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Prepared by
Ms. Diya Deep Singh
Ms. Rajrajeshwari Singh

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India

Nano-science should translate benefits for society: experts at ICONSAT
PIB New Delhi, March 05, 2020

The International Conference on Nano Science and Nano Technology (ICONSAT) under the aegis of Nano Mission, Department of Science and Technology (DST), started at Biswa Bangla Conventional Centre, Kolkata focusing on the recent advances in this frontier research field. In his inaugural address, Professor Ashutosh Sharma, Secretary, DST outlined the genesis of Nano India and said that in last 20 years infrastructure and human resources have been built in the field of nano science and technology. Prof Sharma emphasized on the need to create a network of experts in nano-science so that each can learn from the other and integrate the knowledge across sectors like energy, agriculture, transport, health and so on.

Prof Sharma empasised that 5Ms – mechanical, material, machines, manufacturing and manpower, are the need of the hour and we should orient all these to focus on how nano-science and technology can contribute to the challenges like sustainable development and new technology (machine learning, artificial intelligence and so on). Prof Sharma stressed that science should be related to the larger section of our society and invited young scientists to participate with AWSAR, a DST new initiative through which young scholars can submit popular science stories related to their work while connecting them with societal benefits.

https://pib.gov.in/PressReleseDetail.aspx?PRID=1605449

ARCI develops Fuel Cell Technology for Disaster Management
PIB New Delhi, March 05, 2020

Scientists at International Advanced Research for Powder Metallurgy & New Materials (ARCI), Hyderabad, an autonomous R&D Centre of Department of Science and Technology (DST) have developed Polymer Electrolyte Membrane fuel cells (PEMFC).

PEMFC, in its entireness, have an advantage of operational capability at low-temperatures with applications in decentralised power generation systems. Through intense R&D efforts in the area of fuel cell technologies, ARCI at its Centre for Fuel Cell Technology, Chennai has developed in-house PEMFC systems in the power range of 1 to 20 kiloWatt (kW) and demonstrated the same in stationary (1-20 kW) and transport applications (1,3,5 kW). Emergency Operation Centres (EOC) backed with 10 kW system along with fuel cell stack (providing sustainable electricity using hydrogen gas without the need of grid power), air moving sub systems, power control devices and control and monitoring system is being planned as a natural disaster management measure.

https://pib.gov.in/newsite/PrintRelease.aspx?relid=199888

France reiterates its support for India's NSG bid
WION, March 02, 2020

France has once again extended its support for India's bid for Nuclear Suppliers Group (NSG). The matter was discussed during the India-France Bilateral Consultations on Disarmament, Non-Proliferation & Export Control that took place in Delhi last week.

India is keen to be part of the multilateral export control regime and New Delhi is engaged closely with the NSG members on the way forward on its membership. The only country which is opposing India's membership is China. Barring NSG, India is part of all other export control regimes--Australia Group, Missile Technology Control Regime (MTCR) and Wassenaar Arrangement (WA)

https://www.wionews.com/india-news/france-reiterates-its-support-for-indias-nsg-bid-283831

What is autoclave? Nuclear missile tech that India seized from Pakistan-bound Chinese ship
Taran Deol
The Print, March 04, 2020

A ship bearing the Hong Kong flag, headed to Port Qasim in Karachi was detained by Indian Customs on 3 February for mis-declaring an autoclave — a pressure chamber which can be used in the launch process of ballistic missiles — as an industrial dryer.

The Chinese ship, Dai Cui Yun, was detained at Gujarat's Kandla port and the autoclave was seized, following which the ship was allowed to move towards its final destination. "The autoclave can be used for the manufacture of the motor of very long-range missiles, with range upwards of 1,500 kilometres or even in the construction of a motor for the launch of satellites. Pakistan has the Shaheen II missile in the 1,500-2,000 kilometre range, and the platform was tested last May," the report quoted an official as saying.

https://theprint.in/theprint-essential/what-is-autoclave-nuclear-missile-tech-that-india-seized-from-pakistan-bound-chinese-ship/375520/

