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Indian Pugwash Society

No.1, Development Enclave,
Rao Tula Ram Marg, Near USI, Delhi-110010
Email: indianpugwashsociety@gmail.com

Tel. No (91-11) 2671-7983

Fax No. (91-11)2615-4192

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- France leaves door open for IAEA action on Iran
- France says nuclear talks with Iran must resume where they left off
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- Amir Abdollahian, Lavrov agree on Vienna talks framework
- Iran says U.S. sanctions must be lifted in verifiable process
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- Pentagon backs US sale of weapons, missiles worth \$650 million to Saudi Arabia
- Saudi-led Coalition intercepts, destroys three Houthi ballistic missiles
- RSAF, UAEAF conclude war exercises at Al-Dhafra Airbase

L. UAE

- UAE state nuclear group completes construction of unit 3 of Barakah plant
- Abu Dhabi: 9 projects to help UAE achieve net-zero emissions goal

East Asia

- Green finance clarifies nuclear issue
- PLN plans to use carbon capture, nuclear by 2040
- 'Yes' vote will unseal nuclear plant: premier
- Nuclear plant discussed in first live referendum debate

M. South Korea

- S.Korea, U.S. quietly hold joint air exercises amid calls for talks with N.Korea
- Nuke envoys of S. Korea, China discuss end-of-war declaration for NK dialogue
- Military monitors NK for signs of missile test
- Nuke envoys of S. Korea, Japan discuss Korea peace process

- Cheong WaDae says nuclear phaseout policy remains in place
- Seoul vows close communications with UNSC following N.K. sanctions relief proposal
- Nuclear-Free World' photo exhibition opens in Seoul
- S. Korea, US, Japan to discuss NK's nuclear stalemate, supply chain

N. North Korea

- North Korea casts itself as victim of US vilification over nuclear capabilities
- North Korea launches artillery drill to 'increase combat capabilities'
- N.Korea can produce more uranium than current rate, report says

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- Japan PM Kishida, strengthened by election win, lays out broad policy plans
- Some Japanese utilities cut profit outlook as energy costs spike
- Survey: LDP and Komeito take differing stances on nuclear power
- Ex-TEPCO executives again plead not guilty to nuke accident
- A decade on, Fukushima farmers fear nuclear-tainted water's impact on business
- VOX POPULI: Floating volcanic rocks pose risk to nuclear plants as well as beaches
- Site planned for nuclear plant to host launch pad for small rockets

P. World/Misc

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- Kazakhstan launches production of fuel for nuclear power plants
- Birol calls for nuclear acceleration
- U. N. nuclear agency team to review plans for release of Fukushima water

A. India

Navy takes delivery of warship

The Hindu, November 01, 2021

The first ship of the four Project-15B state-of-the-art stealth guided missile destroyers, Visakhapatnam, being built at the Mazgaon Docks Limited (MDL), was delivered to the Navy. Delayed by three years, the ships will be commissioned very soon. "The 163-metre-long warship has a full load displacement of 7,400 tonnes and a maximum speed of 30 knots. The overall indigenous content of the project is approximately 75%," the Navy.

<https://www.thehindu.com/todays-paper/tp-national/navy-takes-delivery-of-warship/article37276917.ece>

Parachute unit practises combat manoeuvres

The Hindu, November 02, 2021

As the Army prepares to remain deployed in large numbers in the high-altitude areas of eastern Ladakh with the stand-off with China still unresolved, the 50th Parachute Brigade is conducting an airborne exercise and combat manoeuvres along the northern borders in the region to validate its rapid response capabilities.

<https://www.thehindu.com/todays-paper/tp-national/parachute-unit-practises-combat-manoevres/article37295765.ece>

ISRO-Devas fallout: US firm moves court as 'interested party'

The Indian Express, November 09, 2021

A US-based firm, Spaceflight Inc, which uses Indian Space Research Organisation rockets, among others to provide global space launch services, has moved a US court as an "interested party" in the wake of the US court allowing identification of assets of ISRO's commercial arm Antrix Corporation for recovery of a \$1.2 billion compensation award. Spaceflight Inc, which signed up in 2019 to be the first user of ISRO's Small Satellite Launch Vehicle – which is still

under development – and facilitated the launch of Brazil's first satellite in February this year on ISRO's PSLV-C51, moved the US federal court for the western district of Washington at the end of October. The move comes in the wake of the US federal court order of August 16, 2021 allowing a Bengaluru start-up firm Devas Multimedia to identify assets of the Antrix Corporation in order to attach them for recovery of a US \$1.3 billion compensation award made by an international tribunal over a failed 2005 satellite deal.

<https://indianexpress.com/article/cities/bangalore/isro-devas-feud-spaceflight-inc-moves-us-court-as-interested-party-7612303/>

Explained: How NASA's DART mission will hit and deflect an asteroid

The Indian Express, November 11, 2021

On November 24, at around 11.50 am (IST), NASA will launch the agency's first planetary defense test mission named the Double Asteroid Redirection Test (DART). The main aim of the mission is to test the newly developed technology that would allow a spacecraft to crash into an asteroid and change its course. The spacecraft will be launched on a SpaceX Falcon 9 rocket from Vandenberg Space Force Base in California. The target of the spacecraft is a small moonlet called Dimorphos (Greek for "two forms"). It is about 160-metre in diameter and the spacecraft is expected to collide when it is 11 million kilometres away from Earth.

Dimorphos orbits a larger asteroid named Didymos (Greek for "twin") which has a diameter of 780 metres. The asteroid and the moonlet do not pose any threat to Earth and the mission is to test the new technology to be prepared in case an asteroid head towards Earth in the future. The spacecraft carries a high-resolution imager called Didymos Reconnaissance and Asteroid Camera for Optical Navigation (DRACO). Images from DRACO will be sent to Earth in real-time and will help study the impact site and surface of Dimorphos. DART will also

carry a small satellite or CubeSat named LICIACube (Light Italian CubeSat for Imaging of Asteroids). It will be deployed ten days before the impact on Dimorphos. LICIACube is expected to capture images of the impact and the impact crater formed as a result of the collision. It can also capture images of any dust cloud formed during the impact.

<https://indianexpress.com/article/explained/nasa-dart-mission-asteroid-explained-7617692/>

Explained | Will India be sanctioned for S-400 purchase?

Suhasini Haidar

The Hindu, November 14, 2021

What will be the impact if the U.S. goes ahead with punitive measures? How will the Russian missile defence shield help India tackle threats from China and Pakistan?

India is preparing for a visit from Russian President Vladimir Putin for an annual bilateral meeting with Prime Minister Narendra Modi in early December, but it is the arrival of the \$5.4-billion Russian long-range surface-to-air missile defence shield "S-400", also expected next month, that is likely to generate more international headlines. The United States Government has made it clear that the delivery of the five S-400 systems is considered a "significant transaction" under its Countering America's Adversaries Through Sanctions Act (CAATSA) of 2017, which could trigger sanctions against Indian officials and the Government.

<https://www.thehindu.com/news/national/explained-will-india-be-sanctioned-for-s-400-purchase/article37481472.ece>

Deliveries of S-400 air defence system have begun, says Russian official

Dinakar Peri

The Hindu, November 14, 2021

Ahead of Russian President Vladimir Putin's visit to India early next month, Moscow has

started deliveries of S-400 air defence systems to India, a senior Russian official confirmed. This risks the possibility of sanctions from the U.S. under the Countering America's Adversaries Through Sanctions Act (CAATSA) which would come up for discussion at the India-U.S. 2+2 ministerial dialogue.

<https://www.thehindu.com/news/national/russia-starts-delivery-of-s-400-missile-systems-to-india-says-russian-official/article37487108.ece>

Explained | S-400 Triumph long-range air defence system

Dinakar Peri

The Hindu, November 15, 2021

Missiles being procured from Russia are among the world's most advanced "Russia has started supplying S-400 air defence system to India, and the first division will be delivered by the end of 2021," Director of Federal Service for Military-Technical Cooperation Dmitry Shugaev recently announced, confirming the beginning of the much-awaited delivery of the long-range air defence system.

<https://www.thehindu.com/news/national/explained-s-400-triumf-long-range-air-defence-system/article37499541.ece>

Collision avoidance manoeuvre performed for Chandrayaan-2: ISRO

The Indian Express, November 15, 2021

The Indian Space Research Organisation (ISRO) said on November 15 that it performed a "collision avoidance manoeuvre" (CAM) on October 18 to avoid a "critically close approach" of the orbiter of its moon mission Chandrayaan-2 and NASA's robotic spacecraft of Lunar Reconnaissance Orbiter (LRO).

<https://indianexpress.com/article/cities/ahmedabad/collision-avoidance-manoevre-performed-for-chandrayaan-2-isro-7624594/>

B. Pakistan

Hot functional tests completed at Karachi 3

World Nuclear News, November 11, 2021

Hot functional tests simulate the temperatures and pressures that the reactor systems will be subjected to during normal operation and are carried out before loading nuclear fuel. They involve increasing the temperature of the reactor coolant system and carrying out comprehensive tests to ensure that coolant circuits and safety systems are operating as they should. China Zhongyuan Engineering Corporation - CNNC's general contractor for Karachi 2 and 3 - previously announced that the tests at Karachi 3 began on 13 September. Like Karachi 2, which entered commercial operation in May, Karachi 3 is a 1100 MW Hualong One unit supplied by CNNC.

