

Nuclear, Missile & Space Digest

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A Fortnightly Newsletter from the Indian Pugwash Society

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- FM says it's a 'sheer lie' that Iran has made demands beyond JCPOA
- Amir Abdollahian: We have reached a voluntary agreement with IAEA

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- UAE defence ministry says French warplanes not a substitute for U.S. jets
- UAE told the U.S. it will suspend talks on F-35 jets -Emirati official

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- Israel hit chemical weapons facilities in Syria over past two years - Washington Post

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- Iran enriching uranium amid nuclear talks, says UN watchdog
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- International Space Station swerves to dodge space junk
- IAEA completes Ugandan nuclear infrastructure review
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- NATO rejects Russian accusations on missile deployment
- No viable alternative to full and effective implementation of JCPOA: UN's DiCarlo

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A. India

India, Russia strike trade, arms deals during Putin visit

Alasdair Pal and Neha Arora

Reuters, December 06, 2021

Russia and India signed a flurry of trade and arms deals during President Vladimir Putin's visit to New Delhi for talks with Prime Minister Narendra Modi on December 06, including one that will see India produce more than 600,000 Kalashnikov assault rifles. Putin travelled to India with Russia's defence and foreign ministers in a visit that saw the two countries reinforce their ties with a military and technical cooperation pact until 2031 and a pledge to boost annual trade to \$30 billion by 2025.

<https://www.reuters.com/world/asia-pacific/putin-modi-discuss-trade-humanitarian-situation-afghanistan-2021-12-06/>

Explained | The arms race towards hypersonic weapons

Dinakar Peri

The Hindu, December 07, 2021

In October, The Financial Times had reported that China tested a nuclear-capable hypersonic missile in August that circled the globe before speeding towards its target, demonstrating an advanced space capability that caught U.S. intelligence by surprise. This was later confirmed by U.S. military officer Gen Mark Milley, Chairman of the joint chiefs of staff. However, China has denied that it was nuclear capable. This and other recent developments have put the spotlight on hypersonic weapons development, especially the advancements made by China and Russia.

<https://www.thehindu.com/sci-tech/technology/explained-the-arms-race-towards-hypersonic-weapons/article37874968.ece>

Missile developed to neutralise aerial threats at close ranges successfully tested for second time this year

Indian Express, December 08, 2021

THE Vertical Launch Short Range Surface to Air Missile (VL-SRSAM) designed for deployment onboard Indian Naval warships was successfully flight tested on Tuesday by Defence Research & Development Organization (DRDO) for the second consecutive time since February this year. VL-SRSAM is meant for neutralising various aerial threats at close ranges, including sea-skimming targets, which are assets that fly as close as possible to sea surface to avoid being detected by the radars onboard warships.

<https://indianexpress.com/article/india/india-flight-tests-vl-srsam-indian-navy-7661203/>

Brahmos air version tested from IAF's Sukhoi-30, cleared for serial production

Sushant Kulkarni

Indian Express, December 08, 2021

The air version of BrahMos supersonic cruise missile was successfully test-fired from the Indian Air Force's frontline fighter aircraft Sukhoi 30 MKI on December 08 morning, thus clearing the system for the serial production of air-version BrahMos missiles within the country, the Ministry of Defence has said. Calling the test a 'copy book flight', the missile launched from the aircraft followed the pre-planned trajectory meeting all mission objectives in the test that was conducted from Integrated Test Range, Chandipur off the coast of Odisha at 10.30 am.

<https://indianexpress.com/article/cities/pune/brahmos-air-version-tested-from-iafs-sukhoi-30-cleared-for-serial-production-7662814/>

Explained: What is the vertical launch surface to air missile that India has successfully test-fired?

Sushant Kulkarni

Indian Express, December 11, 2021

The Vertical Launch Short Range Surface to Air Missile (VL-SRSAM) designed for Indian Naval warships was successfully flight tested earlier this week by India for the second consecutive time since February earlier this year.

VL-SRSAM has been designed and developed jointly by three facilities of the Defence Research and Development Organisation for deployment of Indian Naval warships. The missile has the capability of neutralising various aerial threats at close ranges including sea-skimming targets. The tactic of sea skimming is used by various anti-ship missiles and some fighter jets to avoid being detected by the radars onboard warships. For this, these assets fly as close as possible to sea surface and thus are difficult to detect and neutralise.

<https://indianexpress.com/article/explained/what-is-vertical-launch-short-range-surface-to-air-missile-7667344/>

DRDO test-fires two India-made missiles

Indian Express, December 12, 2021

In another achievement for the country's indigenous missile development programme, the Defence Research and Development Organisation (DRDO) tested several weapons over the last three days including the extended range Pinaka missile with the Army and a flight test of the indigenously designed and developed Stand-off Anti-Tank Missile (SANT), which was launched from a helicopter at Pokhran ranges.

<https://indianexpress.com/article/india/extended-range-pinaka-rocket-system-successfully-test-fired-7668206/>

Indian refiner BPCL tie-up with nuclear institute in net zero push

Nidhi Verma

Reuters, December 13, 2021

India's third largest refiner Bharat Petroleum Corp Ltd (BPCL.NS) said on Monday it has tied up with the country's nuclear research institute for an electrolyser technology for green hydrogen as it seeks to achieve net zero emissions by 2040. India, the world's third biggest greenhouse gas emitter, is aiming to reach net zero emissions by 2070 and wants to raise the share of renewables in its energy mix to 50% by 2030 from 38% currently.

<https://www.reuters.com/markets/commodities/indian-refiner-bpcl-tie-up-with-nuclear-institute-net-zero-push-2021-12-13/>

Successful flight test of supersonic missile-assisted torpedo release system conducted

Sushant Kulkarni

Indian Express, December 13, 2021

A successful flight test of the Supersonic Missile Assisted Release of Torpedo (SMART), developed by the Defence Research and Development Organisation (DRDO), was conducted from Wheeler Island off the coast of Odisha. This is the second known successful test of the SMART system conducted by the DRDO after its maiden successful test in October last year.

Calling the Monday test a 'text book launch', DRDO said the entire trajectory was monitored by the electro optic telemetry system, various range radars, including the down range instrumentation and down range ships deployed at various locations in Bay of Bengal. As part of the test, the missile carried a torpedo, parachute delivery system and various mechanisms required for release of the torpedo.

<https://indianexpress.com/article/cities/pune/successful-flight-test-of-supersonic-missile-assisted-torpedo-release-system-conducted-7671007/>

Need to quickly think about development of hypersonic cruise missiles: Rajnath

Dinakar Peri

The Hindu, December 14, 2021

Ballistic missile defences were getting “robust” day by day and to maintain a minimum credible deterrence, India should quickly think about developing hypersonic cruise missiles, Defence Minister Rajnath Singh said on December 14. He pointed to the fast-changing battlefield landscape with the emergence of new technologies. “Our effort should be to make India the leader in defence technology. Those technologies which we have already developed are already ours, but along with that we should also acquire those technologies which today are only with a handful of countries,” he stated at an event of the Defence Research and Development Organisation (DRDO). “For example, ballistic missile defence are getting robust day by day. So, in order to maintain our minimum credible deterrence, we should quickly think about developing hypersonic cruise missiles,” he noted. Hypersonic weapons are manoeuvrable weapons that can fly at speeds of at least Mach 5, five times the speed of sound. Several countries, including India, are currently developing them.

<https://www.thehindu.com/news/national/need-to-quickly-think-about-development-of-hypersonic-cruise-missiles-rajnath/article37954715.ece>

B. Russia

Vietnamese, Russian president discuss cooperation in defence, energy sectors – agency

TASS, December 01, 2021

Vietnamese and Russian Presidents, Nguyen Xuan Phuc and Vladimir Putin, discussed issues of bilateral cooperation in a range of areas, including defence and security, trade and economy, and energy. The presidents stressed the importance of further cooperation both on the Vietnam Shelf and in Russia in conformity with international law. Nguyen Xuan Phuc and Vladimir Putin

agreed to speed up the implementation of the project for the construction of a nuclear science and technology centre in Vietnam.

<https://tass.com/politics/1368869>

Moscow takes note of Minsk’s readiness to deploy nuclear weapons – senior diplomat

TASS, December 01, 2021

Moscow has taken note of Belarusian President Alexander Lukashenko’s statement about a possible request that Russia deploy nuclear weapons in Belarus to counter NATO’s attempts to do the same in Poland, Deputy Foreign Minister Sergey Ryabkov stated. According to him, Russia is not going to proliferate nuclear weapons on the territory of non-nuclear-weapon countries. “We are not going in this direction, we have heard the signal of President Lukashenko, we take note of it. We are very responsible in terms of our commitments under all agreements. The same is certainly true for Belarus. However, at some point our Western colleagues should stop and think of their own actions,” the senior diplomat noted. According to him, NATO countries with their actions “undermine the existing system of international security,” encroaching on the Non-Proliferation Treaty (NPT).

<https://tass.com/politics/1369237>

Shipbuilders deliver four combat ships to Russian Navy this year

TASS, December 01, 2021

Shipyards of Russia’s United Shipbuilding Corporation handed over four combat ships to the Navy this year, with half of the defence orders fulfilled ahead of schedule, Defence Minister Sergei Shoigu stated. “In 2021, the Navy received four ships and one vessel,” the defence chief said at the ministry’s conference call. In particular, the Northern Fleet received the Project 885M lead nuclear-powered submarine Kazan, aboard which the

Russian naval flag was solemnly raised on May 7, Shoigu said.

<https://tass.com/defense/1369255>

Two advanced nuclear-powered subs to enter service with Russian Navy in December

TASS, December 01, 2021

The Russian Navy is set to receive the Project 955A (Borei-A) and Project 885M (Yasen-M) first serial-built nuclear-powered submarines Knyaz Oleg and Novosibirsk by the end of this year, Russia's Defence Minister Sergei Shoigu stated.

Project 955A (Borei-A) nuclear-powered missile-carrying submarines are designed to become the mainstay of Russia's seaborne strategic nuclear forces. They carry 16 Bulava intercontinental ballistic missiles as their basic armament. Compared to the baseline Borei series, Borei-A subs feature better acoustic stealth, maneuvering and deep-sea running capabilities and an improved armament control system. Project 885M (Yasen-M) nuclear-powered submarines are armed with Kalibr-PL and Oniks cruise missiles as their basic strike weapons.

<https://tass.com/defense/1369419>

Nuclear weapons deployment in Eastern Europe violates NATO commitments – Russian envoy

TASS, December 02, 2021

Russia sees the possible deployment of nuclear weapons in Eastern Europe as the violation of NATO's obligations, Russian Permanent Representative to the Vienna-based international organizations Mikhail Ulyanov stated. "We have the Russia-NATO Founding Act of May, 1997. Of course, we cannot say that it is creaking at the seams, but our partners are taking it into account increasingly rarely," Ulyanov stressed.

<https://tass.com/politics/1369525>

Russia, US should agree on drafting substitute for New START – deputy foreign minister

TASS, December 02, 2021

Moscow and Washington should achieve agreement in the near future on drafting a substitute for the Measures for the Further Reduction and Limitation of Strategic Offensive Arms (New START), Russia's Deputy Foreign Minister Sergey Ryabkov stated. Russia and the United States signed the New START treaty in 2010. On February 3, 2021, the Russian Foreign Ministry and the US embassy in Moscow exchanged notes to inform each other on the completion of internal procedures necessary for effecting the agreement to prolong the New START treaty by five years.

<https://tass.com/politics/1369877>

Rosatom: Northern Sea Route needs 14 icebreakers by 2030

TASS, December 02, 2021

In order to assure smooth work of the Northern Sea Route Russia must have 12-14 working icebreakers by 2030, head of the Northern Sea Route's management, Rosatom's Deputy Director General Vyacheslav Ruksha said at the 11th international forum Arctic: Present and Future. "Thus, by 2030 we will have at least 7 nuclear-powered icebreakers, while the demand is 12-14 icebreakers," he told the forum's plenary session. According to him, presently, the shipbuilding sector cannot meet the demand to satisfy the Northern Sea Route's regular shipments. It takes about two-three years to build one nuclear-powered icebreaker, he stressed. One of the solutions could be to build icebreakers, powered by liquefied natural gas (LNG). A promising project, he continued, is the Aker ARC 123 model, designed jointly with a Finnish engineering company. The icebreaker, using LNG or diesel, has the power of 55 MW.