India's Digital Transition
Nuclear Engineering International, March 05, 2020

India's department of atomic energy (DAE) is no stranger to the benefits of digitalisation of instrumentation & control (I&C) for its reactor fleet. Eight-bit or 16-bit microprocessor-based controls were introduced for main equipment back in the late 1980s and networking was emphasised in the 1990s, but India was also a relatively early mover in the progressive deployment of field-programmable gated array (FPGA) and application-specific integrated circuit (ASIC) equipment. The digital evolution of I&C systems deployed in Indian nuclear reactors is supported indigenous research and development (R&D). Full-scope simulators were used to test the I&C systems before deployment. The newer reactors operated by DAE's main utility, the Nuclear Power Cooperation of India (NPCIL), have I&C architectures built around programmable logic controllers ultimately slaved to mosaic-based control rooms via computerised operator information systems (COISs) and control panels. Reactors currently under construction, and those planned for the future, will all have distributed I&C architecture based on high-integrity real-time embedded systems using standardised FPGA/ASIC hardware. This I&C architecture would typically include large screen displays and screen-based controls as the human-machine interface, with enhanced safety and cybersecurity features.

This embedded I&C setup has grown out of the experience at Tarapur 3&4, the first medium-sized Indian PHWR built. Commissioned in the first decade of the 2000s, Tarapur 3&4 were the first

Indian PHWRs to have fully computerised key safety systems. In a typical PHWR (or Candu) of contemporary design, the main control equipment for automated plant control, including automatic safe shut down, are: reactor protection system; (RPS), reactor regulating system (RRS); coolant channel temperature monitoring system; process control; safety interlocks; the fuel handling system; and the electrical SCADA.

https://www.neimagazine.com/features/featureindias-digital-transition-7808835/

Indian parliamentary committee calls for focus on PHWRs
World Nuclear News, March 09, 2020

The Parliamentary Standing Committee on Science & Technology, Environment, Forests and Climate Change made these recommendations in its report on the grant requests by the Department of Atomic Energy (DAE) for 2020-2021 The report was presented to India's upper house, the *Rajya Sabha*, on 6 March and tabled before the lower house, the *Lok Sabha*, the same day. India's nuclear energy programme is at a "very sensitive crossroads", the report says. "From the point of view of emissions of greenhouse gases, nuclear power is a clean source of electricity," it added. Although relative economics of nuclear and solar power have changed, as post-Fuksuhima safety concerns have caused increases in the costs of nuclear while the price of solar power has fallen, "India cannot afford to do away with a baseload source of electricity like nuclear power," the report says. "India's nuclear energy programme has both a strategic and energy dimension, and both of these have to be kept in view", it adds.

"The Committee is also aware of the fact that apart from helping India acquire badly needed natural uranium from other countries, the Indo-US Nuclear Agreement of 2005 has not yet resulted in new commercial projects with foreign assistance," it says. "Negotiations with the French and American companies have been going on for over a decade. The Committee feels that at this point in time it would be better for the DAE to adopt a standardised 700 MW heavy-water reactor and use that standardised design for its expansion programme in an aggressive manner." India's 22 operating nuclear power reactors provided around 2% of its electricity in 2017, according to World Nuclear Association. Seven units are under construction. These are: four indigenously designed 700 MWe PHWRs, two each at Kakrapar and Rajasthan; two Russian-designed VVER pressurised water reactors at Kudankulam; and an indigenously designed prototype fast breeder reactor at Kalpakkam. Kovvada, in Andhra Pradesh, has been earmarked for the construction of six Westinghouse-designed AP1000 PWRs, although contractual arrangements have still to be finalised.

https://www.world-nuclear-news.org/Articles/Indian-parliamentary-committee-calls-for-focus-on

Nuclear Power Plants
PIB New Delhi, March 11, 2020

The details of projects under construction and new projects accorded sanction are as follows:
The Pressurised Heavy Water Reactors (PHWRs) are fuelled by Natural Uranium while Light Water Reactors (LWRs) are fuelled by Low Enriched Uranium. The annual requirement of fuel (UO2) of a 700 MW PHWR (at 85% Capacity Factor) is about 125 tons and that of a 1000 MW LWR (at a capacity factor of 90%), about 25 tons. Prototype Fast Breeder Reactor (PFBR) being implemented by Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI) is fuelled by Mixed Oxide (MoX) Fuel.