The two units are the first exports of the Hualong One, which is also promoted on the international market as HPR1000. The first example of the Hualong One - Fuqing 5 in China's Fujian province - was commissioned at the beginning of this year. Eight nuclear power units using Hualong One technology are under construction or in operation at home and abroad, CNNC said. The construction of the Karachi units has boosted the development of Pakistan's economy by providing over 10,000 direct jobs for Pakistan citizens, and a further 40,000 indirect jobs through the value chain, it added.

<https://www.world-nuclear-news.org/Articles/Hot-functional-tests-completed-at-Karachi-3>

C. China

Chinese satellite hints at space warfare prowess by dodging US surveillance

Liu Zhen

South China Morning Post, November 02, 2021

A Chinese satellite has used a manoeuvre to avoid being followed by a spying US satellite, hinting at its capability in potential

space warfare.

<https://www.scmp.com/news/china/military/article/3154496/chinese-satellite-shows-space-warfare-prowess-dodging-us>

Fuel loading under way at Fuqing 6

World Nuclear News, November 08, 2021

China's State Council gave final approval for construction of Fuqing units 5 and 6 in April 2015. The pouring of first concrete for Fuqing 5 began in May 2015, marking the official start of construction of the unit. Construction of unit 6 began in December the same year. Unit 5 was connected to the grid on 27 November last year, having achieved first criticality on 21 October, and entered commercial operation on 30 January this year. Construction of two demonstration Hualong One (HPR1000) units is also under way at China General Nuclear's Fangchenggang plant in the Guangxi Autonomous Region.

Those units are expected to start up in 2022. CNNC has also started construction of two Hualong One unit at the Zhangzhou plant in Fujian province, plus the first of two units at Taipingling in Guangdong. Two HPR1000 units are under construction at Pakistan's Karachi nuclear power plant. Construction began on Karachi unit 2 in 2015 and unit 3 in 2016; the units are planned to enter commercial operation in this year and next, respectively. Karachi 2 was connected to the grid in March after the completion of commissioning tests.

<https://www.world-nuclear-news.org/Articles/Fuel-loading-under-way-at-Fuqing-6>

China launches new remote sensing satellites

Xinhua, November 06, 2021

China successfully launched three new remote sensing satellites from the Xichang Satellite Launch Center in southwest China's Sichuan Province. The satellites, belonging to the Yaogan-35 family, were launched at 11:00 a.m. (Beijing Time) by a Long March-2D carrier rocket and entered

the planned orbit successfully. This launch marked the 396th mission for the Long March series carrier rockets.

http://www.news.cn/english/2021-11/06/c_1310294294.htm

China's astronauts complete spacewalk at new Tiangong space station

Global Times, November 08, 2021

Chinese astronauts have once again completed an outdoor mission at the Tiangong (Heavenly Palace) space station, which is currently under construction. Wang Yaping was the first female Chinese astronaut to undertake a spacewalk, the programme for China's manned space flight. The current outboard mission is the first of several planned activities for the crew of three, who set off on their mission on October 16. Among other things, the astronauts want to test systems and conduct scientific experiments during their mission. The second manned mission to the Tiangong space station to date is expected to last a total of six months, which would make it the longest in Chinese space flight history.

<https://www.scmp.com/news/china/science/article/3155211/chinas-astronauts-complete-spacewalk-new-tiangong-space-station>

China's latest WZ-7 recon drone deployed for combat training ahead of PLA Air Force's 72nd anniversary

Global Times, November 10, 2021

As an important piece of equipment in the arsenal of the PLA Air Force's unmanned combat system, the domestically developed WZ-7 high-altitude reconnaissance drone has caught much attention since it made its debut at the Airshow China this year. The drone has been deployed for full combat training; the PLA Air Force announced on the eve of its 72nd anniversary.

The WZ-7 uses the "Ö type" tandem-wing aerodynamic configuration, the first time in the world that such design has been used in

an aircraft. It has been tested in all kinds of environments and its reliability has been proven. It is "the second drone that can freely cross civil aviation routes," the state-owned Aviation Industry Corporation of China, the aircraft's manufacturer said in a statement sent to the Global Times at the Airshow China 2021.

<https://www.globaltimes.cn/page/202111/1238671.shtml>

D. Russia

Nuclear-powered submarine Novosibirsk to perform four launches of cruise missiles – source

TASS, November 01, 2021

During state trials in the next two months the cutting-edge nuclear submarine of project 885M ("Yasen-M") "Novosibirsk" before putting into service of the Russian Navy, will perform at least four launches of Onyx and Kalibr-PL cruise missiles, a source in the military-industrial complex reported.

<https://tass.com/defense/1356355>

Peaceful uses of nuclear energy should be part of energy transformation – Russian diplomat

TASS, November 02, 2021

Peaceful uses of nuclear energy should be part of global energy transformation, Russian Ambassador to Argentina Dmitry Feoktistov said on November 01 during an open lecture of the prospects of the 10th Review Conference for the Nuclear Non-Proliferation Treaty (NPT). According to Feoktistov, Russia wants to preserve the NPT's integrity and advocates equal decision-making in the area of global security.

<https://tass.com/economy/1356807>

Nuclear-powered sub-Perm to be first regular carrier of Tsirkon hypersonic missiles

TASS, November 02, 2021

The improved Project 885M (Yasen-M) nuclear-powered submarine Perm will be the first regular carrier of Tsirkon hypersonic cruise missiles in the Russian Navy, a source in the defense industry stated. According to the source, the delivery of the Perm submarine to the Russian Navy is planned for 2025.

<https://tass.com/defense/1356871>

Cargo for Rooppur NPP in Bangladesh to be supplied over Northern Sea Route

TASS, November 02, 2021

The nuclear-powered container carrier Sevmorput will deliver cargo for the Rooppur nuclear power plant (NPP) in Bangladesh, the communications department of Rosatomflot said. On November 2, the nuclear-powered container ship "departed from the port of St. Petersburg to the port of Vladivostok. The world's only transport vessel with a nuclear propulsion unit carries on board general cargo for the Rooppur NPP currently under construction," the company reported. Structural steel and machinery constitute the bulk of the cargo which weighs 1,400 tonnes. The voyage to the port of destination is planned to take about 25 days. Cargo will be unloaded in Vladivostok for further carriage to Bangladesh.

<https://tass.com/economy/1357159>

Russia concerned about ambiguity in US nuclear threshold – diplomat

TASS, November 03, 2021

Russia is concerned about the fact that the United States is creating additional ambiguity in issue of circumstances that permit the use of nuclear weapons, Russian Deputy Foreign Minister Sergey Ryabkov told the online Fort Ross Dialogue forum.

Washington is currently reviewing its policy towards the use of nuclear weapons, which remained unchanged since the Cold War. Discussions on the issue are expected to be completed by the end of the year.

<https://tass.com/defense/1357293>

Final dates of Russia's lunar mission to be known in spring 2022 – scientist

TASS, November 03, 2021

The final decision on the date of Luna-25, the first lunar mission in the history of modern Russia, will be made in March-April 2022, said Igor Mitrofanov, the head of nuclear planetology department at the Institute of Space Research of the Russian Academy of Sciences. According to the scientist, the closest launch window for the mission would open on May 25, 2022. Good ballistic conditions would remain in place until July 2022.

<https://tass.com/science/1357295>

Russian Navy to get two nuclear subs in 2022 – source

TASS, November 03, 2021

Russia's biggest shipyard, Sevmash (part of the United Shipbuilding Corporation), will hand over two nuclear subs to the Russian Navy next year, a source close to the Russian defence ministry stated. The strategic nuclear-powered submarine Generalissimus Suvorov was laid down at the Sevmash Shipyard in Russia's northwest on December 26, 2014.

The sub belongs to the fourth generation of nuclear-powered submarines developed for the Russian Navy. Currently, four Project 955 and improved Project 955A submarines are operational in the Russian Navy. The fifth sub of this Project, the Knyaz Oleg, will be delivered to the Navy in December 2021. Borei-and Borei-A-class submarines have been developed by the Rubin Central Design Bureau of Marine Engineering. They carry 16 Bulava

intercontinental ballistic missiles and are outfitted with 533mm torpedo tubes. Besides, Sevmash is building six Project 885M nuclear subs. The first serial sub of this series, the Novosibirsk, is now undergoing trials.

<https://tass.com/defense/1357305>

China, Russia will continue to work on settlement of Iranian nuclear problem - ministry

TASS, November 04, 2021

China and Russia are ready to continue strategic interaction and will jointly promote the political settlement of the Iranian nuclear problem, according to the commentary on a telephone conversation between the two countries' deputy foreign ministers, Ma Zhaoxu and Sergey Ryabkov, which took place on November 3.

It specified that the Chinese and Russian diplomats during the conversation reached a consensus on a wide range of issues. It emphasizes that the return to the Joint Comprehensive Plan of Action on the Iranian Nuclear Program (JCPOA) must be carried out taking into account the interests of each of the parties concerned, on the basis of mutual respect. Russian Foreign Minister Sergey Lavrov said earlier during the G20 summit, Moscow fully supports the return to the JCPOA in its original form.

<https://tass.com/world/1357811>

Atomic shower? Russia is experiencing climate innovation

World Nuclear News, November 05, 2021

As countries from around the world meet in Scotland this week to try to find new ways to mitigate climate change, Russia has embraced nuclear heating as a possible solution, but hopes it can provide a competitive edge. Companies in the United States, China and France are considering building small reactors, now connected to Pevk's hydropower facilities. Home heating with nuclear energy is different from space heating or water heaters with electricity

generated from nuclear sources. Direct nuclear heating, tested in small regions of Russia and Sweden, circulates water between the power plant and homes, transferring heat directly from fissile uranium atoms to residential buildings.