<https://tass.com/economy/1369995>

Rosatom: Sibir nuclear-powered icebreaker expected in Kara Sea in January

TASS, December 02, 2021

The Sibir nuclear-powered icebreaker of Project 22220 is due to sail into the Kara Sea the first week of January, 2022. The icebreaker's commissioning paperwork is scheduled for December, 15, head of the Northern Sea Route's management, Rosatom's Deputy Director General Vyacheslav Ruksha stated. Another icebreaker of Project 22220 - the Yakutia - is due to be ready by December, 2024, he continued, though possible delays in power units' supplies may shift the date. One more icebreaker, the Chukotka, is scheduled for December, 2026.

The Sibir nuclear-powered icebreaker is the second vessel of Project 22220, built by the Baltic Shipyard. The lead nuclear-powered icebreaker of Project 22220, the Arktika, was commissioned in October, 2020. The Baltic Shipyard has been working on the project's four serial nuclear-powered icebreakers - the Sibir, the Ural, the Yakutia, and the Chukotka.

<https://tass.com/economy/1370001>

Russia deploys coastal missile system on island chain near Japan

Reuters, December 02, 2021

Russia has deployed its Bastion coastal missile defence system to a remote part of the Kuril island chain in the Pacific near Japan, the Ministry of Defence's Zvezda TV channel stated. Japan lays claim to the Russian-held southern Kuril islands that Tokyo calls the Northern Territories, a territorial row that dates back to the end of World War Two when Soviet troops seized them from Japan.

<https://www.reuters.com/world/asia-pacific/russia-deploys-coastal-missile-system-island-chain-near-japan-2021-12-02/>

Russia, India considering joint development of Arctic, Far Eastern hydrocarbon fields

TASS, December 03, 2021

Russia and India are exploring the possibilities of the joint development of hydrocarbons on the Arctic shelf and Russia's Far East, Kremlin Aide Yuri Ushakov stated. The sides are mainly focused on energy cooperation, he said, adding that exports of Russian hydrocarbons to India are expanding, with the two countries' mutual interest in the implementation of joint LNG projects persisting. Trade turnover between the two countries "is recovering fairly fast after the pandemic first hit, growth continues," he said, noting that it soared by 38.1% in January-September 2021, reaching \$8.8 bln. Cooperation is underway in various sectors, including nuclear energy and space, according to the Kremlin aide.

<https://tass.com/economy/1370521>

Tsirkon hypersonic missiles to enter service with Russian navy in 2025 - source

TASS, December 04, 2021

The submarine version of Tsirkon, Russia's advanced hypersonic cruise missile, is expected to enter service with the Russian Navy in 2025, a source close to Russia's defence ministry stated.

<https://tass.com/russia/1370761>

First reactor pressure vessel dismantled in Sweden, says Rosatom

TASS, December 06, 2021

Russia's state nuclear corporation Rosatom has successfully completed the in-situ part of the dismantling of the first reactor pressure vessel of a commercially operated nuclear power plant in Sweden at the Barseback site, TVEL Fuel Company, a subsidiary of Rosatom, stated.

<https://tass.com/economy/1371435>

India to allot second site for NPP construction under Russian design

TASS, December 06, 2021

India will strive to finalize the formal allotment of the second site for the nuclear power plant construction under the Russian design, according to a joint statement following the talks between Russian President Vladimir Putin and Indian Prime Minister Narendra Modi. They also welcomed “the continuation of technical discussions on the VVER 1200 of the Russian design, joint manufacturing of equipment and localization of components,” as well as “noted successful cooperation in the setting up of the Rooppur NPP in Bangladesh and expressed their readiness to explore similar cooperation in third countries as well.”

Moreover, Putin and Modi welcomed the active work carried out within the framework of the Memorandum of Understanding between Russia’s Roscosmos corporation and the Indian Space Research Organization on joint activities in human spaceflight program.

<https://tass.com/economy/1371597>

Russia hopes to supply India with more S-400 missile systems -Ifx

Reuters, December 06, 2021

Russia hopes to deliver more S-400 missile systems to India within the current deal’s option, Interfax cited Russia’s state arms exporter as saying on December 06. Despite pressure from Washington, India signed a \$5.5 billion deal with Russia in 2018 for five of the surface-to-air missile systems, giving the Indian military the ability to shoot down aircraft and missiles at unprecedented ranges.

<https://www.reuters.com/business/aerospace-defense/russia-hopes-supply-india-with-more-s-400-missile-systems-ifx-2021-12-06/>

Russia says U.S. trying to undermine deal on S-400 supplies to India

Reuters, December 06, 2021

Russian Foreign Minister Sergei Lavrov said a deal to supply India with S-400 air defence missile systems was being implemented despite what he said were U.S. efforts to undermine the accord. Speaking at a news conference in India, Lavrov said India had made clear that it was a sovereign country.

<https://www.reuters.com/business/aerospace-defense/russia-says-us-trying-undermine-deal-s-400-supplies-india-2021-12-06/>

Russia sends new tanks to base in Tajikistan, practices missile defence

Reuters, December 06, 2021

Russia said on December 06 it was reinforcing its military base in Tajikistan with 30 new tanks and that its forces at the facility had carried out exercises with missile defence systems, highlighting Moscow’s concern about turmoil in Afghanistan. The possibility of Islamist militants in Afghanistan infiltrating Tajikistan and other former Soviet republics in Central Asia is a worry for Moscow, which views the region as a defensive buffer to its south.

<https://www.reuters.com/world/russia-sends-new-tanks-base-tajikistan-practices-missile-defence-2021-12-06/>

Putin stresses importance of implementing JCPOA’s agreed parameters - Kremlin aide

TASS, December 08,2021

During the talks with US President Joe Biden on Tuesday, Russian President Vladimir Putin stressed the importance of sticking to the initial parameters of the

Joint Comprehensive Plan of Action (JCPOA) on the Iranian nuclear program, Russian presidential aide Yuri Ushakov told journalists after the talks. "The presidents touched upon the Iranian problem. <...> Our president stressed the importance and necessity of implementing the initially agreed parameters of the Joint Comprehensive Plan of Action on the Iranian nuclear program," he said, adding that Moscow's and Washington's positions "do not differ very much."

<https://tass.com/politics/1372343>

Embassy slams US senator's remark on use of nuclear arms against Russia as irresponsible

TASS, December 09, 2021

US Senator Roger Wicker's statements about possible use of nuclear weapons against Russia in case of aggravation of the situation around Ukraine are irresponsible, the Russian embassy to the United States stated.

<https://tass.com/politics/1372977>

Shipbuilders to deliver Project 955A next nuclear-powered sub to Russian Navy in 2023

TASS, December 09, 2021

The Project 955A (Borei-A) seventh strategic nuclear-powered underwater cruiser Emperor Alexander III under construction at the Sevmash Shipyard in Russia's northwest (part of United Shipbuilding Corporation) will enter serve with the Russian Navy in late 2023, a source in the shipbuilding industry stated. The strategic nuclear-powered submarine Emperor Alexander III was laid down on December 18, 2015. This is the Project 955 seventh nuclear-powered submarine and the improved Project 955A fourth vessel. Currently, the Russian Navy operates four Project 955/955A submarines. The fifth vessel Knyaz Oleg will be delivered to the Navy by the end of this year.

<https://tass.com/defense/1373065>

Russia and Serbia sign agreement on construction of nuclear technology center

TASS, December 09, 2021

The Serbian government and Russian state nuclear corporation Rosatom signed an agreement on the construction of a nuclear technology center in the republic, the press service of Serbian Innovation Minister Nenad Popovic announced on December 09. Under the signed agreement, a nuclear medicine center based on a cyclotron complex, as well as facilities for the production of radiopharmaceuticals, will be built in Serbia over the next three years, the press service reported.

<https://tass.com/economy/1373069>

Russia's nuclear triad deters potential enemy, says military chief

TASS, December 09, 2021

The Russian nuclear triad deals with the tasks of deterring a potential enemy and over 95% of the ground-based strategic nuclear forces' launchers are ready for combat employment, Chief of the Russian General Staff Valery Gerasimov stated. Efforts continue to rearm the Russian Strategic Missile Force with Yars intercontinental ballistic missiles (ICBMs) and place new Avangard hypersonic missile systems on combat alert, the military chief said.

<https://tass.com/defense/1373081>

Russia successfully wrapping up Tsirkon hypersonic missile trials, says military chief

TASS, December 09, 2021

The trials of the Tsirkon seaborne hypersonic missile system are successfully nearing their completion, Chief of the Russian General Staff Valery Gerasimov said. The Russian Navy ramped up its capabilities in the close-in and distant

maritime areas “through the deliveries of advanced submarines and surface ships,” he said.

<https://tass.com/defense/1373089>

Vienna talks on Iran nuclear deal were constructive, Russian envoy says

TASS, December 09, 2021

The meeting of the Joint Commission of Iran and the five international mediators (Russia, the UK, Germany, China and France) on restoration of the Joint Comprehensive Plan of Action (JCPOA) on the Iranian nuclear program wrapped up in Vienna, and it was constructive, Russian Permanent Representative to International Organization in Vienna. Before the meeting, the Iranian delegation had informal consultations with Russia and China, as well as with the EU coordinator Enrique Mora, who manages the indirect talks between Iran and the US.

<https://tass.com/world/1373223>

Russia launches trials of plasma thrusters for nanosatellite orbit retention

TASS, December 09, 2021

Russia has launched the trials of a plasma thruster for retaining the attitude of small space vehicles in orbit, the press office of Sitronics Group stated. The engine has been named VERA (Volume-Effective Rocket-propulsion Assembly). “The small size and weight of the thrusters that have been developed make it possible to retain a cluster of ten nanosatellites in orbit,” the press office added.

With these thrusters mounted on CubeSat 3U satellites weighing no more than 4 kg, these space vehicles will be capable of retaining their orbital position or, upon the completion of their operation, lower the orbit’s altitude, cutting the time of burning up in the dense layers of the atmosphere two-or three-fold. The orbit lowering maneuver after the end of the satellite’s operation will make it possible to cut the

time of space junk existence, the press office specified. These plasma thrusters will be mounted on two satellites of Sputnix Company that will be launched into space under the Space PI program in 2022.

<https://tass.com/science/1373017>

Negotiators on Iran nuclear deal address several misunderstandings, Russian envoy says

TASS, December 10, 2021

Participants in a meeting of the Joint Commission of Iran and the five international mediators (Russia, the UK, Germany, China and France) on restoration of the Joint Comprehensive Plan of Action (JCPOA) on Iran’s nuclear program managed to address a number of misunderstandings that had created tensions, Russia’s Permanent Envoy to International Organizations in Vienna Mikhail Ulyanov stated.

<https://tass.com/world/1373495>

All sides set to maximize effort for restoring Iranian deal in original form – ministry

TASS, December 10, 2021

All participants of talks on restoring the Joint Comprehensive Plan of Action (JCPOA) on Iran’s nuclear program have confirmed their determination to pay maximum effort for restoring the deal in its original form, the Russian Foreign Ministry said in a statement. According to the Russian foreign ministry, the sides decided to continue intense contacts, including at the level of experts, within the framework of working groups on sanctions and nuclear issues. The seventh round of talks on the Iran nuclear deal and the lifting of US sanctions resumed on December 9 after being paused on December 3, when European participants returned to their countries for additional consultations.

<https://tass.com/world/1373567>

Russia to present document on security guarantees in Europe to US, NATO, says Kremlin

TASS, December 10, 2021

The Kremlin intends to convey its vision of security in Europe to Washington and NATO, Russian Presidential Spokesman Dmitry Peskov told, adding that work on the relevant document was underway. Russian President Vladimir Putin earlier called on NATO to launch substantive talks in order to provide Russia with “reliable and long-term security guarantees.”

In its dialogue with Washington and US allies, Moscow will insist “on the development of specific agreements” that would rule out NATO’s further eastward expansion and the deployment of weapons systems that threaten Russia in the immediate vicinity of its territory, the president emphasized. He specified that what Russia “needs is legal guarantees because our Western colleagues failed to implement the obligations they had made verbally.”