https://pib.gov.in/PressReleseDetail.aspx?PRID=1605939

No change in India's nuclear doctrine: MEA
The Hindu, March 04, 2020

"There has been no change in India's nuclear doctrine," Minister of State for External Affairs V. Muraleedharan said in the Lok Sabha There has been no change in India's nuclear doctrine, the Ministry of External Affairs (MEA) said on March 4. Responding to a question in the Lok Sabha, Minister of State for External Affairs V. Muraleedharan said India is committed to maintaining credible minimum deterrence and the policy of no-first use of nuclear weapons.

https://www.thehindu.com/news/national/no-change-in-indias-nuclear-doctrine-mea/article30981553.ece

China

China repeats call for dialogue after North Korea missile launch
Reuters, March 2, 2020

China on Monday reiterated a call for dialogue in response to North Korea's latest missile launch and said all sides involved in efforts to rid the Korean Peninsula of nuclear weapons should reconcile conflicts through discussion. Foreign ministry spokesman Zhao Lijian made the remarks at a daily news briefing.

https://www.reuters.com/article/us-northkorea-missiles-china/china-repeats-call-for-dialogue-after-north-korea-missile-launch-idUSKBN20P0UN

China launches new BeiDou navigation satellite
Xinhua, March 9, 2020

China launched a new satellite of the BeiDou Navigation Satellite System (BDS) from the Xichang Satellite Launch Center in southwest China's Sichuan Province at 7:55 p.m. Monday (Beijing Time), only one step away from completing the whole global system. The satellite, the 54th of the BeiDou family, was sent into a geostationary orbit as planned by a Long March-3B carrier rocket. The satellite and the carrier rocket were developed by the China Academy of Space Technology (CAST) and the China Academy of Launch Vehicle Technology, respectively. Monday's launch was the 327th mission of the Long March rocket series.

http://www.xinhuanet.com/english/2020-03/09/c_138859679.htm

Mars probe passes tests for signal transmission
Zhao Lei
China Daily, March 11, 2020

Chinese scientists and engineers finished a major test on Tuesday in Beijing to verify the compatibility between ground control and China's first Mars probe, according to the Beijing Aerospace Control Center. The center said in a statement sent to China Daily that the test, the first of its kind in the country, successfully examined the signal transmission and interfaces between the ground systems and the robotic probe, which is scheduled to start its journey to the red planet before the end of this year. Technical plans and statuses as well as related hardware and software were put to

comprehensive trial runs, the statement said, adding that all procedures were similar to those that will be used in the mission.

Cui Xiaofeng, head of the center's Mars mission control team, explained that the farthest distance between the Earth and Mars is about 400 million kilometers, so a probe will travel about seven months before it reaches the Martian atmosphere. During the probe's flight toward Mars, the technical statuses inside the spacecraft's equipment will change. In addition, the environment in deep space is highly sophisticated.All of these factors will make command and control very difficult and challenging, he noted. According to the China National Space Administration, the country's first Martian probe will conduct scientific investigations about the planet's soil, geological structure, environment and atmosphere as well as possible water sources.

https://www.chinadaily.com.cn/a/202003/11/WS5e6734e0a31012821727dd95.html

China's space sector resists COVID-19 impact
Zhang Hongpei
Global Times, March 11, 2020

Wuhan bears the brunt of the blow, with production, supply affected. iSpace engineers prepare the company's first orbital carrier rocket. Photo: Courtesy of iSpace. Compared with traffic-dependent industries like catering, aviation and tourism, China's fledging commercial space sector has not been severely disrupted by the outbreak of novel coronavirus pneumonia (COVID-19) which has claimed over 3,000 lives nationwide and continues to spread globally. However, the epidemic's impact on Wuhan is still very obvious, industry insiders told the Global Times.