Proponents of this idea say that insulating homes with nuclear energy also has environmental benefits. First and foremost, it eliminates the waste of heat, which is usually discharged as steam through the conical cooling towers of nuclear power plants, and instead captures it for use in residential heating, if it suits customers.

However, some experts are concerned about the potential risks, pointing to numerous spills and accidents on Soviet and Russian submarines and icebreakers that used similar small reactors. For example, nuclear submarines sank in 1989 and 2000.

<https://worldnationnews.com/atomic-shower-russia-is-experiencing-climate-innovation/>

Nuclear powers seek to agree positions on non-proliferation - Russia's deputy UN envoy

TASS, November 06, 2021

The world's five nuclear powers (Russia, the United States, China, the United Kingdom and France) are actively trying to agree their positions ahead of the upcoming Review Conference of the Parties to the Treaty on the Non-Proliferation of nuclear weapons (NPT), Russian Deputy Permanent Representative to the United Nations Office and Other International Organizations in Geneva Andrei Belousov, who represented Russia at recent meetings of the UN General Assembly's First Committee in New York.

Belousov pointed out that the nuclear powers had been able to "agree three statements that were announced at a meeting of the UN General Assembly's First Committee and include a statement on the Treaty on the Prohibition of Nuclear Weapons, a statement on the prohibition

of the production of fissile material for nuclear weapons and other nuclear explosive devices and a statement on a zone free of nuclear weapons in Southeast Asia.”

<https://tass.com/politics/1358175>

Russia designs ‘smart’ projectile-drone hybrid

TASS, November 07, 2021

Researchers of the Russian Federal Nuclear Center – Zababakhin All-Russian Research Institute of Technical Physics have patented a smart projectile-drone hybrid. According to the patent, the projectile will feature increased horizontal maneuverability due to an additional set of wings.

<https://tass.com/defense/1358309>

Russian Antey-class nuclear-powered sub’s upgrade to extend its service life by 10 years

TASS, November 09, 2021

The service life of the Pacific Fleet’s Project 949A ‘Antey’ multirole nuclear-powered submarine Irkutsk will be extended by at least ten years after its repairs and upgrade at the Zvezda Ship Repair Plant in Russia’s Far East, Defence Minister Sergei Shoigu said at the ministry’s conference. The nuclear-powered submarine Irkutsk will be outfitted with the latest missile, torpedo and radio-technical armaments and advanced communications systems to boost its combat efficiency, the defence minister said.

<https://tass.com/defense/1359203>

International Space Station to manoeuvre higher to swerve satellite junk

Reuters, November 10, 2021

The International Space Station will perform a brief manoeuvre on November 10 to dodge a fragment of a defunct Chinese satellite, Russian space agency Roscosmos said. The station crewed by seven astronauts will

climb 1,240 metres higher to avoid a close encounter with the fragment and will settle in an orbit 470.7 km (292 miles) above the Earth, Roscosmos said. It did not say how large the debris was.

<https://www.reuters.com/lifestyle/science/international-space-station-manoevre-higher-serve-satellite-junk-2021-11-10/>

Rosatom ready to participate in new NPP projects in Turkey

TASS, November 12, 2021

Russia’s state-run nuclear corporation Rosatom is ready to take part in new nuclear power plant (NPP) construction projects in Turkey, company head Alexei Likhachev told reporters on the sidelines of the 26th UN Climate Change Conference (COP26) in Glasgow. At present, Russia is taking part in the project to build the Akkuyu nuclear power on Turkey’s southern coast, under an agreement signed in 2010. The Akkuyu power plant will consist of four power units with a capacity of 1200 MW each. After completion of construction, the station will generate about 35 bln kWh per year.

<https://tass.com/economy/1360447>

Russia to insist on restoring Iran nuclear deal in full – Lavrov

TASS, November 13, 2021

Russia will insist on the resumption of full implementation of the Joint Comprehensive Plan of Action (JCPOA) on the Iranian nuclear program and on lifting sanctions off Iran, Russian Foreign Minister Sergey Lavrov stated. According to the Russian top diplomat, the Iran nuclear deal was among the topics discussed in Paris during the 2+2 meeting between Russian and French defence and foreign ministers. “Here, we have prospects for more constructive cooperation,” he added.

<https://tass.com/politics/1360897>

E. U.S.A.

U.S. says it is in talks with allies on getting Iran to agree to nuclear deal

Kanishka Singh and Jonathan Landay

Reuters, November 01, 2021

The United States was “absolutely in lock step” with Britain, Germany and France on getting Iran back into a nuclear deal, Secretary of State Antony Blinken said on October 31, but he added it was unclear if Tehran was willing to rejoin the talks in a “meaningful way.” “It really depends on whether Iran is serious about doing that,” Blinken said on Iran rejoining the nuclear talks. “All of our countries, working by the way with Russia and China, believe strongly that that would be the best path forward,” he added.

<https://www.reuters.com/world/middle-east/blinken-says-us-talks-with-allies-getting-iran-agree-nuclear-deal-2021-10-31/>

U.S. says hopes Iran returns to nuclear talks on Nov. 29 “in good faith”

Reuters, November 04, 2021

The United States on November 03 said U.S. Special Envoy for Iran Robert Malley will be heading the U.S. delegation in Iran nuclear talks which will resume on November 29 and said Washington hoped that Tehran returns to talks ready to negotiate and in good faith. Speaking at a news briefing, State Department spokesperson Ned Price said Washington still believed that it remains possible to quickly reach and implement an understanding on a mutual return to compliance with the JCPOA.

<https://www.reuters.com/world/middle-east/us-says-hopes-iran-returns-nuclear-talks-nov-29-good-faith-2021-11-03/>

Pentagon sharply raises its estimate of Chinese nuclear warheads

Idrees Ali and Phil Stewart

Reuters, November 04, 2021

The Pentagon on November 03 sharply increased its estimate of China’s projected nuclear weapons arsenal over the coming years, saying Beijing could have 700 warheads by 2027 and possibly 1,000 by 2030. While the numbers would still be significantly smaller than the current U.S. nuclear stockpile, they represent a significant change in the U.S. projection from just last year, when the Pentagon warned the Chinese arsenal would top 400 by the end of the decade.

Washington has repeatedly called on China to join it and Russia in a new arms control treaty. In its wide-ranging annual report to Congress on China’s military, the Pentagon reiterated concern about increasing pressure on self-ruled Taiwan, an island China sees as a breakaway province, and China’s chemical and biological programs and technological advancements.

<https://www.reuters.com/world/pentagon-sharply-raises-its-estimate-chinese-nuclear-warheads-2021-11-03/>

US government works to ‘cocoon’ old nuclear reactors

Nicholas K. Geranios

Associated Press, November 5, 2021

Costs to clean up a massive nuclear weapons complex in Washington state are usually expressed in the hundreds of billions of dollars and involve decades of work. But one project on the Hanford Nuclear Reservation is progressing at a much lower price. The federal government is moving forward with the “cocooning” of eight plutonium production reactors at

Hanford that will place them in a state of long-term storage to allow radiation inside to dissipate over a period of decades, until they can be dismantled and buried. "It's relatively non-expensive," Mark French, a manager for the U.S. Department of Energy, said of cocooning.

"The cost of trying to dismantle the reactor and demolish the reactor core would be extremely expensive and put workers at risk." The federal government built nine nuclear reactors at Hanford to make plutonium for atomic bombs during World War II and the Cold War. The site along the Columbia River contains America's largest quantity of radioactive waste.

<https://apnews.com/article/science-lifestyle-business-washington-world-war-ii-bf6f8f675a3d75628e1cf600ac8d1ea2>

Satellite images show China built mock-ups of US warships

ABC News, November 08, 2021

Satellite images show China has built mock-ups of a U.S. Navy aircraft carrier and destroyer in its northwestern desert, possibly for practice for a future naval clash as tensions rise between the nations. China has massively upgraded its military in recent years, and its capability and intentions are increasingly concerning to the United States as tensions rise over the South China Sea, Taiwan and military supremacy in the Indo-Pacific.

<https://abcnews.go.com/US/wireStory/satellite-images-show-china-built-mock-ups-us-81029789>

Saving nuclear plant could help California hit climate goals -report

Timothy Gardner

Reuters, November 09, 2021

The report by researchers at Stanford, the Massachusetts Institute of Technology (MIT) and LucidCatalyst, LLC said delaying closure of the plant to 2025 would reduce California's carbon emissions from power plants by more than 10% from 2017 levels, reduce dependency on natural gas, and save up to \$21 billion in power system costs. The

Diablo Canyon plant generates about 8% of California's in-state electricity and 15% of its carbon-free power. Keeping it open to 2045 could save up to \$21 billion in power system costs and spare 90,000 acres of land from use for energy production, it said.

<https://www.reuters.com/world/us/saving-nuclear-plant-could-help-california-hit-climate-goals-report-2021-11-08/>

China's new high-tech aircraft carrier could launch in early 2022, satellite imagery analysis shows

Ben Westcott

CNN, November 9, 2021

A new Chinese aircraft carrier with technology nearly equaling the capabilities of its US counterparts could be launched as soon as February next year, according to an analysis of satellite imagery by a Washington-based think tank. In images provided by Centre for Strategic and International Studies (CSIS), the carrier — known only as the Type 003 — can be seen on the edge of completion on October 23, in the Jiangnan shipyard in Shanghai.

The installation of major external and internal components, including power plants and the aircraft launching system, appears to either be finished or on the verge of completion, CSIS said. Only a few additional items — such as radar and weapon systems — remain to be installed before the vessel can slip into the Yangtze River, the analysts added.