<https://tass.com/politics/1373853>

Sevmorput LASH carrier will make 3 voyages a year – United Shipbuilding Corporation

TASS, December 10, 2021

The Sevmorput nuclear-powered LASH carrier from 2022 will make at least three voyages a year along the Northern Sea Route, the United Shipbuilding Corporation’s CEO Alexei Rakhmanov said. The Sevmorput is the world’s biggest LASH carrier in terms of displacement (61,000 tonnes) with the icebreaking capability, equipped with a KLT-40 type nuclear propulsion plant. It is the only nuclear-powered merchant ship in service. The ship was commissioned in 1988, the upgrade was in 2021.

<https://tass.com/economy/1373903>

Rosatom seeks to bring back Russian scientists from abroad

TASS, December 10, 2021

Rosatom, Russia’s state nuclear energy corporation, is interested in returning young Russian scientists from abroad, as well as attracting them to the work on its projects, predominantly in the quantum computing industry, Rosatom Digitalization Director Ekaterina Solntseva stated. As of today, three out of 12 laboratories dealing with quantum computing within the framework of the state corporation’s roadmap are headed by scientists that have returned to Russia after working abroad, according to Solntseva.

<https://tass.com/science/1373965>

Russia-US strategic stability group can consider NATO non-expansion – MFA

TASS, December 10, 2021

Provision of security guarantees for NATO’s non-expansion to the east can be on the agenda of the Russian-US group on strategic stability, Russia’s Deputy Foreign Minister Sergey Ryabkov said.

<https://tass.com/defense/1374031>

Efforts of all negotiators aimed at preserving Iran nuclear deal – senior diplomat

TASS, December 10, 2021

Efforts of all the participants in the Joint Commission of the Joint Comprehensive Plan of Action (JCPOA) are aimed at renewing the Iran nuclear deal, Russian Deputy Foreign Minister Sergey Ryabkov stated. “All the countries that after a technical break gathered for a JCPOA Joint Commission meeting on December 9, that is yesterday, as well as the United States, which withdrew from the agreement by the decision of the [former President Donald] Trump Administration, confirm

(and it was again documented yesterday) their intention to return to the JCPOA, and this is what the efforts of the negotiating teams in Vienna are now focused on," he said.

<https://tass.com/world/1374055>

Russia interested in implementing megaprojects in Greece, Turkey, Kremlin spokesman says

TASS, December 11, 2021

Russia is interested in implementing megaprojects in Greece much like it does in Turkey, Kremlin Spokesman Dmitry Peskov said in an interview. The conversation took place before the December 8 meeting between Russian President Vladimir Putin and Greek Prime Minister Kyriakos Mitsotakis in Sochi. The Kremlin official said that Russia is interested in expanding economic cooperation with Greece. "We have lots and lots of Russian companies who are ready to invest in Greek economy. We are interested in implementing huge, mega projects like we do it in Turkey. Of course, it is not that every project is allowed [in Greece], for example, we are building a nuclear station in Akkuyu in Turkey, but, unfortunately, nuclear energy is forbidden in Greece," he explained.

<https://tass.com/economy/1374167>

JCPOA restoration talks are progressing, Russian envoy says

TASS, December 13, 2021

The negotiations on restoration of the Joint Comprehensive Plan of Action (JCPOA) are progressing, albeit not too fast, Russian Permanent Representative to International Organizations in Vienna Mikhail Ulyanov stated. The diplomat disclosed that one acute issue being discussed in Vienna is the issue of uranium enrichment centrifuges in Iranian nuclear sites.

<https://tass.com/politics/1374775>

Lavrov discusses resumption of talks on Iran nuclear deal with Iranian top diplomat

TASS, December 13, 2021

Russian and Iranian Foreign Ministers, Sergey Lavrov and Hossein Amir-Abdollahian, discussed the situation around the Joint Comprehensive Plan of Action (JCPOA) on the Iranian nuclear program in the context of the resumption of the Vienna talks, the Russian foreign ministry stated.

<https://tass.com/world/1374811>

Parties to Iran nuclear deal not seeking to drag out talks – Russian diplomat

TASS, December 13, 2021

There are no grounds to think that any of the parties to the talks on the restoration of the Iran nuclear deal is seeking to drag out the process or has no political will to reach a practical result, Russia's Permanent Representative to the Vienna-based international organizations Mikhail Ulyanov stated. According to the Russian diplomat, it is important for the Americans to be sure that the Iranian nuclear program is under safe control, which has now been lost to a larger extent because of Washington's policy of maximal pressure and Tehran's response steps. "And it is important for the Iranians to have the sanctions lifted," he added. Ulyanov noted that the Iranians are showing themselves "as quite serious negotiators" and the G7's concerns stem from the lack of trust between the participants in the process. If they [the Iranians] feel that there are flaws in their position that do not suit others - real flaws that can and should be corrected - they do so. They do it quickly and clearly," he added.

<https://tass.com/politics/1374809>

Russia says it may be forced to deploy mid-range nuclear missiles in Europe

Alexander Marrow and Mark Trevelyan

Reuters, December 13, 2021

Russia said it may be forced to deploy intermediate-range nuclear missiles in Europe in response to what it sees as NATO's plans to do the same. The warning from Deputy Foreign Minister Sergei Ryabkov raised the risk of a new arms build-up on the continent, with East-West tensions at their worst since the Cold War ended three decades ago.

<https://www.reuters.com/world/russia-says-lack-nato-security-guarantees-would-lead-confrontation-ria-2021-12-13/>

Russia leads the world in hypersonic missiles tech, Putin says

Reuters, December 13, 2021

Russia is the global leader in hypersonic missiles and, by the time other countries catch up, is likely to have developed technology to counteract these new weapons, President Vladimir Putin said. Russia and the United States have an approximate parity when it comes to the number of warheads and their carriers, Putin stated.

<https://www.reuters.com/world/russia-leads-world-hypersonic-missiles-tech-putin-says-2021-12-12/>

C. China

Taiwan role expected for China's second Type 075 landing helicopter dock

Minnie Chan

South China Morning Post, December 03, 2021

China's second Type 075 landing helicopter dock is expected to be assigned to the Eastern Theatre Command, which oversees the Taiwan Strait, giving the frontline unit a powerful striking platform, a defence expert said. Dubbed a small aircraft carrier,

the 40,000-tonne vessel was shown at the eastern command's home naval base in Zhoushan, Zhejiang province, in a photograph posted on social media last week by the local government.

<https://www.scmp.com/news/china/military/article/3158401/taiwan-role-expected-chinas-second-type-075-landing-helicopter>

Chinese weapon makers take second biggest share of global sales as industry avoids pandemic slump

Kristin Huang

South China Morning Post, December 06, 2021

Chinese arms manufacturers again notched up the second highest global sales after US firms in 2020, as the industry remained largely unaffected by the Covid-19 pandemic. That is according to the latest report on the world's top 100 arms companies by the Stockholm International Peace Research Institute (SIPRI), released on Monday. The Swedish think tank said China's modernisation programme and push for self-reliance in defence had driven its arms producers and services companies to become more competitive.

<https://www.scmp.com/news/china/military/article/3158678/chinese-weapon-makers-take-second-biggest-share-global-sales>

Chinese military's largest amphibious assault ship passes assessment

Teddy Ng

South China Morning Post, December 08, 2021

An advanced amphibious assault ship of the Chinese navy has passed an assessment on multidimensional landing combat, in a boost to the military's readiness for action in the South China Sea or Taiwan Strait.

<https://www.scmp.com/news/china/military/article/3158942/chinese-militarys-largest-amphibious-assault-ship-passes>

Hypersonic flight: Chinese scientists create prototype with an engine design abandoned by Nasa

Stephen Chen

South China Morning Post, December 09, 2021

A research team in China has built and tested a prototype hypersonic flight engine based on a bold design by a Nasa scientist more than two decades ago. Unlike most hypersonic aircraft with an engine at the belly, the Two Stage Vehicle (TSV) X-plane proposed by Ming Han Tang – then chief engineer of Nasa’s hypersonic programme in the late 1990s – was driven by two separate engines on the sides. The engines could work as normal turbine jet engines at lower speed and then switch to a high-speed mode which has no moving parts as the aircraft accelerates to five times the speed of sound, or beyond.

<https://www.scmp.com/news/china/science/article/3158918/hypersonic-flight-chinese-scientists-create-prototype-engine>

How Equatorial Guinea became a backdrop for China-US rivalry

Jevans Nyabiage

South China Morning Post, December 11, 2021

Equatorial Guinea sits on the west coast of Central Africa and is home to just 1.4 million people. But the tiny oil-rich nation is right at the centre of a geopolitical rivalry between two of the world’s biggest powers – China and the United States. Equatorial Guinea has been propelled into the spotlight with suggestions that it could become home to a Chinese military base, a move that the US says might jeopardise its military ambitions on the Atlantic Ocean.

<https://www.scmp.com/news/china/diplomacy/article/3159253/how-equatorial-guinea-became-backdrop-china-us-rivalry>

Time to set global rules for AI warfare, China tells UN weapons review

Liu Zhen

South China Morning Post, December 14, 2021

China’s arms control envoy has called for international rules to be imposed on the use of artificial intelligence in the military to prevent an international arms race and the risk of human disaster. China’s arms control ambassador to the United Nations, Li Song, said that since the application of AI technology could reshape the future of warfare and potentially trigger humanitarian crises, rules were needed to stop it becoming a tool for war or hegemony. “Countries, especially great powers, should exercise restraint in developing AI weapon systems,” Li said. “China opposes the use of AI technologies to seek absolute military superiority and to undermine the sovereignty and territorial security of other countries.”

<https://www.scmp.com/news/china/military/article/3159704/time-set-global-rules-ai-warfare-china-tells-un-weapons-review>

D. USA

U.S. in hypersonic weapon ‘arms race’ with China -Air Force secretary

Mike Stone

Reuters, December 01, 2021

The United States and China are engaged in an arms race to develop the most lethal hypersonic weapons, the U.S. Air Force secretary said, as Beijing and Washington build and test more and more of the high-speed next-generation arms.

<https://www.reuters.com/business/aerospace-defense/us-hypersonic-weapon-arms-race-with-china-air-force-secretary-2021-11-30/>

NASA resets spacewalk after ruling out immediate threat from orbital debris

Steve Gorman

Reuters, December 01, 2021

A spacewalk planned for November 30 to replace a faulty antenna on the International Space Station has been postponed for 48 hours, after mission control concluded that the position of orbital debris cited for the delay posed no risk to the repair operation, NASA said. Two U.S. astronauts were originally due to venture outside the space station on Tuesday morning to begin their work, despite what NASA officials acknowledged was a slightly elevated risk level from debris scattered in low-Earth orbit by a Russian anti-satellite missile test this month.

<https://www.reuters.com/lifestyle/science/two-nasa-astronauts-set-spacewalk-replace-faulty-space-station-antenna-2021-11-30/>

US defence chief slams China's drive for hypersonic weapons

Hyung-Jin Kim and Kim Tong-Hyung

AP, December 2, 2021

America's defence chief rebuked China, vowing to confront its potential military threats in Asia and warning that its pursuit of hypersonic weapons intended to evade U.S. missile defences "increases tensions in the region." U.S. Defence Secretary Lloyd Austin's stern comments after annual security talks with South Korea, a top U.S. ally, are a window into one of the Biden administration's top foreign policy worries: How should Washington and its partners contain a Chinese military that is strengthening — both in sheer firepower and in confidence — as it pursues an end of American dominance in Asia?

China sees much of Asia as its natural sphere of influence. But many in the region warn of a pattern of Chinese interference, accompanied by moves to acquire the weapons needed to dominate its rivals. Austin's comments were directed at China's

July test of a hypersonic weapon capable of partially orbiting Earth before reentering the atmosphere and gliding on a maneuverable path to its target.

<https://apnews.com/article/china-japan-seoul-south-korea-lloyd-austin-43cd78f6ba607300e11c7e5bc0962a3c>

U.S. seeks norms for outer space after 'irresponsible' Russia test

Trevor Hunnicutt

Reuters, December 02, 2021

U.S. Vice President Kamala Harris criticized an "irresponsible" Russian test that endangered the International Space Station with debris, and the Biden administration laid out a new strategy for responsible use of space. Harris convened the inaugural meeting of the National Space Council and asked members of the government body to promote responsible civil, commercial and national security-related behavior in space, where there are growing commercial interests and concerns about Chinese and Russian competition.

