power Plant

IAEA, June 27, 2022

An International Atomic Energy Agency (IAEA) team of experts completed a review of long term operational safety at the Laguna Verde Nuclear Power Plant (NPP) in Mexico. The SALTO (Safety Aspects of Long Term Operation) follow-up review mission was requested by the Comisión Federal de Electricidad of Mexico (CFE), the operator of the plant. The SALTO team, whose four-day review began on 21 June, focused on aspects essential to the safe Long Term Operation (LTO) at Laguna Verde NPP. The mission reviewed the plant's implementation of recommendations and suggestions made during an IAEA SALTO mission in 2019. The plant consists of two units, each with a capacity of 810 Megawatt electric (MWe). Both are equipped with a boiling water reactor (BWR) and were subject to review by the IAEA team. Unit 1 went into commercial operation in 1990 and Unit 2 in 1995. The operator of the plant has already obtained a license renewal to extend the operating lifetime of Unit 1 from 30 to 60 years. The application to extend operation of Unit 2 from 30 to 60 years is in process.

<https://www.iaea.org/newscenter/pressreleases/iaea-concludes-long-term-operational-safety-review-at-mexicos-laguna-verde-nuclear-power-plant-0>

P. East Asia

South Korea Launches Satellite Into Orbit Using Its Own Rocket

VOA News, June 21, 2022

South Korea succeeded in its second attempt to place a satellite into orbit using a domestically built space rocket, South Korean authorities said Tuesday, a key step in the country's ambitious plans for

independent space development. Space minister Lee Jong-ho confirmed that the three-stage rocket, dubbed "Nuri," deployed several satellites into orbit after being launched from a space center on a small island in the southwestern coastal area of Goheung. The success comes eight months after Nuri's maiden flight failed to place a dummy satellite into orbit when the rocket's third stage malfunctioned.

With Tuesday's successful launch, South Korea became the 10th country to place a satellite into space using its own technology.

<https://www.voanews.com/a/south-korea-tests-space-rocket-/6626309.html>

Q. Japan

IAEA Task Force Releases Report on Regulatory Aspects of Water Discharge at Fukushima Daiichi

IAEA, June 16, 2022

The International Atomic Energy Agency (IAEA) Task Force established to review Japan's discharge of treated water from the Fukushima Daiichi Nuclear Power Station today released a report setting out their initial observations of regulatory aspects of the proposed Advanced Liquid Processing System (ALPS) treated water discharge.

The review of regulatory aspects is one component of the Task Force's three-pronged review, to be carried out before, during and after the discharge of treated water. The other two components are the review of technical aspects related to safety of the proposed discharge of ALPS treated water - with the first report on this topic released in April this year - and conducting independent sampling and analysis.

<https://www.iaea.org/newscenter/pressreleases/iaea-task-force-releases-report-on-regulatory-aspects-of-water-discharge-at-fukushima-daiichi>

R. North Korea

North Korea expands work at nuclear test site to second tunnel

Indian Express, June 16, 2022

North Korea appears to be expanding work at its nuclear test site to include a second tunnel, a US-based think tank said on Thursday, as South Korean and US officials say North Korea might conduct a nuclear test any day. Preparation work at the Punggye-ri Nuclear Test Facility's Tunnel No 3 was apparently complete and ready for a possible nuclear test, the Center for Strategic and International Studies said in a report, citing commercial satellite imagery. North Korea conducted six underground nuclear tests at the site from 2006 to 2017.

<https://indianexpress.com/article/world/north-korea-expanding-to-second-nuclear-testing-tunnel-7973248/>

North Korea's Kim urges stronger war deterrent amid international concern about potential nuclear test

Reuters, June 24, 2022

North Korean leader Kim Jong Un ordered a strengthening of the country's defence capabilities as he wrapped up a key meeting with top military officials, state media said on Friday, raising concerns about its possible addition of tactical nuclear weapons. Reporting by Soo-hyang Choi; Editing by Richard Pullin

<https://www.reuters.com/world/asia-pacific/nkorea-vows-boost-frontline-military-units-action-plan-strengthen-war-deterrent-2022-06-23/>

N Korea military move suggests deployment of battlefield nukes: Report

Hindustan Times, June 23, 2022

North Korea discussed assigning additional duties to front-line army units at a key military meeting, state media said Thursday, a move that analysts said indicates it plans to deploy battlefield nuclear weapons

targeting South Korea along the rivals' tense border. During an ongoing meeting of the Central Military Commission of North Korea's ruling Workers' Party, leader Kim Jong Un and other top military officers discussed on Wednesday "the work of additionally confirming the operation duties of the front-line units of the Korean People's Army and modifying the operation plans," according to the official Korean Central News Agency.

<https://www.hindustantimes.com/world-news/n-korea-military-move-suggests-deployment-of-battlefield-nukes-report-101655980286317.html>

S. Australia

Australia commits to Pacific islands defense training as China seeks rival meeting

CNBC, June 28, 2022

Australia will establish a defense school to train Pacific island militaries, Canberra's new Pacific minister said, amid intensifying competition for security ties and as Beijing seeks to host a rival meeting to the main regional group, the Pacific Islands Forum, next month.