<https://edition.cnn.com/2021/11/09/china/china-aircraft-carrier-type-003-launch-satellite-imagery-intl-hnk/index.html>

NASA, SpaceX launch 4 more astronauts into orbit on flight to space station

Joe Skipper and Steve Gorman

Reuters, November 11, 2021

NASA and private rocket company SpaceX launched four astronauts into orbit late on November 10. The SpaceX-built

launch vehicle, consisting of a Crew Dragon capsule and a two-stage Falcon 9 rocket, was launched from NASA's Kennedy Space Centre in Florida. The flight marks the third "operational" space station crew sent to orbit aboard a Dragon capsule since NASA and SpaceX teamed up to resume space launches from American soil last year, following a nine-year hiatus at the end of the U.S. space shuttle program in 2011.

<https://www.reuters.com/business/aerospace-defense/nasa-spacex-set-launch-space-stations-next-crew-orbit-2021-11-10/>

F. Europe

International team notes improvements at Ostravets

November 01, 2021

An expert team assembled by the International Atomic Energy Agency (IAEA) "observed significant improvements" in operational practices at Belarus' Ostravets nuclear power plant, the organisation said, noting that some areas remain for improvement.

<https://www.world-nuclear-news.org/Articles/International-team-notes-improvements-at-Ostravets>

'Evolution' in EU nuclear debate

World Nuclear News, November 03, 2021

European industry body Foratom is hopeful that a new conversation around nuclear energy in light of the continent's gas crisis will bring the policy framework needed for it to make a major contribution to 2030 energy targets. Speaking from the COP26 climate change talks in Glasgow, Scotland, Foratom's Communications and EU Stakeholder Director Jessica Johnson said, "This year, nuclear is a topic for an open discussion."

Foratom Director General Yves Desbazeille related this to the high gas prices Europe in particular is currently facing. "A gas shock is turning into an electricity shock," he said. "We need low-carbon sources, and we also need dispatchable low-carbon sources. This

is where nuclear is in everyone's mind. It has come back in the debate, nationally and at the EU level."

<https://www.world-nuclear-news.org/Articles/Evolution-in-EU-nuclear-debate>

Explainer: High-tech climate solutions that could cut emissions in the long term

Timothy Gardener

Reuters, November 03, 2021

From replicating the process that fuels the sun to harnessing scorching temperatures deep below our feet, scientists, companies and venture capitalists are betting on high-tech ways to power the planet without emitting greenhouse gases.

Energy companies are excited by fusion. Both Italy's ENI (ENI.MI), and Norway's Equinor have invested. U.S. company Chevron Corp (CVX.N) has invested in Seattle-based Zap Energy Inc, a fusion startup. Fusion has advantages over fission - used in today's nuclear reactors to break apart atoms - including that the fuel is derived from water, not radioactive uranium or plutonium. That means fusion does not generate long-term radioactive waste, which few politicians want in their districts.

<https://www.reuters.com/business/cop/high-tech-climate-solutions-that-could-cut-emissions-long-term-2021-11-03/>

Nordic fund KLP excludes 14 weapons companies on ethical grounds

Victoria Klesty

Reuters, November 04, 2021

Norway's largest pension fund KLP said it would no longer invest in 14 major weapons makers and their suppliers, including Raytheon Technologies Corporation (RTX.N) and Rolls-Royce (RR.L). The exclusion of the firms, based in Britain, China, France, Israel, India, Italy and the United States, is because they

produce certain types of weapons, mostly involving nuclear arms, that violate fundamental humanitarian principles, KLP said.

<https://www.reuters.com/business/nordic-fund-klp-excludes-14-weapons-companies-ethical-grounds-2021-11-04/>

IAEA concludes mission to assess Swiss nuclear safety

World Nuclear News, November 05, 2021

Switzerland is committed to maintaining and strengthening its regulatory framework for nuclear and radiation safety, an International Atomic Energy Agency (IAEA) team of experts has concluded. The Integrated Regulatory Review Service (IRRS) mission team said a key challenge for the country is to keep and to build new safety competence for the future by evaluating anticipated gaps in expertise and in identifying actions required to fill them.

<https://www.world-nuclear-news.org/Articles/IAEA-concludes-mission-to-assess-Swiss-nuclear-saf>

Energy Minister: Ukraine provided with nuclear fuel for 1.5 years ahead

Kyiv Post, November 05, 2021

Ukraine has reserves of fuel at nuclear power plants, designed for 1.5 years of operation, Energy Minister Herman Haluschenko has said. According to the minister, by creating barriers to the supply of fuel resources, the Russian Federation has the opportunity to influence the limitation of nuclear fuel supplies, since half of the nuclear power plants operate on Russian fuel.

<https://www.kyivpost.com/ukraine-politics/energy-minister-ukraine-provided-with-nuclear-fuel-for-1-5-years-ahead.html>

Teaming agreement signed for Romanian SMR deployment

World News Network, November 05, 2021

NuScale Power and Romanian national nuclear company Nuclearelectrica signed a

teaming agreement to advance the deployment of NuScale's small modular reactor (SMR) technology in Romania. The signing came a day after plans for the cooperation were announced on the sidelines of the COP26 climate conference in Glasgow. Under the teaming agreement, NuScale will help Nuclearelectrica evaluate its technology, and together, the organisations will take steps towards deploying a first NuScale 6-module, 462 MWe, power plant in Romania as early as 2027/2028

<https://www.world-nuclear-news.org/Articles/Teaming-agreement-signed-for-Romanian-SMR-deployme>

Long-term safety of Armenian plant reviewed by IAEA

November 08, 2021

An International Atomic Energy Agency (IAEA) team of experts has completed a follow-up Safety Aspects of Long-Term Operation (SALTO) mission to unit 2 of the Armenian Nuclear Power Plant at Metsamor. The team reviewed the improvements in preparedness, organisation and programmes related to long-term operation against the IAEA safety standards.

<https://www.world-nuclear-news.org/Articles/Long-term-safety-of-Armenian-plant-reviewed-by-IAE>

Completion of Khmelnytsky 3 'begins' in Ukraine

World Nuclear News, November 09, 2021

Work has already started to complete Ukraine's Khmelnytsky 3 using AP1000 technology. Engineers from Westinghouse are at the site, taking stock and considering how to complete the unique project, according to plant owner Energoatom.

Khmelnytsky 3 was originally intended to be a VVER-1000 but construction stalled in 1990 at around 75% completion. The foundation and much of the containment structure are present, as is some heavy

equipment in storage on site. At the same time, Energoatom and Westinghouse have an opportunity to use AP1000 components and modules intended for the cancelled summer project in the USA and kept in storage there.

<https://www.world-nuclear-news.org/Articles/Completion-of-Khmelnitsky-3-begins-in-Ukraine>

Britain backs Rolls-Royce mini nuclear plants in net zero drive

Susanna Twidale and Sarah Young

Reuters, November 09, 2021

Britain has backed a \$546 million Rolls-Royce funding round to develop the country's first small modular nuclear reactor, in a drive to reach net zero carbon emissions and promote new technology with export potential.

<https://www.reuters.com/business/sustainable-business/britain-commits-283-mln-rolls-royce-small-nuclear-reactors-2021-11-08/>

Parliament approves greater independence for Hungarian nuclear regulator

World Nuclear News, November 11, 2021

The Hungarian parliament has adopted changes to the country's Atomic Act which will give the Hungarian Atomic Energy Authority (HAEA) more control over its structure and staffing. The changes appear to be a response to missed deadlines for decision-making on the Paks II new build project.

<https://www.world-nuclear-news.org/Articles/Parliament-approves-greater-independence-for-Hunga>

Russia and NATO weigh in as crisis mounts on Belarus-Poland border

Dmitry Antonov and Robin Emmott

Reuters, November 11, 2021

The European Union accused Belarus on November 10 of mounting a "hybrid attack" by pushing migrants across the border into

Poland, paving the way for widened sanctions against Minsk in a crisis that threatens to draw in Russia and NATO. Russia took the rare step of dispatching two nuclear-capable strategic bombers to patrol Belarusian airspace in a show of support for its close ally. Poland briefed fellow NATO allies at a closed-door meeting and they pledged their support, an alliance official said.

<https://www.reuters.com/world/russia-flies-nuclear-capable-bombers-over-belarus-migrant-crisis-escalates-2021-11-10/>

Greenland bans uranium mining, halting rare earths project

Reuters, November 11, 2021

Greenland's parliament has passed legislation that will ban uranium mining and cease development of the Kuannersuit mine, one of the biggest rare earth deposits in the world. Kuannersuit, owned by Australian mining firm Greenland Minerals (GGG.AX) and located near the southern town of Narsaq, contains a large deposit of rare earth metals, used to make consumer electronics and weapons, but also radioactive uranium.

<https://www.reuters.com/world/americas/greenland-bans-uranium-mining-halting-rare-earths-project-2021-11-10/>

G. France

French nuclear plant outages and restarts

Reuters, November 03, 2021

France has 62,380 megawatts (MW) of nuclear generation capacity provided by 57 reactors, data from power grid operator RTE shows. Reuters estimates 18,300 MW, or about 29.3% of that capacity is offline. That puts online availability at 44,080 MW, or 70.7%.