<https://www.reuters.com/business/aerospace-defense/biden-administration-turns-focus-space-rivals-china-russia-loom-2021-12-01/>

NASA chief to visit Russia in H1 2022 -Ifax cites Roscosmos

Reuters, December 03, 2021

NASA chief Bill Nelson will visit Russia in the first half of 2022 to discuss further cooperation on the International Space Station (ISS), the Interfax news agency reported on Friday, citing Russia's space agency Roscosmos. U.S. officials said last month that an anti-satellite missile test carried out by Russia had generated a debris field in low-Earth orbit that endangered the ISS and would pose a hazard to space activities for years.

<https://www.reuters.com/lifestyle/science/nasa-chief-visit-russia-h1-2022-ifax-cites-roskosmos-2021-12-03/>

'Lot of concern' over Russian military activity near Ukraine, top U.S. general says

Phil Stewart

Reuters, December 03, 2021

The United States is tracking enough indicators and warnings surrounding Russian military activity near Ukraine to trigger "a lot of concern" and Russian rhetoric appears increasingly strident, the top U.S. military officer stated. Army General Mark Milley, chairman of the Joint Chiefs of Staff, declined to speculate about the kinds of options the United States might consider in the event of a Russian invasion. But Milley, in some of his most extensive remarks on the crisis, stressed the importance of Ukraine's sovereignty to Washington and to the NATO alliance.

<https://www.reuters.com/world/top-us-general-milley-says-indicators-russian-military-moves-are-worrying-2021-12-03/>

NASA astronauts replace faulty space station antenna during spacewalk

Steve Gorman and Brendan O'Brien

Reuters, December 03, 2021

Two NASA astronauts completed a 6-1/2 hour spacewalk on December 02 to replace a faulty antenna on the International Space Station, a mission NASA said carried slightly higher risk posed by orbital debris left from a Russian missile test weeks ago. Astronauts Thomas Marshburn and Kayla Barron exited an airlock of the orbiting research lab some 250 miles (400 km) above Earth to begin their work at 6:15 a.m. Eastern time (1115 GMT), an hour ahead of schedule.

The "extra-vehicular activity" (EVA) followed a 48-hour delay prompted by a separate orbital debris alert - believed to be the first such postponement in more than two decades of space station history - which NASA later deemed inconsequential. The origin of the newly detected debris was left

unclear by NASA. A spokesperson said there was no indication it came from fragments of the defunct satellite that Russia blew to pieces with a missile test last month.

<https://www.reuters.com/lifestyle/science/after-delay-nasa-astronauts-set-spacewalk-replace-faulty-space-station-antenna-2021-12-02/>

Iran abandoned any compromises in latest nuclear talks - U.S.

Arshad Mohammed and Jan Wolfe

Reuters, December 05, 2021

Iran abandoned any compromises it had made in talks to revive its 2015 nuclear deal with major powers, pocketed those made by others, and demanded more during indirect U.S.-Iran talks this week, a senior U.S. State Department official said. Tehran's stance during the first such talks in more than five months disappointed not just the United States and its European allies but also China and Russia, historically more sympathetic to Iran, the official, speaking on condition of anonymity, said this week.

<https://www.reuters.com/world/middle-east/iran-abandoned-any-compromises-latest-nuclear-talks-us-2021-12-04/>

U.S. Senate backs \$650 million missile sale to Saudi Arabia

Reuters, December 08, 2021

The U.S. Senate rejected a resolution that would have prohibited the proposed sale of 280 advanced medium range air-to-air missiles to Saudi Arabia. As voting continued, the vote was 62 to 25 against the resolution, which was introduced by Republicans Rand Paul and Mike Lee, as well as Bernie Sanders, who caucuses with Democrats.

<https://www.reuters.com/world/middle-east/us-senate-backs-650-million-missile-sale-saudi-arabia-2021-12-08/>

Exclusive: U.S., Israel to discuss military drills for Iran scenario

Phil Stewart

Reuters, December 09, 2021

U.S. and Israeli defence chiefs are expected to discuss possible military exercises that would prepare for a worst-case scenario to destroy Iran's nuclear facilities should diplomacy fail and if their nations' leaders request it, a senior U.S. official stated. The scheduled U.S. talks with visiting Israeli Defence Minister Benny Gantz follow an Oct. 25 briefing by Pentagon leaders to White House national security adviser Jake Sullivan on the full set of military options available to ensure that Iran would not be able to produce a nuclear weapon, the official said on Wednesday, speaking on condition of anonymity.

Iran denies seeking nuclear weapons, saying it wants to master nuclear technology for peaceful purposes. The U.S.-Israeli preparations, which have not been previously reported, underscore Western concern about difficult nuclear talks with Iran that President Joe Biden had hoped would revive a 2015 nuclear deal abandoned by his predecessor, Donald Trump.

<https://www.reuters.com/world/exclusive-diplomacy-stutters-us-israel-discuss-military-drills-iran-scenario-us-2021-12-09/>

U.S. Space Force holds war game to test satellite network under attack

Mike Stone

Reuters, December 14, 2021

The United States is testing satellite resiliency to threats from China and Russia miles above the earth's surface, just weeks after Russia shot down an aging communications satellite. The computer-aided simulations included potential shooting down of U.S. missile-tracking satellites, satellite jamming, and other electronic warfare "effects" that are possible tactics in space warfare. Actual satellites are not used.

<https://www.reuters.com/business/aerospace->

[defense/us-space-force-holds-war-game-test-satellite-network-under-attack-2021-12-14/](https://www.reuters.com/defense/us-space-force-holds-war-game-test-satellite-network-under-attack-2021-12-14/)

Fluor's nuclear energy unit NuScale to go public via \$1.9 bln SPAC deal

Reuters, December 14, 2021

Fluor Corporation (FLR.N) said its nuclear energy unit NuScale Power plans to go public by merging with a blank-check firm in a deal that values the combined entity at \$1.9 billion, including debt. NuScale, which offers nuclear technology solutions for the production of electricity, heat and clean water, is the latest firm looking to cash in on the spurt in clean energy demand amid a rising awareness about climate change.

<https://www.reuters.com/markets/us/fluors-nuclear-energy-unit-nuscale-go-public-via-19-bln-spac-deal-2021-12-14/>

USA builds HALEU supply chain

World Nuclear News, December 15, 2021

The US Department of Energy (DOE) is asking the public for its input on plans to create a new programme to assure the availability of high-assay low-enriched uranium (HALEU) fuel - needed for the demonstration and commercial deployment of advanced reactors - in the USA. Meanwhile, Centrus is working with Clean Core Thorium Energy on advanced fuel using HALEU and thorium.

<https://www.world-nuclear-news.org/Articles/USA-builds-HALEU-supply-chain>

U.S. says it is ready to move forward with fighter jet sale to UAE

Ghaida Ghantous and Humeyra Pamuk

Reuters, December 15, 2021

The United States said it was ready to move forward with the sale of F-35 fighter jets and drones to the United Arab Emirates after Abu Dhabi told Washington it would suspend talks on the \$23-billion deal that

also includes munitions. The deal was signed under then-President Donald Trump after the UAE forged ties with Israel last year but progress on the sale had slowed amid concerns in Washington, including over the Gulf Arab state's ties with China, a main trade partner.

<https://www.reuters.com/business/aerospace-defense/us-set-move-forward-with-f-35-sale-after-uae-threatens-withdrawal-2021-12-15/>

E. Europe

NATO on guard against Chinese, Russian missiles that can hit allies

Reuters, December 01, 2021

NATO Secretary-General Jens Stoltenberg said on December 01 that the Western alliance was working closely to protect allies against new Chinese and Russian missiles that can reach Europe and North America. "Russia, but also China, now invest heavily in nuclear-capable systems that can reach all NATO countries," Stoltenberg told a Reuters Next conference.

<https://www.reuters.com/world/china/nato-guard-against-chinese-russian-missiles-that-can-hit-allies-2021-12-01/>

Eni takes part in \$1.8 bln fund raising for nuclear fusion project

Reuters, December 01, 2021

Italian energy group Eni (ENI.MI) said on December 01 it had taken part in a \$1.8 billion funding round for a project that aims to produce clean electricity from nuclear fusion. In 2018 Eni became the single biggest shareholder in Commonwealth Fusion System (CFS), a firm set up by the Massachusetts Institute of Technology to produce energy by fusing atoms at superhot temperatures.

<https://www.reuters.com/markets/europe/eni-takes-part-18-bln-fund-raising-nuclear-fusion-project-2021-12-01/>

Europeans see 'problem' if Iran is not serious in nuclear talks this week

Francois Murphy and Parisa Hafezi

Reuters, December 01, 2021

Iran must show seriousness this week about reviving a 2015 nuclear deal with major powers, European diplomats said on November 30, saying otherwise they had a "problem" and it remained unclear if Tehran would resume talks where they left off in June. After a five-month hiatus, diplomats on Monday resumed talks on reviving the pact, which then-U.S. President Donald Trump abandoned in 2018 and reimposed harsh U.S. economic sanctions. Trump's moves infuriated Iran and dismayed the other powers involved - Britain, China, France, Germany and Russia.

<https://www.reuters.com/markets/commodities/european-diplomats-unsure-if-iran-talks-resume-where-ended-june-2021-11-30/>

Iran nuclear talks break, Europe, U.S. dismayed by Iranian stance

Parisa Hafezi and Francois Murphy, John Irish

Reuters, December 04, 2021

Indirect U.S.-Iranian talks on saving the 2015 Iran nuclear deal broke off until next week as European officials voiced dismay on December 03 at sweeping demands by Iran's new, hardline government. The seventh round of talks in Vienna is the first with delegates sent by Iran's anti-Western President Ebrahim Raisi on how to resuscitate the agreement under which Iran limited its nuclear program in return for relief from economic sanctions.

<https://www.reuters.com/markets/commodities/iran-nuclear-talks-break-europe-dismayed-by-tehran-demands-2021-12-03/>

Report reinforces nuclear's role in EU low-carbon energy system

World Nuclear News, December 07, 2021

A future low-carbon energy system based on variable renewables will require the backup of additional flexible capacity, according to an updated report commissioned by European nuclear trade body Foratom. It says nuclear provides a key competitive advantage as it is the only dispatchable, low-carbon and non-weather dependent technology which can support the energy system transition under secure conditions.

<https://www.world-nuclear-news.org/Articles/Report-reinforces-nuclears-role-in-EU-low-carbon-e>

Nuclear deal with Iran will soon be 'empty shell' -European diplomats

Francois Murphy

Reuters, December 14, 2021

Major powers and Iran have yet to get down to business at talks on rescuing the 2015 nuclear deal, which will very soon become "an empty shell" without progress, senior British, French and German diplomats said on December 13.

<https://www.reuters.com/markets/commodities/iran-nuclear-deal-will-soon-be-empty-shell-european-diplomats-say-2021-12-13/>

French, German ministers say nuclear power a difficult subject

Reuters, December 13, 2021

The French and German finance ministers, during the first visit of new German Finance Minister Christian Lindner to Paris, said talks about the role of nuclear energy in European power markets will be difficult, even if they agreed on most other issues. France, which will take on the rotating presidency of the European Union in January, wants to see nuclear power classified as sustainable energy in the European Union's new "taxonomy" system to define sustainable investment. However, many EU nations have abandoned nuclear energy and want

EU funds to support renewable energies such as solar and wind.

<https://www.reuters.com/markets/europe/french-german-ministers-say-nuclear-power-difficult-subject-2021-12-13/>

Meeting Macron, Orban says Europe needs 'strategic autonomy' in defence, nuclear energy

Reuters, December 13, 2021

Europe needs strategic autonomy in three areas, Hungarian Prime Minister Viktor Orban said as Budapest hosted French President Emmanuel Macron for a summit of East European leaders. "We support the policy of common European defence capabilities, nuclear energy and a strong European farming sector," Orban stated.