"The Kuaizhou rocket team under the state-owned China Aerospace Science and Industry Corp (CASIC) as well as its relevant suppliers have forged a major force in Wuhan [in Central China's Hubei Province]," said an industry investment manager who asked to remain anonymous. Kuaizhou-1A solid-propellant rockets developed by Expace Technology, subordinate to the CASIC, will mainly be used to launch low-orbit microsatellites. A Kuaizhou-1A carrier rocket lifted the Galaxy-Space 1, China's first 5G-capable satellite built by a private Chinese company, at the Jiuquan Satellite Launch Center on January 16. The company completed its first mission, launching eight to nine rockets, at the beginning of the year. For the first half of 2020, the company was scheduled to conduct four or five launches, a representative told the Global Times in December.

http://www.globaltimes.cn/content/1182278.shtml

Chinese military slams US provocative acts in South China Sea
China Military Online, March 11, 2020

A US guided-missile destroyer USS McCampbell trespassed into Chinese territorial waters off the Xisha Islands without permission on Tuesday. In response, the Southern Theater Command (STC) of the Chinese People's Liberation Army (PLA) organized naval and air forces to track, verify, identify, and warn the ship away, Senior Colonel Li Huamin, spokesperson for the PLA STC, said in a statement on Wednesday. Snr. Col. Li pointed out that the US has kept flexing muscles and stirring up troubles in the South China Sea under the pretext of freedom of navigation.

He denounced the US provocative acts as supremacy violating international law and called the US a "source of chaos" that threatens the peace and stability in the South China Sea. "China owns indisputable sovereignty over the Xisha Isla nds and their adjacent waters," Snr. Col. Li said,

reaffirming that the Chinese military will stay on high alert and take all necessary measures to protect national sovereignty and security and safeguard peace and stability in the South China Sea.

http://english.chinamil.com.cn/view/2020-03/11/content_9765812.htm

Chinese nuclear project honored at quality innovation awards
CNNC, March 12, 2020

The 2019 Quality Innovation Award, also known as QIA, was recently announced in Tel Aviv in Israel, where a Chinese project -- R&D of Hualong One nuclear power plant steam generators -- won second prize, according to local reports. It is a project of the Nuclear Power Institute of China, also known as the NPIC, which is a unit of China National Nuclear Corporation, or CNNC. Due to current novel coronarivus epidemic, the team was absent from the awards ceremony and officials from the Embassy of China in Israel instead received it on their behalf.

Experts said the project demonstrates how the systematic application of quality innovation methods by the NPIC assist the research and development of the steam generators in the Chinese-designed Hualong One, or HPR 1000 nuclear reactors. The project won the top award in the national quality innovation contest in July 2019, among more than 1,000 projects, and was recommended by the China Association for Quality for the international competition. The HPR 1000 is a third-generation reactor design and currently steam generators have been installed in all HPR 1000 domestic and international units, according to CNNC officials.

http://en.cnnc.com.cn/2020-03/12/c_461869.htm

Chinese drones see rapid production despite epidemic, indicating high demand
Liu Xuanzun
Global Times, March 12, 2020

Production of the CH-4, one of the top selling armed reconnaissance drones in the world developed by China, has now resumed as the novel coronavirus epidemic is being brought under control in the country. A workshop was seen full of drones being assembled, as analysts predicted on Thursday the CH-4 will see great demand in the international market in 2020. CH UAV Co Ltd, a company affiliated with China Aerospace Science and Technology Corp's Chinese Academy of Aerospace and Aerodynamics, on Tuesday released a set of photos showcasing its production progress since resumption of work after the extended Spring Festival holidays due to the COVID-19 outbreak.

The high rate of production indicated that the CH-4 drone remains an item that is very much in demand on the international market in 2020, as the manufacturer was attempting to keep up with the original production schedule to deliver the drones on time, a military expert who asked not to be named told the Global Times on Thursday. Drones are becoming increasingly popular in regional conflicts around the world, and Chinese companies can offer them at very reasonable prices, offering good performances and after-sales services and not attaching political conditions, which are all advantages they have over Western countries' products, the expert said. The CH drones are particularly popular as they are very easy to operate and do not require very intensive and professional training, the expert noted.

http://www.globaltimes.cn/content/1182386.shtml

Pakistan

Govt approves release of Rs464.7bn for development projects
Pakistan Today, March 01, 2020

The federal government has so far authorized release of Rs464.707 billion for various ongoing and new social sector uplift projects under its Public Sector Development Program (PSDP) 2019-20, as against the total allocation of Rs701 billion. Under its development program, the government has authorized release of an amount of Rs193.073 billion for federal ministries, Rs157.716 billion for corporations and Rs34.215 billion for special areas, according to a latest data released by the Ministry of Planning, Development and Reform.