<https://www.reuters.com/business/cop/french-nuclear-plant-outages-restarts-2021-11-03/>

French ambassador accuses Australia of deceit over submarine deal

Reuters, November 03, 2021

France's ambassador to Australia, Jean-Pierre Thebault, said on November 03 that Australia acted with deceit when it abruptly cancelled a multi-billion-dollar deal with Paris to build a fleet of submarines. "The deceit was intentional," Thebault stated. "And because there was far more at stake than providing submarines, because it was a common agreement on sovereignty, sealed with the transmission of highly classified data, the way it was handled was a stab in the back."

Australia in September cancelled a deal with France's Naval Group, opting instead to build at least 12 nuclear-powered submarines in a deal with the United States and Britain.

<https://www.reuters.com/business/cop/french-ambassador-accuses-australia-deceit-over-submarine-deal-2021-11-03/>

France leaves door open for IAEA action on Iran

John Irish

Reuters, November 04, 2021

France said on November 04 it could still act with its partners against Iran at an upcoming meeting of the U.N. nuclear watchdog's board after Tehran said it would return to nuclear talks with world powers at the end of November.

<https://www.reuters.com/world/france-leaves-door-open-iaea-action-iran-2021-11-04/>

France says nuclear talks with Iran must resume where they left off

Reuters, November 09, 2021

France's foreign minister told his Iranian counterpart on November 09 that when talks with world powers on reviving a nuclear accord resume at the end of

November, they must continue where they left off in June.

<https://www.reuters.com/world/middle-east/france-says-important-pick-up-talks-with-iran-where-they-were-left-2021-11-09/>

Macron says France will build new nuclear energy reactors

Reuters, November 10, 2021

France will build new nuclear reactors to help the country lessen its dependence on foreign countries for its energy supplies, meet global warming targets and keep prices under control, President Emmanuel Macron said on November 09. With concerns over purchasing power topping opinion polls five months before the presidential election, at a time of soaring energy prices, Macron said the decision to go for new reactors was essential to keep prices "reasonable." This was meant "to guarantee France's energy independence, to guarantee our country's electricity supply and achieve our objectives, in particular carbon neutrality in 2050," he said.

<https://www.reuters.com/business/energy/macron-says-france-will-build-more-nuclear-energy-reactors-2021-11-09/>

H. Germany

German energy demand, carbon dioxide emissions seen rising in 2021 -industry group

Reuters, November 02, 2021

Germany's energy consumption in 2021 is likely to rise by nearly 3% and the country's carbon dioxide emissions are set to increase by at least 4% as more coal is burnt, industry statistics group AGEBA said on November 02. The rise in energy demand is mainly due to a pickup in economic growth and cold weather at the start of the year, although higher prices of energy and carbon pollution allowances have tempered growth in demand, AGEBA said. Natural gas consumption increased

by 8.5% in the nine months while the power sector saw higher output produced from coal and nuclear energy.

<https://www.reuters.com/business/environment/german-energy-demand-carbon-dioxide-emissions-seen-rising-2021-industry-group-2021-11-02/>

German nuclear plant outages and restarts

Reuters, November 03, 2021

Germany is left with six reactors operated by three companies, after closing more than half of its nuclear capacity in 2011 and speeding up the schedule for the remainder of plants to be shut, after the Fukushima nuclear crisis had sparked safety concerns. Three of these will close at the end of 2021.

<https://www.reuters.com/business/cop/german-nuclear-plant-outages-restarts-2021-11-03/>

West Asia

Turkish President Erdoğan looks to further new nuclear

World Nuclear News, November 10, 2021

Turkey plans to build more nuclear power plants after it completes Akkuyu, the country's president said. "After Akkuyu nuclear power plant, we will swiftly begin preparations for our second and third power plants," Recep Tayyip Erdoğan said. Akkuyu is expected to generate its first electricity in 2023.

<https://www.world-nuclear-news.org/Articles/Turkish-President-Erdogan-looks-to-further-new-nuc>

I. Iran

Talks on reviving 2015 Iran nuclear deal to resume Nov. 29

Parisa Hafezi

Reuters, November 04, 2021

Talks on reviving the 2015 Iran nuclear deal will resume on Nov. 29, the country's top nuclear negotiator said on November 03, as Western concerns over Tehran's nuclear

advances grow. "We agreed to start the negotiations aiming at removal of unlawful & inhumane sanctions on 29 November in Vienna," Ali Bagheri Kani wrote in a tweet later confirmed in U.S. and EU statements. Negotiations have been on hold since the June election of hardline Iranian President Ebrahim Raisi, who is expected to take a tough approach when they resume in Vienna.

<https://www.reuters.com/world/middle-east/iran-says-nuclear-talks-with-world-powers-resume-nov-29-2021-11-03/>

Iran says stockpile of 60% enriched uranium reaches 25 kg

Reuters, November 05, 2021

Iran has increased its stockpile of 60% enriched uranium to 25 kilograms (55 pounds), state media reported on November 05, potentially adding to complications dogging efforts to revive Tehran's 2015 nuclear deal with world powers. Negotiations are due to resume on Nov. 29 in Vienna. But Western powers have said Iran's accelerating enrichment of uranium closer to weapons grade, breaching limits set by the pact after Washington under then-President Donald Trump withdrew from the pact in 2018, is dimming chances of salvaging it.

"So far, we have produced 25 kilograms of 60% uranium, which, except for countries with nuclear weapons, no other country is able to produce," Iranian media quoted Behrouz Kamalvandi, spokesman for the Atomic Energy Organisation of Iran, as saying.

<https://www.reuters.com/world/middle-east/iran-says-its-stockpile-60-enriched-uranium-has-reached-25-kg-state-media-2021-11-05/>

Raisi says Iran won't give in to excessive demands

Tehran Times, November 5, 2021

President Ebrahim Raisi said on November 04 that Iran will not leave the negotiating table, but will not give in to excessive demands that would lead to violation of

the Iranian nation's interests. He reiterated that the Islamic Republic seeks "result-oriented" negotiations with the aim of lifting Washington's anti-Iran sanctions, which the U.S. reinstated in 2018 after it unilaterally withdrew from the 2015 nuclear agreement, officially known as the Joint Comprehensive Plan of Action (JCPOA).

<https://www.tehrantimes.com/news/466721/Raisi-says-Iran-won-t-give-in-to-excessive-demands>

Amir Abdollahian, Lavrov agree on Vienna talks framework

Tehran Times, November 6, 2021

On November 06, Iranian Foreign Minister Hossein Amir Abdollahian and his Russian counterpart Sergei Lavrov discussed issues of mutual interest, including the upcoming Vienna talks and the current developments in the region. Referring to the agreement reached with European Union's nuclear deal coordinator Enrique Mora on the timing of the talks with the P4+1, the chief Iranian diplomat stressed that the rapid progress of the talks requires that the European and American sides avoid making post-JCPOA demands and take a realistic and constructive approach.

<https://www.tehrantimes.com/news/466758/Amir-Abdollahian-Lavrov-agree-on-Vienna-talks-framework>

Iran says U.S. sanctions must be lifted in verifiable process

Reuters, November 08, 2021

Iran is demanding that all U.S. sanctions should be lifted in a verifiable process, Iranian Foreign Ministry spokesman Saeed Khatibzadeh said on November 08, a few weeks ahead of a resumption of talks between Tehran and world powers to revive a 2015 nuclear deal.

<https://www.reuters.com/world/middle-east/iran-says-us-sanctions-must-be-lifted-verifiable-process-2021-11-08/>

Iran wants U.S. assurances it will never abandon nuclear deal if revived

Reuters, November 09, 2021

Iran said on November 08 that the United States should provide guarantees that it will not abandon Tehran's 2015 nuclear deal with world powers again, if talks to revive the agreement succeed. Indirect talks between Iran and the United States, which stalled in June after the election of hardline Iranian President Ebrahim Raisi, are set to resume on Nov. 29 in Vienna to find ways to reinstate the 2015 accord.

"The U.S. should show that it has the capability and will to provide guarantees that it will not abandon the deal again if the talks to revive the deal succeed," Foreign Ministry spokesman Saeed Khatibzadeh stated.

<https://www.reuters.com/business/energy/iran-wants-us-assurances-it-will-never-abandon-nuclear-deal-if-revived-2021-11-08/>

Iran, Germany FMs discuss JCPOA

Tehran Times, November 9, 2021

The foreign ministers of Iran and Germany held a telephone conversation to discuss the situation around the 2015 nuclear deal between Tehran and major world powers. The Iranian foreign ministry said the two ministers discussed the latest developments in bilateral relations, the Vienna nuclear talks, and the region.

"The U.S. withdrawal [from the nuclear deal] and the failure of the three European countries to fulfill their obligations have increasingly deepened mistrust. Therefore, full removal of sanctions is a necessity," he said.

<https://www.tehrantimes.com/news/466866/Iran-Germany-FMs-discuss-JCPOA>

Iran's Bagheri rules out nuclear negotiations, says talks only focused on U.S. sanctions

Tehran Times, November 10, 2021

Iran's top nuclear negotiator has said that there will be no nuclear negotiations at the Vienna talks later this month and the talks would only focus on the implications of the U.S. withdrawal from the 2015 nuclear deal between Iran and the major world powers. The Iranian diplomat met his French counterpart and discussed issues related to the JCPOA. The Iranian diplomat noted, "The main issue we are facing now is the consequences of the U.S. withdrawal from the JCPOA, which are limited to the illegal sanctions imposed on the Islamic Republic of Iran."