<https://www.cnn.com/2022/06/28/australia-plans-pacific-islands-defense-training-as-china-seeks-rival-meeting.html?&qsearchterm=DEFENCE>

New Australian PM makes climate pledge

WNN, June 17, 2022

Australia has formally pledged to reduce its greenhouse gas emissions by 43% below 2005 levels by 2030. Prime Minister Anthony Albanese said the government will support a transition to renewable energy, but members of the shadow cabinet are signalling a willingness to include nuclear in the energy debate and a recent poll has found widespread public support.

<https://www.world-nuclear-news.org/Articles/New-Australian-PM-makes-climate-pledge>

AUKUS: Nuclear subs possible for Australia by 2030: US defence expert

THE AUSTRALIAN, June 27, 2022

Australia could have two nuclear powered submarines a decade ahead of the AUKUS timetable, according to a US defence expert.

https://www.theaustralian.com.au/subscribe/news/1/?sourceCode=TAWEB_WRE170_a&dest=https%3A%2F%2Fwww.theaustralian.com.au%2Fnation%2Fdefence%2Faukus-nuclear-subs-possible-for-australia-by-2030-us-defence-expert%2Fnews-story%2F0dc07fc6c316651f5198ca0f5b577729&mentype=anonymous&mode=premium&v21=dynamic-cold-control-noscore&V21spcbehaviour=append

Sleepwalk to war: Australia on the horns of a US military alliance dilemma

THE AUSTRALIAN, June 24, 2022

Australia has not fired a shot in support of America in Asia since we came home from Vietnam. But this will change as America presses us to provide real support against China.

https://www.theaustralian.com.au/subscribe/news/1/?sourceCode=TAWEB_WRE170_a&dest=https%3A%2F%2Fwww.theaustralian.com.au%2Finquirer%2Fsleepwalk-to-war-australia-on-the-horns-of-a-us-military-alliance-dilemma%2Fnews-story%2F57350a9a5910da21c00068fcd5d273&mentype=anonymous&mode=premium&v21=dynamic-cold-control-noscore&V21spcbehaviour=append

Dutton denies releasing top-secret information regarding nuclear submarines

THE AUSTRALIAN, June 19, 2022

Peter Dutton has denied releasing top-secret information when he claimed the US was likely to sell Australia two nuclear--powered submarines within eight years.

https://www.theaustralian.com.au/subscribe/news/1/?sourceCode=TAWEB_WRE170_a&dest=https%3A%2F%2Fwww.theaustralian.com.au%2Fnation%2Fpolitics%2Fdutton-denies-releasing-topsecret-information-regarding-nuclear-submarines%2Fnews-story%2F1e2eabe1460d75f

162e166b3340e6148&mentype=anonymous&mode=premium&v21=dynamic-cold-control-noscore&V21spcbehaviour=append

T. New Zealand

As nuclear nations build weapons, New Zealand seeks an outright ban on the bomb

The dominion post, June 16, 2022

As nuclear-armed nations make threats and modernise their weapons, New Zealand is pushing for an outright ban of the bombs. Disarmament Minister Phil Twyford headed to Austria on Wednesday to attend a meeting of countries eager to advance a new United Nations nuclear prohibition treaty demanding nuclear states give up their weapons.

<https://www.stuff.co.nz/national/politics/128977320/as-nuclear-nations-build-weapons-new-zealand-seeks-an-outright-ban-on-the-bomb>

Jacinda Ardern calls for nuclear disarmament, criticises China over human rights during Nato speech

The dominion post, June 30, 2022

Prime Minister Jacinda Ardern highlighted China's human rights abuses and called for nuclear disarmament during her speech at the Nato Leaders' Summit overnight. Ardern said her speech displayed the country's "fiercely held independent foreign policy" and commitment to standing for peace and human rights.

<https://www.stuff.co.nz/national/politics/300625460/jacinda-ardern-calls-for-nuclear-disarmament-criticises-china-over-human-rights-during-nato-speech>

U. Miscellaneous

Nuclear power can play a major role in enabling secure transitions to low emissions energy systems

IEA.org, June 30, 2022

As the world contends with a global energy crisis, nuclear power has the

potential to play a significant role in helping countries to securely transition to energy systems dominated by renewables, according to a new special report by the IEA. In countries that choose to continue or increase their use of nuclear power, it can reduce reliance on imported fossil fuels, cut carbon dioxide emissions and enable electricity systems to integrate higher shares of solar and wind power. Building sustainable and clean energy systems will be harder, riskier and more expensive without nuclear, according to the new report, Nuclear power and secure energy transitions: From today's challenges to tomorrow's clean energy systems. Nuclear is today the second largest source of low emissions power after hydropower, with nuclear plants in 32 countries. About 63% of today's nuclear generating capacity comes from plants that are more than 30 years old, since many were built in the aftermath of the 1970s oil shocks. But a range of both advanced and emerging economies have recently announced energy strategies that include substantial roles for nuclear power as well as considerable financial incentives to invest in it.