Of those allocations, the government has authorized release of Rs38.45 billion for security enhancement in the country. An amount of Rs77.655 billion has also been authorized to be released for the blocks managed by the Finance Division under the government's 10-year development program.

https://profit.pakistantoday.com.pk/2020/03/01/govt-approves-release-of-rs464-7bn-for-development-projects/

Indian claims regarding possible 'military' application of seized item factually incorrect: FO
The News International, March 07, 2020

Pakistan has dismissed India's claim that the object Indian officials have reportedly confiscated from onboard a Chinese commercial ship bound for Pakistan has "military" applications. "Claims regarding the possible military dimension of the held item are factually incorrect," said the Foreign Office (FO) in a statement on Saturday.

"We have noted the reports about inspection and seizure by the Indian authorities of an item from a Pakistan-bound commercial vessel. We have also been approached by the private company in Pakistan which had imported the item under question," read the statement. According to the FO, the item under question is a heat treatment furnace casing system which has several industrial applications. It is not listed on any international export control list. "Similar furnaces are being used in several industries in Pakistan and the world over."

https://www.thenews.com.pk/latest/625313-indian-claims-regarding-military-applications-of-seized-item-factually-incorrect-fo

Pakistan 11th largest arms importer in the world: report
Pakistan Today, March 09, 2020

Pakistan was on Monday ranked the eleventh largest arms importer in the world in a report published by the Stockholm International Peace Research Institute (SIPRI). According to the report, arch-rival India was ranked second on the list.

Figures released by SIPRI alongside the report showed that China, Russia and Italy were the main suppliers of arms to Pakistan. Import numbers further highlighted that the actual share of Pakistani imports in total global weapons imports had decreased. "As in previous years, in 2019 India and Pakistan—which are nuclear-armed states—attacked each other using an array of imported major

arms," Siemon Wezeman, senior researcher at SIPRI, said. "Many of the world's largest arms exporters have supplied these two states for decades, often exporting arms to both sides," he added.

https://www.pakistantoday.com.pk/2020/03/09/pakistan-11th-largest-arms-importer-world-report/

USA

Poland, USA underscore commitment to new nuclear projects
World Nuclear News, March 02, 2020

Poland will soon start the tender process for developers interested in participating in its first nuclear power plant project, Piotr Naimski, government commissioner for strategic energy infrastructure, said following the third US-Poland Strategic Dialogue on Energy held in Washington DC last week. Poland's Climate Minister Michał Kurtyka, who was also at the meeting, has commented on the country's pro-nuclear policy as a way to reduce carbon emissions and other pollutants. Naimski said Poland is "getting closer to practical solutions" in the construction of a nuclear power plant in the country and noted that there are US companies keen to cooperate with Warsaw on this.

"We will have six to nine gigawatts in the nuclear sector by 2040 and 2045; this decision has already been made. We will invite and select partners for this programme soon," Naimski said, according to various reports, including by Polish news agency The First News. Poland's nuclear power programme will involve "large reactors, those with a capacity of 1000 megawatts and more, and there will be minimum of six of them", Naimski said, adding that the units will be built in three phases over 20 years. "This is a big programme, but when it is completed Poland will have 20%, or little more than 20% of stable and safe energy produced in nuclear power plants for the next 60 years." Poland's draft Energy Policy until 2040 provides for the currently coal-dependent country's adoption of nuclear power, with the target of 20 TWh of electricity from nuclear energy by 2035. Kurtyka noted that this is almost twice as much electricity than would be generated from solar power, Polish newspaper Rzeczpospolita, reported on 28 February. He tweeted that the meeting in Washington had been "fruitful".