<https://www.reuters.com/world/europe/meeting-macron-orban-says-europe-needs-strategic-autonomy-defence-nuclear-energy-2021-12-13/>

Dutch explore nuclear 'taboo' as part of energy transition

Bart H. Meijer

Reuters, December 15, 2021

The Netherlands may build two nuclear reactors, its government-in-waiting said signalling a possible radical shift in energy policy as it seeks to keep a transition to a carbon-neutral economy on track. The country aims to spend an extra 35 billion euros (\$40 billion) on its energy transformation in the coming 10 years, including investments in hydrogen, heat and electricity networks, the prospective four-party coalition said in a presentation.

<https://www.reuters.com/world/europe/dutch-political-parties-start-talks-extending-government-coalition-2021-09-30/>

Nuclear makes a comeback in the Netherlands

World Nuclear News, December 15, 2021

The Netherlands' new coalition government has placed nuclear power at the heart of its climate and energy policy.

Some EUR500 million (USD564 million) has been earmarked to support new nuclear build in the period to 2025.

<https://www.world-nuclear-news.org/Articles/Nuclear-makes-a-comeback-in-the-Netherlands>

Polish support for nuclear on a high

World Nuclear News, December 15, 2021

Support for nuclear energy in Poland is overwhelming with 78% of people supporting the technology as a response to climate change, according to opinion polling. It comes as the country experiences a series of developments towards nuclear deployment.

[world-nuclear-news.org/Articles/Polish-support-for-nuclear-on-a-high](https://www.world-nuclear-news.org/Articles/Polish-support-for-nuclear-on-a-high)

EU needs long-term operation of nuclear fleet, says Foratom

World Nuclear News, December 15, 2021

The long-term operation (LTO) of the existing fleet of nuclear power reactors will help the European Union achieve its emission reduction targets at an affordable cost, according to European nuclear trade body Foratom. In an updated position paper, it says the LTO of existing units will help achieve the interim 2030 targets, reduce the EU's energy import dependency and support the integration of a higher share of renewables.

<https://www.world-nuclear-news.org/Articles/EU-needs-long-term-operation-of-nuclear-fleet,-say>

F. U.K.

Britain tells Iran: still time for a 'last chance' nuclear deal

Reuters, December 12, 2021

Britain told Iran that there was still time for Tehran to save the nuclear deal but that this was the last chance for Iranian negotiators to come to the table with serious proposals. "This is the last chance for Iran to come to the negotiating table with a serious resolution to this issue, which has to be

agreeing the terms of the JCPOA," British Foreign Secretary Liz Truss said.

<https://www.reuters.com/world/middle-east/britain-tells-iran-still-time-last-chance-nuclear-deal-2021-12-12/>

UK regulator invites bids for new cross-border power cables

Nora Buli

Reuters, December 13, 2021

UK energy regulator Ofgem said it is inviting bids to build more cross-border electricity transmission connections including pilot projects connecting offshore wind farms in the North Sea. Britain is seeking to increase the amount of low-carbon electricity it can import to replace lost capacity as older coal and nuclear power plants close, and to help meet its climate targets. The regulator will hold a third investment round next year to build new subsea cables, called interconnectors, which can import cheaper clean energy when it's needed and export surplus power to neighbouring countries, it added.

<https://www.reuters.com/world/uk/uk-regulator-invites-bids-new-cross-border-power-cables-2021-12-13/>

G. Germany

Germany urges Iran to return to nuclear talks with realistic proposals

Reuters, December 06, 2021

Germany wants Iran to present realistic proposals in talks over its nuclear programme, a Foreign Ministry spokeswoman said, adding that offers Tehran made last week almost all violate previously agreed compromises. Its proposals are "not a basis for a successful end to talks," she said. "We reviewed the proposals ... carefully and thoroughly and concluded that Iran violated almost all compromises found previously in months of hard negotiations."

<https://www.reuters.com/world/middle-east/germany-says-iran-proposals-its-nuclear-programme-unacceptable-2021-12-06/>

Germany's Scholz skirts question around nuclear energy

Reuters, December 10, 2021

German Chancellor Olaf Scholz skirted a question about differences between Germany and France regarding whether nuclear power should be labelled sustainable and said it was up to every country to choose how to fight climate change. Germany's new government, which took over this week, has vowed to step up climate protection efforts with far-reaching reforms, including a faster expansion of renewables and an accelerated coal exit.

<https://www.reuters.com/business/environment/germanys-scholz-skirts-question-around-nuclear-energy-2021-12-10/>

Germany says time is running out for Iran nuclear deal

Reuters, December 11, 2021

German foreign minister Annalena Baerbock said there was no progress in sight for nuclear talks with Iran, and stressed that time was running out. "It has shown in the last days that we do not have any progress... due to the offer of the Iranian government negotiations have been thrown back six months," Baerbock told reporters on the sidelines of a G7 meeting in Liverpool, England.

<https://www.reuters.com/world/germany-says-time-is-running-out-iran-nuclear-deal-2021-12-11/>

Germany's Baerbock pushes for nuclear disarmament

DW, December 14, 2021

German Foreign Minister Annalena Baerbock called for a "new momentum" to nuclear disarmament as she met with her Swedish counterpart with an eye toward a review of a non-proliferation treaty. Germany and Sweden have paired up to find ways to get the world's nuclear powers to move toward committing to disarmament. The foreign ministers met in Stockholm to plot the way forward ahead of next month's review of the Non-Proliferation Treaty

(NPT). Baerbock has been in talks with her Swedish counterpart Ann Linde and met with the Stockholm Initiative, a group of 16 countries seeking to get rid of nuclear weapons.

<https://www.dw.com/en/germanys-baerbock-pushes-for-nuclear-disarmament/a-60118195>

H. France

French envoy says Australia "in denial" over subs row, trust regained with U.S.

Reuters, December 09, 2021

France has restored "a degree of trust" with ally the United States but not with Australia after a debacle over Canberra's cancellation of a multi-billion-dollar submarine deal with Paris, a French regional envoy said. Christophe Penot, ambassador for the Indo-Pacific, said the rift with Canberra continues because the Australian government is still "in denial" about communication of the decision.

<https://www.reuters.com/world/europe/french-envoy-says-australia-denial-over-subs-row-trust-regained-with-us-2021-12-09/>

Protesters denounce French push to label nuclear as sustainable energy

Reuters, December 14, 2021

Demonstrators unfurled a banner declaring "Gas & nuclear are not green" outside France's foreign ministry on Tuesday in protest at a government drive to label nuclear energy and fossil gas as sectors for climate-friendly investment. Finance Minister Bruno Le Maire said last month that one of the priorities of France's six-month EU presidency, starting on Jan. 1, would be to include nuclear power in Europe's sustainable finance taxonomy. Some EU countries, including Germany, do not agree with this policy. France generates about three quarters of its electricity in nuclear reactors operated by state-owned utility EDF.

<https://www.reuters.com/markets/commodities/protesters-denounce-french-push-label-nuclear->

sustainable-energy-2021-12-14/

I. East Asia

Taiwan's first home-made submarine may be ready a year ahead of schedule

Lawrence Chung

South China Morning Post, December 04, 2021

Taiwan's navy is expected to take delivery of the island's first locally built submarine in 2024 – a year ahead of schedule – after the first and the most important phase of construction was completed last month. Local constructor CSBC Shipbuilding Corporation held a “keel-laying” ceremony for the island's first Indigenous Defence Submarine (IDS) on November 16.

<https://www.scmp.com/news/china/military/article/3158473/taiwans-first-home-made-submarine-may-be-ready-year-ahead>

Taiwan says confident Chinese invasion would be very hard

Ben Blanchard

Reuters, December 13, 2021

A full Chinese invasion of Taiwan with troops landed and ports and airports seized would be very difficult to achieve due to problems China would have in landing and supplying troops, Taiwan's Defence Ministry said in its latest threat assessment. Tensions between Taipei and Beijing, which claims the democratically-ruled island as its own territory, have risen in the past two years as China steps up military activities near Taiwan to pressure it to accept Chinese rule.

<https://www.reuters.com/business/aerospace-defense/taiwan-says-confident-chinese-invasion-would-be-very-hard-2021-12-13/>

J. Japan

EDITORIAL: Pressing need to recognize 'black rain' victims as hibakusha

Asahi Shimbun, December 02, 2021

We urge the state to take swift action in line with a high court ruling that all individuals exposed to radioactive “black rain” in the aftermath of Hiroshima's 1945 atomic bombing should be recognized as hibakusha. The government has a clear obligation to expedite the process. But the way the government is handling the issue raises doubts about its commitment to bring full and swift relief to victims.

The health ministry met Nov. 30 with Hiroshima and Nagasaki prefectural and municipal authorities to craft new guidelines for the issuance of “hibakusha kenko techo” booklets that entitle the holder, who must be officially recognized as an atomic bomb survivor, to free medical treatment and other benefits.

<https://www.asahi.com/ajw/articles/14493395>

Japanese reactor restarted following prolonged outage

World Nuclear News, December 03, 2021

Shikoku Electric Power Company restarted unit 3 of its Ikata nuclear power plant in Japan's Ehime Prefecture yesterday. The reactor - one of the few to have been restarted since the March 2011 accident at the Fukushima Daiichi plant - had been offline since December 2019 due to a periodic inspection and a subsequent court injunction.

<https://www.world-nuclear-news.org/Articles/Japanese-reactor-restarted-following-prolonged-out>

Japan's military, among world's strongest, looks to build

Mari Yamaguchi

AP, December 6, 2021

Dozens of tanks and soldiers fired explosives and machine guns in drills on Japan's northern island of Hokkaido, a main stronghold for a nation that is perhaps the world's least-known military powerhouse. Just across the sea from rival Russia, Japan opened up its humbly named Self Defense Force's firing exercises to the media in a display of public firepower that coincides with a recent escalation of Chinese and Russian military moves around Japanese territory.

The drills, which foreign journalists rarely have a chance to witness, will continue for nine days and include about 1,300 Ground Self Defence Force troops. On Monday, as hundreds of soldiers cheered from the sidelines and waved unit flags, lines of tanks shot at targets meant to represent enemy missiles or armored vehicles.

<https://apnews.com/article/business-europe-russia-japan-constitutions-0e89fcb0163b044fc71bc4ae7d87f674>

Japan PM to push for progress at NPT meet to scrap nuclear weapons

Reuters, December 09, 2021

Japanese Prime Minister Fumio Kishida vowed on Thursday to do his utmost to push for meaningful progress at a January meeting to review the Non-Proliferation Treaty and encourage action to rid the world of nuclear weapons. The comment by Kishida, who hails from the nuclear memorial city of Hiroshima, comes after the previous such meeting, in New York in 2015, failed to adopt a final document following disagreement over a plan for a nuclear-free Middle East.

<https://www.reuters.com/business/energy/japan-pm-push-progress-npt-meet-scrap-nuclear-weapons-2021-12-09/>

K. South Korea

Seoul, Washington update war plans to deter evolving North Korea's nuke, missile threats

Korea Times, December 02, 2021

South Korea and the United States agreed to update their joint wartime contingency plans to deter North Korea's evolving nuclear and missile threats, the two sides said, in a sign of their stepped-up cooperation to reinforce deterrence against the recalcitrant regime. Defence Minister Suh Wook and his U.S. counterpart, Lloyd Austin, approved the "Strategic Planning Guidance," a document to set the tone for updated wartime operation plans (OPLANs), during the allies' annual Security Consultative Meeting (SCM).

Calls have persisted for rewriting the decade-old strategic guidance that critics said has become outdated following major advancements in the North's weapons development programs, including its refined nuclear arms, submarine-launched ballistic missiles and a hypersonic missile.

http://www.koreatimes.co.kr/www/nation/2021/12/103_319846.html

Korea voices concerns about Japan's Fukushima water release plan

Korea Times, December 04, 2021

South Korea expressed concerns over Japan's assessment report on its planned release of radioactive water into the sea from its crippled Fukushima nuclear power plant. The stance was delivered at a virtual meeting between South Korea and Japan about a draft report by Tokyo Electric Power (TEPCO) on the radioactive impacts of its planned discharge.