<https://www.tehrantimes.com/news/466920/Iran-s-Bagheri-rules-out-nuclear-negotiations-says-talks-only>

J. Israel

Israel to place aerial reconnaissance balloon in North

Anna Ahronheim

Jerusalem Post, November 03, 2021

As Israel continues to work toward significantly bolstering its air defences, an advanced aerial surveillance balloon has been raised high in the sky in the North to provide additional early warning capabilities against aerial threats. Following years of development and manufacturing, the Israel Missile Defence Organization (IMDO) at the Directorate of Defence R&D of the Defence Ministry has "begun initial inflation operations" of the balloon, the ministry said in a statement.

<https://www.jpost.com/israel-news/israel-to-launch-massive-aerial-reconnaissance-balloon-in-the-north-683890>

Israel 'will do what it needs to' against a nuclear Iran, Bennett says

Tovah Lazaroff

Jerusalem Post, November 04, 2021

Israel will do what is necessary to protect itself against the Iranian existential threat, Prime Minister Naftali Bennett said on November 04, as world powers are expected to hold November 29 talks in Vienna with Tehran on the renewal of the 2015 nuclear deal.

"We will not tire, we will be relentless, when we are talking about the very existence of the Jewish state, we will do what we need to do," Bennett said in a virtual address to a United States-based virtual conference by the group United Against a Nuclear Iran.

"Iran poses a strategic threat to the world and an existential threat to Israel, and they ought not to be allowed to get away with it.

<https://www.jpost.com/israel-news/israel-will-do-what-it-needs-to-against-a-nuclear-iran-bennett-says-684057>

IDF's new arsenal: More munitions, precise missiles, greater firepower

Anna Ahronheim

Jerusalem Post, November 07, 2021

The IDF is planning to significantly increase the number of precision munitions in its arsenal in the coming years now that a state budget has been finalized. The IDF will look to purchase a substantially larger amount of munitions from the United States than before, due to the increase in threats facing the country as well as an increase in targets picked out by the military.

<https://www.jpost.com/israel-news/idf-to-substantially-increase-precision-missile-arsenal-684274>

IAI unveils new defensive electronic warfare systems

Jerusalem Post, November 11, 2021

Israel Aerospace Industries (IAI) unveiled a family of new electronic warfare (EW) systems which can combat a range of threats, including UAVs, ships, missiles and radar systems. The Scorpius family of systems scans the entire surrounding area for targets and deploys narrowly focused beams to interfere with multiple threats across the electromagnetic spectrum. The system effectively disrupts the operation of electromagnetic systems, including radar, electronic sensors, navigation and data communications.

<https://www.jpost.com/israel-news/iai-unveils-new-defensive-electronic-warfare-systems-684703>

Israel, India agree to develop bilateral defence technology

Anna Ahronheim

Jerusalem Post, November 11, 2021

Just weeks after Israel and India agreed to identify new areas in defence cooperation, the two countries signed an agreement to develop bilateral technology such as drones, artificial intelligence and more. The Bilateral Innovation Agreement (BIA) was signed by India's Defence Research and Development Organization (DRDO) chairman G Satheesh Reddy and Israel's Directorate of Defence Research and Development (DDR&D) head Danny Gold.

"Under the agreement, start-ups and industry of both countries will work together to bring out next-generation technologies and products in the areas such as drones, robotics, artificial intelligence, quantum technology, photonics, biosensing, brain-machine interface, energy storage, wearable devices, natural language processing, etc," India's defence ministry said in a statement.

<https://www.jpost.com/israel-news/israel-india-agree-to-develop-bilateral-defence-technology-684692>

K. Saudi Arabia

Arab Coalition destroys two ballistic missile sites in Yemen's Saada, Amran

Saudi Gazette, November 01, 2021

The Saudi-led Arab Coalition supporting legitimacy in Yemen said it has destroyed two sites in Yemen's Saada and Amran cities, used for launching ballistic missiles.

<https://saudigazette.com.sa/article/613043/SAUDI-ARABIA/Arab-Coalition-destroys-two-ballistic-missile-sites-in-Yemens-Saada-Amran>

Pentagon backs US sale of weapons, missiles worth \$650 million to Saudi Arabia

Saudi Gazette, November 06, 2021

The Pentagon spokesman announced that the US Department of Defence supports the State Department's decision to sell weapons and missiles to Saudi Arabia. The deal announced by the State Department included the sale of 280 AIM-120 Advanced Medium-Range Air-to-Air Missiles (AMRAAM) to Saudi Arabia, worth up to \$650 million. The sale also included 596 LAU-128 Missile Rail launchers (MRL), in addition to containers, weapon support and support equipment; spare and repair parts, US government and contractor engineering, technical and logistical support services.

[https://saudigazette.com.sa/article/613220/SAUDI-ARABIA/Pentagon-backs-US-sale-of-weapons-missiles-worth-\\$650-million-to-Saudi-Arabia](https://saudigazette.com.sa/article/613220/SAUDI-ARABIA/Pentagon-backs-US-sale-of-weapons-missiles-worth-$650-million-to-Saudi-Arabia)

Saudi-led Coalition intercepts, destroys three Houthi ballistic missiles

Saudi Gazette, November 10, 2021

The Saudi-led Arab Coalition to support Yemen's legitimacy on November 10 intercepted and destroyed three ballistic missiles launched by the Houthi militia against the southern part of Saudi Arabia, according to a Coalition statement.

The Coalition was quoted by the Saudi Press Agency (SPA) as saying in a statement that it has aborted Houthi militia's indiscriminate attempts to target civilians and property, vowing to take necessary action to neutralize the militia's capabilities in line with international humanitarian law. GCC Secretary General Nayef Al-Hajraf, leading a wave of condemnation decried the firing of three ballistic missiles by the Houthi militia in the direction of South Saudi Arabia.

<https://saudigazette.com.sa/article/613406/SAUDI-ARABIA/Saudi-led-Coalition-intercepts-destroys-three-Houthi-ballistic-missiles>

RSAF, UAFAF conclude war exercises at Al-Dhafra Airbase

Saudi Gazette, November 11, 2021

Royal Saudi Air Force (RSAF) and UAE Armed Forces have concluded the Missile Air War Center 2021 Exercise at Al Dhafra Air Base in Abu Dhabi, United Arab Emirates, with the participation of a number of countries, in the presence of the RSAF Deputy Commander Maj. Gen. Pilot Talal Bin Suleiman Al-Ghamdi.

<https://saudigazette.com.sa/article/613465/SAUDI-ARABIA/RSAF-UAFAF-conclude-war-exercises-at-Al-Dhafra-Airbase>

L. U.A.E.

UAE state nuclear group completes construction of unit 3 of Barakah plant

Reuters, November 04, 2021

The United Arab Emirates' Nuclear Energy Corporation (ENEC) has completed construction of Unit 3 of the Barakah Nuclear Energy Plant, the Arab world's first multi-unit operating nuclear energy plant. The unit of the plant in Abu Dhabi's Al Dhafra region is now preparing for operational readiness and is on track to start up and deliver clean electricity in 2023, the agency added in a statement on its website.

<https://www.reuters.com/world/middle-east/uae-state-nuclear-group-completes-construction-unit-3-barakah-plant-2021-11-04/>

Abu Dhabi: 9 projects to help UAE achieve net-zero emissions goal

Khaleej Times, November 12, 2021

During COP26 in Glasgow, the Abu Dhabi Department of Energy on Friday confirmed key sector initiatives over the next decade to help accelerate the UAE's sustainable economic growth while supporting its ambitious Net Zero By 2050 Strategic Initiative. The DoE outlined nine existing and planned projects focused on clean energy generation from solar and nuclear sources, electrification of the water production system through reverse osmosis (RO) technology. It also outlined enabling policies and energy efficiency measures that combined can reduce emissions associated with power generation and water production by at least 50 per cent in the next 10 years.

<https://www.khaleejtimes.com/uae/abu-dhabi-9-projects-to-help-uae-achieve-net-zero-emissions-goal>

East Asia

Green finance clarifies nuclear issue

Honda Chen

Taipei Times, November 02, 2021

Nuclear power cannot be regarded as green energy, so carbon reduction still requires renewable energy, energy efficiency, or carbon capture and storage technology, Environmental Protection Administration (EPA) Minister Chang Tzi-chin told a question-and-answer session at the Legislative Yuan in Taipei on Thursday. This is the mainstream view worldwide, and green finance, or ESG – environmental, social and governance – investments, which have surged over the past few years, prohibit investing in nuclear power plant projects.

<https://www.taipetimes.com/News/editorials/archives/2021/11/02/2003767157>

PLN plans to use carbon capture, nuclear by 2040

The Jakarta Post, November 04, 2021

State-owned electricity monopoly PLN has announced a plan to deploy controversial new energy technologies within Indonesia's power grid to achieve net-zero emissions by 2060.

PLN wrote in a statement on Oct. 31 that the company planned to deploy carbon capture utilization and storage (CCUS) technology by 2035, and to operate nuclear power plants by 2040, both of which are emerging zero-emission technologies marred by high capital costs, safety concerns and a relative lack of technological readiness.

<https://www.thejakartapost.com/paper/2021/11/03/pln-plans-to-use-carbon-capture-nuclear-by-2040.html>

'Yes' vote will unseal nuclear plant: premier

Chien Hui-ju and Kayleigh Madjar

Taipei Times, November 10, 2021

The Fourth Nuclear Power Plant would be unsealed if people vote in favor of its activation in a referendum next month, Premier Su Tseng-chang said, although one of his ministers earlier said that nuclear power is not an answer to Taiwan's energy challenges. Provisions of the Referendum Act stipulate that the plant in New Taipei City's Gongliao District— which has lain dormant since 2015, when it was mothballed by then-president Ma Ying-jeou— must be unsealed if enough people vote that way on Dec. 18

<https://www.taipetimes.com/News/taiwan/archives/2021/11/10/2003767647>

Nuclear plant discussed in first live referendum debate

Chen Yun, Chien Hui-ju and Jake Chung

Taipei Times, November 14, 2021

A supporter and opponent of a referendum question on restarting construction of the Fourth Nuclear Power Plant in New Taipei

City's Gongliao District staked out their positions. Nuclear power advocate Huang Shih-hsiu, who initiated the vote to unseal the mothballed plant, said that should it be cleared for use, it would save the government NT\$60 billion (US\$2.16 billion) in renewable energy costs, and would pay for itself after five years. Writing off the plant altogether would bankrupt Taiwan Power Co (Taipower), he said.