https://www.world-nuclear-news.org/Articles/Poland,-USA-underscore-commitment-to-new-nuclear-p

US Defense Department invites comment on microreactor
World Nuclear News, March 03, 2020

The US Department of Defense (DOD) is seeking public comment on a proposal to construct and demonstrate a prototype advanced mobile nuclear microreactor to support its domestic and operational energy demands. This is expected to be a small advanced gas reactor using high-assay low enriched uranium tristructural isotropic (TRISO) fuel and air cooling. The DOD issued a Request for Information in January last year to identify concepts for a "small mobile reactor" design to address electrical power needs in rapid response scenarios. In a notice published yesterday in the Federal Register, it said it intends to prepare, in partnership with the US Department of Energy, an Environmental Impact Statement (EIS) for the prototype reactor. The DOD's proposed action includes construction of the prototype microreactor and demonstration activities, as well as the planned disposition of the reactor following operation.

The DOD issued a Request for Information in January last year to identify concepts for a "small mobile reactor" design to address electrical power needs in rapid response scenarios. In a notice published yesterday in the Federal Register, it said it intends to prepare, in partnership with the US Department of Energy, an Environmental Impact Statement (EIS) for the prototype reactor. The DOD's proposed action includes construction of the prototype microreactor and demonstration activities, as well as the planned disposition of the reactor following operation.

https://www.world-nuclear-news.org/Articles/US-Defense-Department-seeks-comment-on-microreacto

Holtec underscores transparency at US plants
World Nuclear News, March 04, 2020

Oyster Creek has begun reactor vessel segmentation, with GE Hitachi serving as the contractor and Nuclear Consultants International (NCI), an autonomous company tasked with the oversight authority of all safety-significant activities. Several adjunct buildings have been demolished and transformers on site are being deconstructed and removed, "all to improve the plant's security profile", Holtec said. Planning is under way for de-fuelling the used fuel pool in 2021.

At Pilgrim, in Plymouth, Massachusetts, recent achievements include the demolition of legacy structures, construction of a new HI-STORM storage facility for the used nuclear fuel, containment vessel head segmentation and removal to assist the upcoming fuel loading campaign, and controlled evaporation of tens of thousands of gallons of unneeded water inventory. "We are committed to keeping our decommissioning activities fully transparent at all times and sharing them with our host communities. Educating the local residents and policy makers in the art and science of decommissioning is a high priority for us," Joy Russell, Holtec's chief communications officer, said.

https://www.world-nuclear-news.org/Articles/Holtec-underscores-transparency-at-US-plants

Trump taps accused torture advocate for nuclear envoy
Zachary Cohen, Kylie Atwood and Jennifer Hansler
CNN, March 05, 2020

The Trump administration has tapped Marshall Billingslea, the current undersecretary for terrorism financing at the Treasury Department, as special envoy for nuclear talks, according to two sources familiar. The decision comes nearly one month after US national security adviser Robert O'Brien said the US was preparing to begin negotiating a new nuclear arms agreement with Russia.

The National Security Council declined to comment and Billingslea hasn't responded to CNN's inquiry. Billingslea had previously been nominated to be under secretary for civilian security, democracy and human rights at the State Department but his confirmation process stalled after Democrats and advocacy groups raised concerns about his views on torture while working for President George W. Bush's administration. As of Wednesday evening, a Democratic Senate aide told CNN that the nomination had not yet been formally withdrawn.

https://edition.cnn.com/2020/03/04/politics/marshall-billingslea-nuclear-envoy/index.html

Russia Fears US Under Trump Now Ready to Use Nuclear Weapons as 'Viable Political Option'
Eoin Higgins

Common Dreams, March 06, 2020

The Russian government is regarding U.S. moves to increase and upgrade its low-level nuclear arsenal as a sign that the White House is prepared to use nuclear weapons as a political option on the world stage. "Washington is not just modernizing its nuclear forces, but is striving to give them new capabilities, which greatly expands the likelihood of their use," Russian Foreign Ministry spokeswoman Maria Zakharova said Friday. Zakharova told reporters that the U.S. increase in nuclear weapons capabilities earlier in the year, when the military deployed a low-yield ballistic warhead to its submarines, reduces the threshhold for using the weapons and brings the world closer to the possibility of nuclear war. As Common Dreams reported, the move was seen by International Campaign to Abolish Nuclear Weapons treaty coordinator Tim Wright as "an alarming development that heightens the risk of nuclear war."