Last month, TEPCO, the operator of the tsunami-stricken Fukushima plant, said its planned release of radioactive water into

the ocean would have a “very minimal” impact on the marine environment and people. In April, Japan announced a plan to start discharging the radioactive water into the sea in 2023 in what is expected to be a decades-long process, as all storage tanks at the Fukushima plant are expected to be full as early as the fall of 2022.

http://www.koreatimes.co.kr/www/nation/2021/12/113_319961.html

Spy agency warns of increased hacking attempts ahead of presidential election

Yonhap, December 15, 2021

South Korea’s spy agency warned of a possible rise in the number of hacking attempts to glean information on the country’s diplomatic and security affairs ahead of the March presidential election. This year, South Korea saw increased hacking attempts targeting foreign and security officials, apparently aimed at “identifying shifts in North Korea policy on the occasion of ‘the inauguration of a new U.S. government,’ and the ‘end-of-war declaration proposal,’” the agency said in a release.

Hackers are also increasingly taking advantage of technical vulnerabilities exposed in the course of the expansion of teleworking and remote services due to COVID-19, and vaccine technologies are among the most frequently targeted information, it said. Yet the number of domestically reported damage from cyberattacks decreased 21 percent on-year, the agency said, citing efforts to enhance security following a hacking attempt on a state-run nuclear research institute earlier this year. In June, Rep. Ha Tae-keung of the main opposition People Power Party said the Korea Atomic Energy Research Institute’s server was breached by a North Korean hacking group, though the North denied the allegations.

<https://en.yna.co.kr/view/AEN20211215006800325>

Regulator approves restart of nuclear reactor after maintenance

Yonhap, December 15, 2021

South Korea’s nuclear safety watchdog approved the restart of a nuclear reactor in the country’s southwestern nuclear complex that was shut down for an inspection. The Nuclear Safety and Security Commission said it has given the go-ahead to restart the Wolsong No. 4, 700-megawatt reactor, in Gyeongju, 371 kilometers southeast of Seoul. The Wolsong No. 4 nuclear power reactor, which first started operations in 1999, has been shut down since Oct. 10 for regular maintenance. The commission will conduct nine additional follow-up tests on the reactor to confirm its safety.

<https://en.yna.co.kr/view/AEN20211215006000320>

L. North Korea

N.Korea continues operating main nuclear reactor at Yongbyon: CSIS

Ji Da-gyum

Korea Herald, December 09, 2021

North Korea is operating its main plutonium-producing nuclear reactor at the Yongbyon complex, a Washington-based think tank revealed, citing thermal infrared imagery. The CSIS Korea Chair said in a report it found the “clear and conclusive evidence” that the 5-megawatt reactor was operating based on thermal image analysis. The 5-megawatt nuclear reactor at the Yongbyon Nuclear Complex is the core of Pyongyang’s proliferation efforts given that the reactor has been estimated to be able to produce around six kilograms of plutonium a year.

http://www.koreaherald.com/view.php?ud=20211209000644&ACE_SEARCH=1

Recent N. Korean missile tests aimed at defeating missile defence programs: CRS report

Byun Duk-kun

Yonhap, December 14, 2021

North Korea appears to be aiming to counter or cripple U.S. missile defence programs deployed in the Northeast Asian region, the U.S. Congressional Research Service (CRS) said in a report released. The report follows a series of short and medium-range missile tests conducted by the North this year. "The recent advances in North Korea's ballistic missile test program appear to be directed at developing capabilities to defeat or degrade the effectiveness of missile defences deployed in the region: Patriot, Aegis Ballistic Missile Defence (BMD), and Terminal High Altitude Area Defence (THAAD)," said the report. "In addition, North Korea's progress with submarine-launched ballistic missiles (SLBM) suggests an effort to counter land-based THAAD missile defences by launching attacks from positions at sea outside the THAAD's radar field of view," it added.

<https://en.yna.co.kr/view/AEN20211214000300325>

M. Saudi Arabia

Saudi coalition bombs Sanaa in tit-for-tat violence with Houthis

Aziz El Yaakoubi

Reuters, December 08, 2021

The Saudi-led coalition fighting in Yemen said it bombed military targets in the capital Sanaa after the Iran-aligned Houthis launched ballistic missiles and armed drones into Saudi Arabia, including at Aramco oil facilities in Jeddah. The tit-for-tat violence has escalated dramatically over the last months despite efforts by the United States and the United Nations to engineer a ceasefire in the seven-year-old war that has caused a dire humanitarian crisis.

<https://www.reuters.com/world/middle-east/yemen-houthis-say-attacked-saudi-aramco-other-facilities-with-missiles-drones-2021-12-07/>

As GCC summit begins, Crown Prince reaffirms unity in confronting challenges

Saudi Gazette, December 14, 2021

Crown Prince Muhammad Bin Salman, deputy premier and minister of defense, reaffirmed the need for the Gulf Cooperation Council (GCC) states to close their ranks and stand united in confronting the challenges. He said this while chairing the 42nd session of the GCC Supreme Council at Diriyah Palace. The Crown Prince stressed the importance of dealing seriously with Iran's nuclear file as well as to prevent Afghanistan from becoming a source of threat to the region. He called for supporting the stability of Iraq and reaching political solution in Yemen, saying that dialogue is the best way to resolve conflicts.

<https://saudigazette.com.sa/article/614727/SAUDI-ARABIA/As-GCC-summit-begins-Crown-Prince-reaffirms-unity-in-confronting-challenges>

Saudi foreign minister says Iran stalling at Vienna talks, hopes for progress

Saudi Gazette, December 15, 2021

Saudi Arabia's Foreign Minister Prince Faisal Bin Farhan said that Iran appeared to be stalling in talks with global powers to salvage a nuclear pact and hoped progress would be made soon. Addressing a press conference following the Gulf Cooperation Council (GCC) summit, the minister said the Kingdom was in constant contact with parties to the talks in Vienna and the feedback does not lead to optimism.

"So far the reports show there is some stalling by Iran and we hope this will turn to progress in the near future. The GCC states prefer to be part of the talks that would be open to any mechanism that addresses their concerns," he said. Prince Faisal bin Farhan affirmed that the Vienna negotiations currently do not lead to optimism. There appears to be a hard

Iranian position that has reversed what was agreed upon in the previous rounds of talks. "We want a long and comprehensive nuclear agreement with Iran, and we hope the negotiations will succeed. We want to have a normal relationship with Iran, and that depends on it," he said while stressing that Iran's hard-line position in the Vienna negotiations is worrisome.

<https://saudigazette.com.sa/article/614734/SAUDI-ARABIA/Saudi-foreign-minister-says-Iran-stalling-at-Vienna-talks-hopes-for-progress>

N. Iran

Talks between Iran's Eslami, IAEA's Grossi was constructive: MP

Tehran Times, December 01, 2021

Eslami, chief of the Atomic Energy Organization of Iran (AEOI), attended a meeting of the parliamentary committee and presented a report on the recent visit of Grossi to Tehran. MP Ebrahim Azizi, in an interview with the Mehr news agency, highlighted the details of the Tuesday meeting with Eslami, saying, "The head of the Atomic Energy Organization attended the meeting and reported on Rafael Grossi's recent visit to Iran. Mohammad Eslami presented a report on the issues raised between the Iranian officials and the director-general of the Agency (IAEA), which indicated that the issues raised by Iranian officials were quite serious and stemmed from the revolutionary thinking of the administration."

<https://www.tehrantimes.com/news/467627/Talks-between-Iran-s-Eslami-IAEA-s-Grossi-was-constructive>

Removal of sanctions major reason for Iran's signature on JCPOA

Salman Parviz

Tehran Times, December 03, 2021

Ali Chegani pointed out that Indian External Affairs Minister Subrahmanyam Jaishankar has visited Iran twice after the presidency of Seyed Ebrahim Raisi and added that a visit by his Iranian counterpart Hussain Amir Abdollahian to New Delhi is in the

pipeline. The Iranian envoy pointed out the Chabahar Port is not subject to U.S. unilateral sanctions. Pundits believe that an exemption was granted due to the U.S. focus on containing the emerging Chinese influence in the region. The Pakistani Port of Gwadar, which lies 140 kilometers east of Chabahar, is being developed by China as part of the China-Pakistan Economic Corridor. In May 2015, Iran and India signed a cooperation agreement for the development of Chabahar port. India's private sector was scheduled to invest in Chabahar in two phases. The first phase is a \$31 billion project that involves construction of two berths in the port, a container of 640 meters and a multipurpose cargo terminal of 600 meters.

<https://www.tehrantimes.com/news/467673/Removal-of-sanctions-major-reason-for-Iran-s-signature-on-JCPOA>

Iran holds unannounced air defence drill over nuclear town Natanz

Reuters, December 05, 2021

Iranian air defences fired a missile as part of an exercise over the central town of Natanz, which houses nuclear installations. Iranian news agencies earlier reported a large explosion in the sky above Natanz, but said there was no official explanation of the incident.

<https://www.reuters.com/world/middle-east/iranian-news-agency-says-blast-heard-above-natanz-site-nuclear-facilities-2021-12-04/>

UN okays Iran's membership in atomic radiation committee

Tehran Times, December 11, 2021

The United Nations General Assembly on Friday approved Iran's full membership in the UN Scientific Committee on the Effects of Atomic Radiation (UNSCEAR). Before obtaining full membership, Iran had observer status at the UNSCEAR.

Iran's accession was first approved last month in the General Assembly's Fourth

Committee, despite opposition from the Israeli regime and the United States. In addition to Iran, Norway, Algeria and the United Arab Emirates (UAE) also joined the UNSCEAR, increasing the number of the body's permanent members from 27 to 31. The UNSCEAR was set up by resolution of the General Assembly in 1955. Its mandate is to assess and report on the levels of and the effects of exposure to ionizing radiation.

<https://www.tehrantimes.com/news/467976/UN-okays-Iran-s-membership-in-atomic-radiation-committee>

Iran chief negotiator meets E3, Chinese, Russian counterparts

Tehran Times, December 13, 2021

Iran's top negotiator in Vienna held meetings with his European, Russian and Chinese counterparts amid intense negotiations over removing U.S. sanctions on Iran that resumed in late November after a months-long hiatus.

Ali Bagheri Kani, deputy foreign minister of Iran who leads the Iranian negotiating team in Vienna, met with the chief negotiators of the E3- France, Germany and Britain.

<https://www.tehrantimes.com/news/468049/Iran-chief-negotiator-meets-E3-Chinese-Russian-counterparts>

Govt. to build nuclear power plants for generating 10 GW of electricity

Tehran Times, December 14, 2021

Based on the national budget bill for the next Iranian calendar year (begins on March 21, 2022), the government is allowed to construct nuclear power plants for the generation of 10,000 megawatts (10 GW) of electricity in collaboration with foreign or local investors and under the supervision of the Atomic Energy Organization of Iran (AEOI).

According to the AEOI Head Mohammad Eslami, the construction of the mentioned power plants requires \$40 billion of investment and is expected to begin in the next Iranian calendar year, Mehr News

Agency reported. As reported, the financing of the mentioned power plant projects is going to be done using foreign investment, domestic financing, public resources, and the acquisition of capital assets.

<https://www.tehrantimes.com/news/468061/Govt-to-build-nuclear-power-plants-for-generating-10-GW-of-electricity>

Iran, Russia FMs discuss Vienna talks

Tehran Times, December 14, 2021

Iranian Foreign Minister Hossein Amir Abdollahian and the Russian Federation's Foreign Minister Sergey Lavrov exchanged views on the latest status of the Vienna talks. In the telephone conversation, Amir Abdollahian explained Iran's position and called on the West to be as serious as possible and urging the involved parties to come up with initiatives in the negotiations, the Iranian foreign ministry said.

The Russian foreign minister described the Iranian deputy foreign minister's visit to Moscow as positive, saying the two countries' delegations are seriously cooperating on the steps to be taken by the two sides and their implementation arrangements in Vienna. Lavrov noted that it has always been emphasized that all sanctions which are illegal and contrary to the Joint Comprehensive Plan of Action and UN Security Council Resolution 2231 should be removed. He added that Moscow has always tried to bring the Americans in line with all the rules of the JCPOA and UN Security Council resolution 2231.