<https://www.iaea.org/news/nuclear-power-can-play-a-major-role-in-enabling-secure-transitions-to-low-emissions-energy-systems>

V. Opinion

Smaller nuclear warheads make nuclear terrorism realistic. China, US, Russia must sit together

Shyam Saran

The Print, June 16, 2022

The US and Russia still have the largest arsenals, over 90% of the global total but China is catching up fast. Neither Moscow nor Washington believe that bilateral arms deals will enhance their security unless China joins the negotiations. In the subcontinent, India is reluctant to engage in nuclear arms control with Pakistan because China is its main adversary. China, on the other hand, has structured its nuclear deterrent with the US in mind. It is only in a

multilateral format that these differing threat perceptions can be addressed and reconciled.

<https://theprint.in/opinion/smaller-nuclear-warheads-make-nuclear-terrorism-realistic-china-us-russia-must-sit-together/998699/>

The deterrence dynamic in India-China-Pak triad

Manish Tewari

Deccan Chronicle, June 18, 2022

Ukraine had the third-largest nuclear arsenal in the world when the Soviet Union disappeared in 1991. It gave up its nuclear weapons in return for security guarantees from the US, UK and Russia. Given that the guarantors of the Budapest Memorandum of 1994 failed to measure up to their commitments and one of them, Russia, actually invaded Ukraine first in 2014 and then again in 2022, it will make many small and medium powers reassess their national positions qua acquiring nuclear arms. One of the positives of the 22-month-old stand-off with China is that the deterrence posture of both the nations has remained stable. Both India and China have long been proponents of a No First Use Policy with regard to the use of nuclear weapons. However, in the absence of a structured dialogue between the two nations, especially given the tense stand-off in Eastern Ladakh and Arunachal Pradesh, can strategic stability be taken as a given?

<https://www.deccanchronicle.com/opinion/columnists/180622/manish-tewari-the-deterrence-dynamic-in-india-china-pak-triad.html>

The flaws in China's nuclear power drive

L V Krishnan

Hindustan Times, June 20, 2022

Under Mao Zedong, China's focus was fully on nuclear weapons. Buoyed by the success in nuclear weapon production, in 1970 Zhou Enlai proposed a turn to

nuclear electricity generation. That led to some preliminary work soon after. Serious attempts to design a large Pressurised Reactor (PWR) that require enriched uranium began after the adoption of the 'reform and opening up' policy in 1978. In parallel, for quick results, simultaneously China initiated negotiations with France to build two large PWRs. These became operational in 1986. China then ordered more reactors from Canada, Russia and the United States (US). Now, out of a total of about 60 reactors, China has built 40 reactors on its own.

<https://www.hindustantimes.com/ht-insight/international-affairs/the-flaws-in-china-s-nuclear-power-drive-101655711719425.html>

Why China's ambitions in space should not be underestimated

Philip J. Cunningham

South China Morning Post, June 23, 2022

China's space programme may lag behind the US in accomplishments to date, but it is not to be underestimated. For example, the US-led International Space Station is bigger and has been in orbit much longer, but it is getting creaky and harder to maintain. Then, there is the political fallout, since the project has from the start depended on close US-Russia cooperation. For a decade, the US has relied on Russia to ferry its astronauts back and forth from space. The US module depends on the Russian wing to make necessary course corrections. In 2020, the oxygen-supply system in the Russian module failed, but it was supported by oxygen generation from the US side. China was famously excluded from the International Space Station in 2011 due to narrow-minded political concerns in the US Congress, codified as the Wolf Amendment, but it has done a remarkable job of dealing with the political necessity of going it alone.

<https://www.scmp.com/comment/opinion/article/3182480/why-chinas-ambitions-space-should-not-be-underestimated>

Pakistanis confident the world won't let a nuclear state collapse. They forget Soviet Union

The Print, June 25, 2022

The foreign exchange reserves have fallen below US\$9 billion, i.e., an import cover of just over a month; the Pakistan Rupee (PKR) breached the level of 216 to the dollar in the open market, down over 33 percent in the last one year; banks have stopped opening letters of credit for importers to save foreign exchange; foreign banks are demanding 100 percent cash margins for oil imports; oil refineries are on the verge of closing down because of problems in importing oil; power outages of 10-12 hours have become the norm affecting business and industry, and with it exports; petrol prices have gone up by PKR84 and diesel prices by PKR120 in just the last month and will most likely rise further, partly because of market factors and partly because of taxes imposed on petroleum products; base power tariffs are expected to rise by almost a 100 percent to stop the financial bleeding of the power sector; inflation is spiking, and according to independent economists, it could touch 25 percent in the fiscal year 2023; the policy interest rate of the State Bank of Pakistan (SBP) is already 13.75 percent, which means the cost of borrowing for private sector would be upward of 15 percent.

<https://theprint.in/opinion/pakistanis-confident-the-world-wont-let-a-nuclear-state-collapse-they-forget-soviet-union/1011544/>

Contribute Articles

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

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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