Vice Minister of Economic Affairs Tseng Wen-sheng argued against restarting construction on the plant. Tseng said that Huang was mistaken in citing "trial run data," as Huang was referring to a ministry-conducted safety inspection.

<https://www.taipetimes.com/News/taiwan/archives/2021/11/14/2003767857>

M. South Korea

S.Korea, U.S. quietly hold joint air exercises amid calls for talks with N.Korea

Hyonhee Shin

Reuters, November 01, 2021

South Korea and the United States kicked off joint aerial drills on November 01, a military official in Seoul said, amid tensions over North Korea's recent missile tests and calls for a restart of denuclearisation talks. The exercises, previously called Vigilant Ace, once mobilised tens of thousands of troops and hundreds of cutting-edge fighter jets, bombers and other warplanes.

<https://www.reuters.com/business/aerospace-defense/skorea-us-quietly-hold-joint-air-exercises-amid-calls-talks-with-nkorea-2021-11-01/>

Nuke envoys of S. Korea, China discuss end-of-war declaration for NK dialogue

Yonhap, November 01, 2021

The top nuclear envoys of South Korea and China held a videoconference November 01 to discuss measures for an early resumption of the Korean peace process, including the proposed

declaration of a formal end to the 1950-53 Korean War, Seoul's foreign ministry said. Noh Kyu-duk, the special representative for Korean Peninsula peace and security affairs, held the virtual talks with his Chinese counterpart Liu Xiaoming to explain Seoul's efforts to revive stalled dialogue with North Korea and requested Beijing's "constructive" cooperation in the peace drive, the ministry said.

<https://en.yna.co.kr/view/AEN20211101007000325>

Military monitors NK for signs of missile test

Choi Si-young

The Korea Herald, November 01, 2021

South Korean and US intelligence are closely monitoring for signs of North Korea's next missile test, the military said in response to satellite images showing preparations to launch a submarine-launched ballistic missile for the second time since October. The images — made public last week by 38 North, which monitors North Korea — showed activity involving a mobile crane and a submerged barge at Sinpo, a port city along the east coast where North Korea runs a major submarine shipyard.

The South — which is the only non-nuclear state to have demonstrated an SLBM launch, using a 3,000-ton submarine — believes it would take at least five years for the North to match its SLBM technology, though Pyongyang has dismissed Seoul's missile capabilities, describing it as primitive.

http://www.koreaherald.com/view.php?ud=20211101000867&ACE_SEARCH=1

Nuke envoys of S. Korea, Japan discuss Korea peace process

Yonhap, November 02, 2021

The top nuclear negotiators of South Korea and Japan held phone talks November 02 to explore measures for progress in stalled denuclearization efforts, Seoul's foreign ministry said. Noh Kyu-duk, the special representative for Korean Peninsula peace

and security affairs, and his Japanese counterpart Takehiro Funakoshi shared their assessments of the regional security situations and discussed ways to achieve lasting peace, according to the ministry. The two sides agreed to closely work together for the early resumption of dialogue with North Korea, it added. Seoul has recently stepped up diplomacy to bring North Korea back to denuclearization talks.

<https://en.yna.co.kr/view/AEN20211102006300325>

Cheong WaDae says nuclear phaseout policy remains in place

Yonhap, November 04, 2021

Cheong WaDae said there has been no change to the government's nuclear phaseout policy, responding to confusion over the Hungarian president's remarks following his meeting with President Moon Jae-in. "Our nuclear phaseout policy is that we will reduce the share of nuclear power over the very long term until 2080 and instead raise the share of new renewable energy and hydrogen energy in order to achieve carbon neutrality," Park Soohyun, senior Cheong WaDae secretary for public communication, stated.

<https://en.yna.co.kr/view/AEN20211104007200315>

Seoul vows close communications with UNSC following N.K. sanctions relief proposal

Yonhap, November 05, 2021

South Korea will continue close communications with key U.N. Security Council (UNSC) members, the unification ministry said November 12, after China and Russia again proposed easing sanctions against North Korea. Deputy ministry spokesman Cha Duck-chul said South Korea was aware that the two countries have circulated such a draft resolution to UNSC members, and that it will closely monitor related moves at the council. "The government will ... continue

close communications with the United States and other key members of the UNSC on how to deal with the situation surrounding the Korean Peninsula,” Cha stated.

<https://en.yna.co.kr/view/AEN20211105004100325>

Nuclear-Free World’ photo exhibition opens in Seoul

Sanjay Kumar

The Korea Herald, November 09, 2021

The Embassy of Kazakhstan in Seoul opened a photo exhibition on Tuesday titled “Nuclear-Free World.” The show commemorates the 30th anniversary of the independence of the Republic of Kazakhstan and the 30th anniversary of the closure of the Semipalatinsk nuclear test site in Kazakhstan.

http://www.koreaherald.com/view.php?ud=20211109000925&ACE_SEARCH=1

S. Korea, US, Japan to discuss NK’s nuclear stalemate, supply chain

Ahn Sung-m

The Korea Herald, November 14, 2021

South Korea’s First Vice Foreign Minister Choi Jong-kun on November 14 left for Washington for talks with his US and Japanese counterparts, with North Korea’s nuclear issue and the global supply chain disruption expected to top the agenda.

The three officials are expected to discuss how best to restart the stalled nuclear talks with the North, following up on their last meeting where they underscored tighter cooperation among the allies in dealing with the North’s nuclear problem.

Since then, the North has upped the ante with a series of weapons launches in September and October, which included a long-range cruise missile, a train-launched ballistic missile, a hypersonic missile and a submarine-launched ballistic missile. The North’s resumption of weapon tests is a sign that Pyongyang continues to enhance its

military capabilities amid the long-stalled denuclearization talks with the US. It also came as Seoul and Washington have been stepping up diplomacy to nudge Pyongyang back to talks.

http://www.koreaherald.com/view.php?ud=20211114000159&ACE_SEARCH=1

N. North Korea

North Korea casts itself as victim of US vilification over nuclear capabilities

Chaewon Chung November 5, 2021

At UN, DPRK diplomat calls it hypocritical to criticize its weapons tests but not those of US, South Korea

<https://www.nknews.org/2021/11/north-korea-casts-itself-as-victim-of-us-vilification-over-nuclear-capabilities/>

North Korea launches artillery drill to ‘increase combat capabilities’

Chaewon Chung

NK News, November 7, 2021

North Korea’s mechanized troops conducted an artillery competition on November 06, according to state media, the first time this year that such a drill was publicized without the presence of leader Kim Jong Un. Reportedly led by Pak Jong Chon, member of the Presidium of the Political Bureau and secretary of the Central Committee of the Workers’ Party of Korea (WPK), the exercise aimed to intensify readiness of the Korean People’s Army (KPA) and “increase their mobile artillery combat capabilities.” KPA General Rim Kwang Il, chief of the General Staff of the KPA, and commanders of the combined units reportedly joined Pak and oversaw the drills.

<https://www.nknews.org/2021/11/north-korea-launches-artillery-drill-to-increase-combat-capabilities/>

O. Japan

Hooked on coal for power, Japan aims for ammonia fix

Yuka Obayashi

Reuters, November 01, 2021

Japan is stepping up efforts to extend the lifespan of its coal-fired power plants in an ambitious project to add low-carbon ammonia to its fuel mix, targeting both stable energy supply and lower carbon dioxide (CO₂) emissions in one stroke. The world's fifth-biggest CO₂ emitter's push to use ammonia as a fuel reflects its 2050 goal to become carbon neutral and comes to alleviate pressure from Britain and other countries to phase out dirty coal at the COP26 global climate conference.

Tokyo has pledged to achieve net zero emissions status by 2050, but reliance on coal and gas as fuels for power has grown since Japan suffered the 2011 Fukushima disaster, which effectively left its nuclear power industry in crisis. Use of ammonia - principally used as a raw material for fertiliser and chemicals - faces significant technical and costs challenges, and likely won't placate campaigners calling for a COP26 commitment to consign use of coal to history.

<https://www.reuters.com/business/energy/hooked-coal-power-japan-aims-ammonia-fix-2021-10-29/>

Japan PM Kishida, strengthened by election win, lays out broad policy plans

Ju-min Park and Antoni Slodkowski, Kiyoshi Takenaka

Reuters, November 01, 2021

Japanese Prime Minister Fumio Kishida, invigorated by a surprisingly strong election victory, signalled on November 01 he would pursue defence policies aimed at deterring China, address climate change and accelerate recovery from the pandemic. Saying his stimulus package would include investment on clean energy and funding aid to Asia, he also hoped Japan would take a leadership role on zero emissions in Asia.

Japan has set a target of 2050 for becoming carbon-neutral, and Kishida believes - despite considerable public opposition - that nuclear energy should remain an option.