<https://www.tehrantimes.com/news/468079/Iran-Russia-FMs-discuss-Vienna-talks>

Iran, P4+1 continue talks in Vienna

Tehran Times, December 14, 2021

For the first time during the seventh round, the third working group meeting was held

with the participation of experts from Iran and the P4+1 group comprised of Russia, China, and France, Britain plus Germany. Earlier, Mikhail Ulyanov, Russia's envoy to the talks, stated that a third working group on sequencing held a meeting for the first time since the talks resumed in late November. A constructive trilateral meeting was also held among senior negotiators of Iran, Russia and China, during which the participants discussed how to proceed with the talks, the Iranian foreign ministry said.

Ali Bagheri Kani, deputy foreign minister of Iran who leads the Iranian negotiating team in Vienna, met with his Russian and Chinese counterparts on Sunday. "This afternoon I held a constructive & fruitful meeting with Russian & Chinese chief negotiators," Bagheri said on Twitter. He added, "We shared ideas about how to proceed & also coordinated our positions about several issues. We will continue our intensive & serious engagement to reach a good deal." Ulyanov also said the trilateral meeting discussed issues related to the ongoing Vienna talks. "The delegations of China, Iran and Russia held another round of trilateral consultations today on issues related to the on-going Vienna Talks on JCPOA," the Russian diplomat tweeted.

<https://www.tehrantimes.com/news/468080/Iran-P4-1-continue-talks-in-Vienna>

It's 'open lie' that Iran enriching uranium to 90%: nuclear chief

Tehran Times, December 14, 2021

Mohammad Eslami, chief of the Atomic Energy Organization of Iran (AEOI), dismissed rumors that Iran is enriching uranium to 90 percent purity, calling it an "open lie". "This is an open lie... that are attributed to our country especially by the enemies and the Zionist current," Eslami told the IRIB news agency. He added Iran's nuclear program are in accordance to the rules and regulations of the Atomic Energy Agency (IAEA). The IAEA is supervising all Iran's activities and "we have never done and will never do anything outside that framework", the nuclear chief asserted. Eslami also said the centrifuge manufacturing facility near Karaj and all

other issues related to the 2015 nuclear deal - JCPOA - fall outside the IAEA Safeguard Agreement.

<https://www.tehrantimes.com/news/468073/Its-open-lie-that-Iran-enriching-uranium-to-90-nuclear-chief>

UN chief calls on U.S. to lift sanctions on Iran based on JCPOA

Tehran Times, December 14, 2021

United Nations Secretary General Antonio Guterres has called on the United States to lift or waiver the sanctions on Iran in accordance to the 2015 nuclear deal, officially called the Joint Comprehensive Plan of Action (JCPOA). Guterres made the call in his 12th quarterly report submitted to the UN Security Council Resolution 2231 committee. The report was submitted on December 8 to be reviewed by the resolution 2231 committee on December 14. Resolution 2231 has made implementation of the JCPOA legally binding.

<https://www.tehrantimes.com/news/468090/UN-chief-calls-on-U-S-to-lift-sanctions-on-Iran-based-on-JCPOA>

Iran lets IAEA replace its cameras at Karaj workshop

Reuters, December 15, 2021

Iran has allowed the U.N. nuclear watchdog, the IAEA, to replace its cameras at a centrifuge parts workshop, according to an Iranian media outlet affiliated to Iran's top security body.

<https://www.reuters.com/world/middle-east/iran-allows-iaea-replace-its-cameras-karaj-workshop-nournews-2021-12-15/>

FM says it's a 'sheer lie' that Iran has made demands beyond JCPOA

Tehran Times, December 15, 2021

Amir Abdollahian made the remarks at the last day of the conference of the heads of Iranian diplomatic missions in neighboring countries. The foreign minister said Iran has put forward two

draft proposals that are completely based on the JCPOA and they contain nothing beyond the deal. The chief diplomat, however, said these proposals are the result of tens of hours of discussions in the government. Amir Abdollahian said Iran's approach is a complete lifting of the JCPOA-related sanctions in return for dispelling the other parties' alleged concerns about Iran's peaceful nuclear program.

The top diplomat added that the two texts are currently being discussed in Vienna. Amir Abdollahian said the first text is the result of the first six rounds of negotiations during the Rouhani administration. And at the same time, he said, the opposing sides have agreed that the new drafts proposed by Iran should remain on the table in order for all parties to come up with a single text following discussions and combination of all of them. Ultimately, Amir Abdollahian said, this process should lead to the return of the other parties to their obligations. In the end, the foreign minister said he hopes that the other sides will continue their efforts in good faith and with a view to resolving the issue.

<https://www.tehrantimes.com/news/468132/FM-says-it-s-a-sheer-lie-that-Iran-has-made-demands-beyond>

Amir Abdollahian: We have reached a voluntary agreement with IAEA

Tehran Times, December 15, 2021

"Last night, we reached a good agreement with the Agency that could dispel some of the alleged concerns about Iran's peaceful nuclear program and lead to continued mutual cooperation with the Agency," Amir Abdollahian told the last day of the conference of the heads of Iranian diplomatic missions in neighboring countries. However, the foreign minister criticized the Agency for seeking resort to the technical issue to "affect the Vienna negotiations" on some occasions.

According to sources, the agreement that Iran and the IAEA have reached is to replace the cameras in the Tesa centrifuge assembly site near Karaj. The IAEA cameras had been destroyed due to sabotage act on the facility mainly Israel is held responsible

for. The sources said after security and judicial investigations into the attack were concluded and the IAEA agreed to Iran's demand to condemn the attack, the Islamic Republic agreed on replacing the cameras. As per a law passed by the Iranian parliament, the IAEA will not have access to the recordings from the cameras which will be installed "after technical reviews by Iranian experts." The source also said that Iran will not give the recorded footage to the IAEA. The IAEA has also confirmed the agreement between Iran and the UN body.

<https://www.tehrantimes.com/news/468133/Amir-Abdollahian-We-have-reached-a-voluntary-agreement-with>

O. UAE

UAE defence ministry says French warplanes not a substitute for U.S. jets

Reuters, December 05, 2021

The United Arab Emirates defence ministry said its purchase of French Rafale fighter jets would complement its planned deal to buy American F-35 warplanes, which has slowed due to Washington's concerns over Abu Dhabi's relationship with China. The Gulf Arab state on Friday ordered 80 Rafales made by Dassault Aviation and 12 Caracal military helicopters made by Airbus Helicopters in an arms contract worth 17 billion euros (\$19.2 billion).

<https://www.reuters.com/world/middle-east/uae-defence-ministry-says-french-warplanes-not-substitute-us-jets-2021-12-05/>

UAE told the U.S. it will suspend talks on F-35 jets -Emirati official

Reuters, December 15, 2021

The United Arab Emirates has informed the United States that it will suspend discussions to acquire F-35 fighter jets, a UAE official said, part of a \$23 billion deal that also includes drones and other advanced munitions.

The sale of 50 F-35 warplanes made by

Lockheed Martin (LMT.N) to the UAE had slowed amid concerns in Washington over Abu Dhabi's relationship with China, including use of Huawei 5G technology in the country.

<https://www.reuters.com/business/aerospace-defense/uae-threatens-pull-out-23-bln-f-35-drone-deal-with-us-wsj-2021-12-14/>

P. Israel

Israel issues stricter guidelines for use of its cyber tech exports

Reuters, December 06, 2021

Israel said that countries interested in buying its cyber technologies would have to commit to using them to prevent only a limited list of terrorist acts and serious crimes. The move announced by Israel's Defence Ministry was the latest step in enhancing its oversight following concern over possible abuses abroad of a hacking tool sold by Israeli firms like NSO Group.

<https://www.reuters.com/technology/israel-issues-stricter-guidelines-use-its-cyber-tech-exports-2021-12-06/>

Israel hit chemical weapons facilities in Syria over past two years - Washington Post

Reuters, December 13, 2021

Israel twice struck chemical weapons facilities in Syria over the past two years in a campaign to prevent Syria from renewing chemical weapons production. The accuracy of the report, which cited unidentified current and former U.S. and Western intelligence officials, was confirmed to Reuters by a person familiar with the operation who declined to be identified by name or nationality.

<https://www.reuters.com/world/middle-east/israel-hit-chemical-weapons-facilities-syria-over-past-two-years-washington-post-2021-12-13/>

Q. Pakistan

Pakistan Navy conducts live firing of surface-to-air missiles

Dawn, December 08, 2021

Pakistan Navy conducted successful live weapons firing during a ceremony. The units of Pakistan Navy demonstrated combat readiness and war fighting potential through Ground-Based Air Defence (GBAD) live firing of surface-to-air missiles (SAMs) at Karachi. The Chief of the Naval Staff, Admiral Mohammed Amjad Khan Niazi, was chief guest on the occasion. He was briefed on Pakistan Navy's operational capabilities and ongoing developments to augment security through the induction of SAMs.

<https://www.dawn.com/news/1662725>

R. World/Misc.

IAEA team reviews Kalinin safety

World Nuclear News, December 01, 2021

Russia's Kalinin nuclear power plant shows a commitment to safety, said a team assembled by the International Atomic Energy Agency (IAEA), which took some new practices away to share with the global industry.

<https://www.world-nuclear-news.org/Articles/IAEA-team-reviews-Kalinin-safety>

Iran enriching uranium amid nuclear talks, says UN watchdog

DW, December 02, 2021

Iran is expanding its uranium enrichment capabilities in violation of the 2015 nuclear deal, according to experts from the International Atomic Energy Agency (IAEA). The UN agency's latest report came as talks seeking to restore the nuclear agreement were underway in Vienna.

<https://www.dw.com/en/iran-enriching-uranium-amid-nuclear-talks-says-un-watchdog/a-59992101>

IAEA finds commitment to safety at Belleville plant

World Nuclear News, December 02, 2021

EDF has demonstrated commitment to safety at its Belleville nuclear power plant in central France by introducing additional methods to prepare for accident management and using innovative approaches in the training of plant staff, an expert team from the International Atomic Energy Agency (IAEA) has concluded. The team also identified areas for further enhancement, for example in operation, maintenance and operating experience.

<https://www.world-nuclear-news.org/Articles/IAEA-finds-commitment-to-safety-at-Belleville-plan>

GE Hitachi Nuclear to build small reactor in Canada

Reuters, December 03, 2021

GE Hitachi Nuclear Energy, an alliance between General Electric Co (GE.N) and Japan's Hitachi Ltd (6501.T) will build a small modular nuclear reactor (SMR) with Ontario Power Generation (OPG) (ONPWG.UL), the Canadian utility stated. OPG will deploy the SMR at its site in Darlington where it has a license to build a new nuclear power site that it expects to complete around 2028, the company said in a press release.

<https://www.reuters.com/business/energy/ge-hitachi-nuclear-build-small-reactor-canada-2021-12-03/>

International Space Station swerves to dodge space junk

Reuters, December 05, 2021

The International Space Station (ISS) had to swerve away from a fragment of a U.S. launch vehicle, the head of Russia's space agency said, the latest in a series of incidents in which space debris have forced astronauts to respond. Calls to monitor and regulate space debris, or space junk, have grown since Russia conducted an anti-satellite missile test

last month. This generated a debris field in orbit that U.S. officials said would pose a hazard to space activities for years.

Dmitry Rogozin, head of Russian space agency Roscosmos, said on Friday that the ISS had been forced to move due to space junk from a U.S. launch vehicle sent into orbit in 1994. Roscosmos said the station's orbit, in an unscheduled manoeuvre carried out by mission control, dropped by 310 metres (339 yards) for nearly three minutes to avoid a close encounter.

<https://www.reuters.com/lifestyle/science/international-space-station-swerves-dodge-space-junk-2021-12-03/>

IAEA completes Ugandan nuclear infrastructure review

World Nuclear News, December 09, 2021

Uganda's government is strongly committed to developing the infrastructure needed for a safe, secure and peaceful nuclear power programme, an International Atomic Energy Agency (IAEA) team of experts has found. The eight-day Integrated Nuclear Infrastructure Review (INIR) mission was conducted at the government's request.