<https://www.reuters.com/world/asia-pacific/japan-pm-kishida-surprises-with-comfortable-election-win-2021-11-01/>

Some Japanese utilities cut profit outlook as energy costs spike

Yuka Obayashi

Reuters, November 02, 2021

Surging energy costs have forced some Japanese utilities to slash their annual earnings forecasts, but they say they have prepared for the peak winter season with adequate fuel stocks and early plant maintenance to avoid unexpected shutdowns. Thermal coal prices have more than doubled between March 31 and Sept. 30 while LNG spot prices have nearly quadrupled, with Brent crude rising more than 20% as the global economy rebounded from the pandemic-induced slump amid tight supplies.

Japanese utilities are still heavily reliant on coal and LNG in their fuel mix despite growing pressure to shift away from fossil fuels to tackle climate change and as they struggle to restart nuclear power stations due to stricter regulations after the Fukushima nuclear disaster in 2011 and local opposition.

<https://www.reuters.com/business/energy/some-japanese-utilities-cut-profit-outlook-energy-costs-spike-2021-11-02/>

Survey: LDP and Komeito take differing stances on nuclear power

Ryutaro Abe

Asahi Shimbun, November 03, 2021

According to a new survey, winning candidates in the ruling coalition in the Oct. 31 Lower House election differ greatly on the future of nuclear power in Japan. Broken down by political parties, 72 percent of ruling Liberal Democratic Party

winners supported nuclear power, the highest rate among parties, while just 9 percent of junior coalition partner Komeito victors did so.

<https://www.asahi.com/ajw/articles/14474326>

Ex-TEPCO executives again plead not guilty to nuke accident

Asahi Shimbun, November 03, 2021

Three former Tokyo Electric Power Co. executives again maintained their innocence as proceedings began Nov. 2 at the Tokyo High Court on an appeal of a lower court ruling that absolved the three of negligence in the 2011 Fukushima nuclear disaster. They were charged with professional negligence resulting in the deaths of 44 people who were forced to evacuate and the injuries of others after the triple meltdown at the Fukushima No. 1 nuclear power plant in 2011. However, the Tokyo District Court in 2019 found the three not guilty on grounds they could not have predicted that a gigantic tsunami would inundate the plant and cut off all electricity to cool the reactors.

<https://www.asahi.com/ajw/articles/14474341>

A decade on, Fukushima farmers fear nuclear-tainted water's impact on business

Sakura Murakami

Reuters, November 05, 2021

Fukushima farmers fear the Japanese government's planned release of water from the crippled power plant could revive concerns about contamination and again hit the price of their produce, undoing a decade of slow recovery from nuclear disaster. Japan plans to release more than 1 million tonnes of contaminated water from the plant in the country's northeast into the sea after treating it, as the site reaches storage limits for the water. Although international authorities support the plan, it has sparked concern from neighbours China and South Korea and worried local fisherman and farmers.

The water is to be processed to remove radioactive contamination other than from

tritium, which cannot be removed. Water with the radioactive isotope diluted to one-seventh of the World Health Organization's guidelines for drinking water will be released into the Pacific a kilometre out from the plant around spring 2023, under a government plan.

<https://www.reuters.com/business/energy/fukushima-farmers-fear-contaminated-water-could-hurt-business-10-years-after-2021-11-05/>

VOX POPULI: Floating volcanic rocks pose risk to nuclear plants as well as beaches

Asahi Shimbun, November 08, 2021

"When an undersea volcano erupts, the tourist industry takes a massive hit." The cause of the unexpected effect in this case is the huge rafts of "karuishi," or pumice, that have drifted on the sea for hundreds of kilometers and reached the southwestern islands of Okinawa and Amami. The white beaches and the blue sea of these islands now present shockingly ugly sights. The damage from the pumice that originated in a submarine volcano in the Ogasawara Island chain is becoming increasingly more serious. Experts warn that pumice rafts could drift toward the main Japanese islands of Kyushu, Shikoku and Honshu. This prospect raises concerns that the pumice pebbles could affect the operations of nuclear power plants, which take in seawater to cool reactors. "When a submarine volcano erupts, a nuclear power plant malfunctions." Sufficient measures must be taken to ensure that this scenario never comes to pass.

<https://www.asahi.com/ajw/articles/14477196>

Site planned for nuclear plant to host launch pad for small rockets

Masao Naoi

Asahi Shimbun, November 08, 2021

KUSHIMOTO, Wakayama Prefecture – A site originally envisaged for a nuclear power plant is now on course to become the nation's first private-sector launch pad

for small rockets. A building that houses mission control for the launch pad stands near the tip of the Kii Peninsula where National Route 42 runs along the jagged “riasu” Pacific coastline. A banner featuring a photo of a rocket is seen nearby.

The launch pad, dubbed Space Port Kii, is being built by Tokyo-based Space One Co., whose shareholders include Canon Electronics Inc., the Development Bank of Japan and construction company Shimizu Corp. Space One plans to launch its first satellite-carrying rocket by the end of March with the aim of 20 launches annually in the mid-2020s. Satellite images of Earth will be analysed to support business activities.

<https://www.asahi.com/ajw/articles/14464674>

P. World/Misc.

Russia supplies military equipment to Uzbekistan

Kun. Uz, November 02, 2021

Russia supplied Uzbekistan and Kazakhstan with military products, including aircraft and missile systems. Director of the Federal Service for Military-Technical Cooperation (FSMTC) Dmitry Shugaev stated.

<https://kun.uz/en/news/2021/11/02/russia-supplies-military-equipment-to-uzbekistan>

Net-Zero Alliance Plans to Reject Gas, Nuclear as Green Assets

John Ainger and Alastair Marsh

Bloomberg, November 8, 2021

The European Union will likely face investor backlash if it includes natural gas and nuclear energy in its green rulebook, known as the EU taxonomy. The United Nations-convened Net-Zero Asset Owner Alliance, which is part of the wider finance industry’s \$130 trillion climate agreement announced last week, wrote in a document that hasn’t been finalized that it would oppose such a decision. Instead, fossil fuels should go into an extension or separate piece of legislation for transition technologies, the group said.

The inclusion of gas “would be inconsistent

with the high ambition level of the EU taxonomy framework overall.” For nuclear, “it will be of utmost importance to apply strict criteria when assessing” the principle of do-no-significant-harm, “with respect to the other environmental objectives to identify a potential taxonomy alignment,” it said.

<https://www.bloomberg.com/news/articles/2021-11-08/net-zero-alliance-plans-to-reject-gas-nuclear-as-green-assets>

Kazakhstan launches production of fuel for nuclear power plants

The Times of Central Asia, November 12, 2021

The official opening ceremony for the new Ulba Fuel Assembly plant was held on November 10 via teleconference from the Ulba Metallurgical Plant, Ust-Kamenogorsk, Kazakhstan. Top management from national welfare fund Samruk-Kazyna JSC, national atomic company Kazatomprom JSC, UMP JSC, China Atomic Energy Authority, China General Nuclear, Framatome, and the administration of East Kazakhstan region attended the ceremony, the press service of Samruk-Kazyna reported. Ulba-FA LLP is a Kazakhstani and Chinese joint venture; the founders are UMP JSC (a subsidiary of NAC Kazatomprom JSC) holding a 51% interest, and CGNPC-URC (a subsidiary of China General Nuclear Power Corporation), holding a 49% interest. The plant was constructed using high-tech equipment manufactured in China, France and USA to manufacture fuel assemblies (FA) for the generation of thermal power inside a nuclear reactor.

<https://www.timesca.com/index.php/news/24219-kazakhstan-launches-production-of-fuel-for-nuclear-power-plants>

Birol calls for nuclear acceleration

World Nuclear News, November 04, 2021

Countries have “re-appreciated” the value of nuclear power, International Energy Agency (IEA) Executive Director Fatih Birol said at COP26. Birol, who called for

new build in Europe, North America and Asia, also said that national commitments made at COP26 would put the world on track to limit global warming to 1.8°C.

“The world is going through difficult times in terms of energy volatility,” he said. “One of the unintended positive consequences of this market volatility is that some people have re-appreciated the value of nuclear power.

This is something we all need to take note of.” Birol referred to the IEA’s Net Zero by 2050: A Roadmap for the Global Energy Sector report, the recommendations of which he said are well accepted and are being widely followed.” One of the facts in that report is in my view very pertinent. In order to reach energy and climate goals nuclear generation needs to double compared to today,” he said.

<https://www.world-nuclear-news.org/Articles/Birol-calls-for-nuclear-acceleration>

U. N. nuclear agency team to review plans for release of Fukushima water

The Hindu, November 15, 2021

A team from the U.N. nuclear agency arrived in Japan on November 15 to assess preparations for the release into the ocean of treated radioactive water from the wrecked Fukushima nuclear plant. The

experts on the team from the International Atomic Energy Agency (IAEA) are to meet with Japanese officials and visit the Fukushima Daiichi plant to discuss technical details of the planned release, Japanese officials said. The government and the plant’s operator, Tokyo Electric Power Company (TEPCO) Holdings, announced plans in April to start gradually releasing the treated radioactive water in the spring of 2023 to allow the removal of hundreds of storage tanks to make room for facilities needed for the destroyed plant’s decommissioning.

<https://www.thehindu.com/news/international/u-n-nuclear-agency-team-to-review-plans-for-release-of-fukushima-water/article37498602.ece>

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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Prepared by :

Ms Archita Anand

Indian Pugwash Society

No.1, Development Enclave,
Rao Tula Ram Marg, Near USI, Delhi-110010
Tel. No (91-11) 2671-7983
Fax No. (91-11)2615-4192
Email: indianpugwashsociety@gmail.com