<https://www.world-nuclear-news.org/Articles/IAEA-completes-Ugandan-nuclear-infrastructure-revi>

U.N. chief urges action on 'killer robots' as Geneva talks open

Emma Farge

Reuters, December 13, 2021

United Nations Secretary-General Antonio Guterres called for new rules covering the use of autonomous weapons as a key meeting on the issue opened in Geneva. Negotiators at the U.N. talks have for eight years been discussing limits on lethal autonomous weapons, or LAWS, which are fully machine-controlled and rely on new technology such as artificial intelligence and facial recognition. But pressure has increased in

part due to a U.N. panel report in March that said the first autonomous drone attack may have already occurred in Libya.

<https://www.reuters.com/world/un-chief-urges-action-killer-robots-geneva-talks-open-2021-12-13/>

NATO rejects Russian accusations on missile deployment

Reuters, December 15, 2021

NATO is not planning to deploy intermediate-range nuclear missiles in Europe, the Western military alliance said on December 14, rejecting Russian accusations and a call by Moscow for a moratorium on this kind of weapons in Europe. NATO Secretary-General Jens Stoltenberg told reporters in Brussels that Russia itself had violated the meanwhile demised INF treaty for years by deploying new intermediate range nuclear capable missiles in Europe, adding that NATO did not aim to mirror Moscow's behaviour.

<https://www.reuters.com/world/nato-rejects-russian-accusations-missile-deployment-2021-12-14/>

No viable alternative to full and effective implementation of JCPOA: UN's DiCarlo

Tehran Times, December 15, 2021

Iran signed the JCPOA in 2015 alongside China, France, Russia, the United Kingdom and the United States, together with Germany and the European Union. Negotiations are underway in Vienna to revive the deal after the U.S. pulled out in 2018 under the Trump administration. "In recent days, both Iran and the United States have again affirmed their seriousness in seeking to return to full implementation of the JCPOA," DiCarlo told the UN Security Council.

DiCarlo recalled that the JCPOA is widely regarded as a cornerstone of nuclear non-proliferation, and an example of what dialogue and diplomacy can achieve. Security Council Resolution 2231 endorses the deal, and guarantees that the

International Atomic Energy Agency (IAEA) will have regular access to Iran's nuclear program. "The secretary general hopes that in their current negotiations, the United States and the Islamic Republic of Iran will mobilize the same spirit and commitment that resulted in the JCPOA. There is simply no viable alternative to the full and effective implementation of the Plan and the resolution," she stressed.

<https://www.tehrantimes.com/news/468112/No-viable-alternative-to-full-and-effective-implementation-of>

S. Op-Ed

Russia

Column: Drones, gas, sanctions and missiles shape Putin's Ukraine choices

Peter Apps

Reuters, December 09, 2021

As Russia moved troops and vehicles to its border with Ukraine last month, videos posted on social media and Russian television showed often crude canopies over the turrets of some tanks – offering rudimentary protection against Turkish-built drones and U.S.-supplied missiles in the event of war. Moscow's military posturing has already brought results, at least in diplomatic terms. After a similar mass mobilisation by Russian forces earlier this year, Russian President Vladimir Putin and U.S. President Joe Biden held a summit in Geneva.

Pulling back the present military threat allows Russia to avoid further immediate Western sanctions, and paves the way for the new German government to finally certify Nordstream 2, potentially allowing for gas to start flowing through it to Europe in the New Year. But Moscow remains concerned about Ukraine's own resurgent military. If it is going to try to grab Ukrainian territory, it may decide it must do so soon.

<https://www.reuters.com/markets/commodities/drones-gas-sanctions-missiles-shape-putins-ukraine-choices-2021-12-09/>

Europe

Hydrogen: What's the big deal?

Neil King

DW, December 02, 2021

Hydrogen is the most abundant element in the universe, which is probably why it deserves pole position on the periodic table. It's a colorless, odorless and non-toxic gas that consists of a single proton and a single electron. It's also highly combustible. Each kilogram of hydrogen or H₂ contains about 2.4 times as much energy as natural gas. It is. Industry has long been in on the benefits and has been using hydrogen for decades in the petrochemicals sector – mainly for oil refining, producing ammonia for fertilizers, and in the production of methanol and steel. But it has also been touted as a means of speeding up our transition to clean energy. Even the European Commission has described hydrogen as “the missing part of the puzzle to a fully decarbonized economy”.

<https://www.dw.com/en/hydrogen-whats-the-big-deal/a-59076741>

Decarbonising nuclear supply chain logistics

World Nuclear News, December 07, 2021

Nuclear fuel cycle companies are taking steps to reduce their operational carbon emissions through recent announcements. Orano is partnering with freight rail operator Fret SNCF to develop its carbon-free transport in France and Europe; UK company Nuclear Transport Solutions' rail division has launched a new locomotive design to trial the use of a low-emission renewable alternative to diesel; and in Russia, ARMZ Mining Machinery has increased the use of battery-operated machinery at its Priargunsky mining operations.

<https://www.world-nuclear-news.org/Articles/Decarbonising-nuclear-supply-chain-logistics>

USA

Viewpoint: Nuclear, the auctions and the grid

World Nuclear News, December 09, 2021

US electricity grids, especially deregulated grids with auctions, have become fragile and unreliable due to over-dependence on intermittent renewables and just-in-time delivery of natural gas, together with a reliance on imports, writes Meredith Angwin. Nuclear energy, she says, could break the trifecta and prevent rolling blackouts.

<https://www.world-nuclear-news.org/Articles/Viewpoint-Nuclear,-the-auctions-and-the-grid>

West Asia

Analysis: Stuck in the middle? UAE walks tightrope between U.S, Israel and Iran

Ghaida Ghantous and Aziz El Yaakoubi

Reuters, December 13, 2021

The United Arab Emirates is walking a diplomatic high wire between superpower ally Washington, new friend Israel and old adversary Iran as it seeks to avoid a costly regional conflict that could torpedo its trade and tourism ambitions. Abu Dhabi hosts Israel's prime minister this week and will receive a U.S. delegation seeking to warn companies in the UAE about compliance with sanctions on Iran over its nuclear activities. The Gulf state also dispatched a senior official to Tehran last week in a bid to mend ties and contain tensions.

<https://www.reuters.com/world/stuck-middle-uae-walks-tightrope-between-us-israel-iran-2021-12-12/>

Compliance, mandating the world to honour Resolution 2231 vital to revive, sustain JCPOA: analysis

Tehran Times, December 10, 2021

In a commentary on December 7, Bulletin of the Atomic Scientists proposed two steps to revitalize and of course “sustain” the 2015 nuclear deal, officially called the Joint Comprehensive Plan of Action (JCPOA). It says first, all parties “should uphold their JCPOA obligations” and second “the UN Security Council should adopt a new resolution mandating that all nuclear deal parties and all UN member states implement UN Resolution 2231 – the formal JCPOA agreement – completely, correctly, and without discrimination.”

Following is an excerpt of the commentary:

Iran had been in full compliance with the nuclear deal’s terms and conditions until Donald Trump withdrew from the deal and reimposed economic sanctions. In response, Iran gradually reduced its commitments to the deal. From the Iranian perspective, reviving the JCPOA means that all sanctions imposed by Trump must be lifted in a verifiable manner, such that it receives dividends – and not just on paper. In return, Iran would fulfill all of its obligations under the agreement. Tehran seeks assurance that the United States will not violate its commitment again. Yet U.S. officials cannot guarantee this as they do not have the power to limit their next president’s decisions. What’s needed now is not only a revived nuclear deal but a plan for it to endure.

<https://www.tehrantimes.com/news/467895/Compliance-mandating-the-world-to-honor-Resolution-2231-vital>

T. Think Tanks

NPT States Prepare for a Critical Conference

Daryl G. Kimball

Arms Control Association, December 01 2021

States-parties to the nuclear Non-proliferation Treaty (NPT) will convene in January for meetings that will shape the

future of international arms control at a time when nuclear restraints are under severe stress and the outcome of the event is highly uncertain. After multiple delays due to the COVID-19 pandemic, the president-designate of the 10th NPT review conference announced in November that the meeting will finally be held Jan. 4–28 at UN headquarters in New York.

The conference caps a five-year cycle of meetings in which states-parties review compliance with the treaty and seek agreement on steps to overcome new challenges to preventing the spread of nuclear weapons. The conference outcome is still very much in flux, according to diplomatic observers and participants. The president-designate, Argentine diplomat Gustavo Zlauvinen, and his three co-chairs are facilitating talks with more than 100 states-parties on a wide range of topics. Reaching consensus on a final document and action plan will be challenging, hinging on a handful of key issues, observers say.

<https://www.armscontrol.org/act/2021-12/news/npt-states-prepare-critical-conference>

India’s no-first-use dilemma: Strategic consistency or ambiguity towards China and Pakistan

Dr Lora Saalman

SIPRI, December 02, 2021

On 14 October 2020, in a statement to the Conference on Disarmament, Indian ambassador, Pankaj Sharma, reiterated India’s commitment to a policy of no first use (NFU) of nuclear weapons. This reaffirmation, however, followed statements suggesting that India may be reconsidering its NFU pledge. In a statement in 2016, Manohar Parrikar, India’s defence minister, questioned whether India should bind itself to NFU and in 2019 a subsequent defence minister, Rajnath Singh, said that India’s NFU policy might change in the future depending upon circumstances. While Parrikar framed his statement as a personal opinion and debates have revolved around the intent behind Singh’s

comment, even Sharma's statement has been contextualized in light of India's desire to tamp down recent border tensions with China. Irrespective of mitigating circumstances and despite arguments that its nuclear posture remains unchanged, there are signs that India may be moving towards greater strategic ambiguity, with NFU as an indicator.

<https://sipri.org/commentary/blog/2020/indias-no-first-use-dilemma-strategic-consistency-or-ambiguity-towards-china-and-pakistan>

The 11th Hour for Restoration of Compliance with the JCPOA

Kelsey Davenport

Arms Control Association, December 09, 2021

Full restoration of the 2015 nuclear deal with Iran remains the best possible option to avert a nuclear crisis and provide Tehran with sanctions relief, but the Raisi administration's approach to talks and the country's growing nuclear program risks jeopardizing those efforts. When talks resumed in Vienna Nov. 29 after a five-month hiatus, Iran rejected most of the hard-fought progress made during the first six rounds of negotiations from April-June and raised new demands incompatible with the deal, known as the Joint Comprehensive Plan of Action (JCPOA).

While these proposals are unlikely to represent Iran's bottom line, the window of opportunity to negotiate a return to U.S. and Iranian compliance with the accord is closing rapidly. Iran's failure to fully cooperate with the International Atomic Energy Agency (IAEA) and its decision to continue ratcheting up its nuclear activities' risks pushing the United States to determine that the JCPOA's non-proliferation benefits cannot be salvaged.

The Role of Safety and Security in Transport of Radioactive Material Discussed at Vienna Conference

Monica Exner

IAEA, December 13, 2021

Safety and security during the transport of nuclear and radioactive materials represent

two sides of the same coin: To prevent harming the environment and the public, they should be addressed in tandem. This is the focus of this week's International Conference on the Safe and Secure Transport of Radioactive Materials. More than 20 million shipments of nuclear and radioactive material occur per year globally, in air, on the seas, on railways and roads. Safety during transport is enhanced through compliance with the IAEA's safety standards and the national transport safety regulatory requirements derived from them. Similarly, security, to protect against theft and sabotage involving nuclear and radioactive materials during transport, is achieved through the application of international instruments and IAEA Nuclear Security Series guidance.

<https://www.iaea.org/newscenter/news/the-role-of-safety-and-security-in-transport-of-radioactive-material-discussed-at-vienna-conference>

IAEA Chief in the UAE: Nuclear Energy Key to Country's Climate Action

Michael Amdi Madsen

IAEA, December 15, 2021

The United Arab Emirates (UAE) is a global pioneer in innovation and a regional leader in using nuclear energy to meet its sustainable energy and climate action ambitions, IAEA Director General Rafael Mariano Grossi said this week during his trip to the Gulf state. Travelling to the two emirates of Abu Dhabi and Dubai, Mr Grossi met with senior government officials, including the Minister of Foreign Affairs and International Cooperation Sheikh Abdullah bin Zayed bin Sultan Al Nahyan, and visited the Barakah Nuclear Power Plant.

<https://www.iaea.org/newscenter/news/iaea-chief-in-the-uae-nuclear-energy-key-to-countrys-climate-action>

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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