"Of particular concern is the expansion of the range of U.S. low-yield weapons in its nuclear arsenal, including the development and deployment of such munitions for strategic carriers," said Zakharova. The U.S. in February angered Russian officials for a war game in which the Pentagon ran a scenario where Russia attacked a NATO ally with a low-yield nuclear weapon and the U.S. responed with a "limited" nuclear strike.

https://www.commondreams.org/news/2020/03/06/russia-fears-us-under-trump-now-ready-use-nuclear-weapons-viable-political-option

Georgia Power completes Vogtle fuel order
World Nuclear News, March 06, 2020

The 157 fuel assemblies will eventually be loaded into the reactor vessel to enable the reactor to start up and begin operating. Around one-third of the total fuel assemblies will be replaced during each refuelling outage after the units begin operating, in a similar process to that used at the existing Vogtle units 1 and 2. Two AP1000 reactors are being built at Vogtle in Georgia, in a construction project that has been managed by Southern Nuclear and Georgia Power, both subsidiaries of Southern Company, since 2017 following Westinghouse's Chapter 11 bankruptcy. Work began on unit 3 in March 2013 and unit 4 in November the same year. Unit 3 is scheduled to enter commercial operation in November 2021 and unit 4 a year later, but Southern Company CEO Tom Fanning recently told shareholders unit 3 could be brought online as early as May next year, with unit 4 following a year later.

Significant progress continues to be made at the construction site, Georgia power said yesterday. Workers have now installed 10 of the 16 shield building courses of panels that surround the unit 4 containment vessel. The shield building is a unique feature of the AP1000 reactor design for the Vogtle units and provides an additional layer of safety around the containment vessel and nuclear reactor to protect the structure from any potential impacts. The project is now about 84% complete, the company said.

https://www.world-nuclear-news.org/Articles/Georgia-Power-completes-Vogtle-first-core-fuel-ord

Virginia passes bill to achieve 100% carbon-free power by 2045
Reuters, March 07, 2020

The Virginia Legislature passed a bill on Friday that puts the state on a path to 100% clean energy by 2045 as part of the commonwealth’s effort to reduce its impact on climate change. Virginia Senate

Bill 851 requires the state to get all its electricity from carbon free sources like renewables and nuclear. It still requires a signature from the governor, who has advanced a similar plan through executive order.

The legislation would also allow fossil plants to operate if they install carbon capture and storage technologies. The bill heads to Virginia Governor Ralph Northam's office. He made an executive order in September with a goal of producing all the state's electricity from carbon-free sources by 2050. The bill also commits Virginia to join the Regional Greenhouse Gas Initiative (RGGI), a market-based program to reduce greenhouse gas emissions in 10 U.S. Northeast and Mid-Atlantic states.

https://www.reuters.com/article/us-usa-virginia-renewables/virginia-passes-bill-to-achieve-100-carbon-free-power-by-2045-idUSKBN20T2OF

Second US plant licensed for 80-year operation
World Nuclear News, March 09, 2020

The US Nuclear Regulatory Commission (NRC) has approved Exelon Generation Company's application for an additional 20 years of operation for Peach Bottom units 2 and 3, authorising an operating life of up to 80 years. These are the second subsequent licence renewals granted by the US regulator, following Turkey Point units 3 and 4 which were granted renewals last December. Peach Bottom 2's subsequent renewed licence will expire on 8 August 2053 and unit 3's on 2 July 2054. The rationale for the NRC's decision is documented in its final Safety Evaluation Report on the application, published last month, and in a final Supplemental Environmental Impact Statement published in January. The NRC's Advisory Committee on Reactor Safeguards also reviewed the safety aspects of renewing the licences, the regulator said.

Peach Bottom 2's subsequent renewed licence will expire on 8 August 2053 and unit 3's on 2 July 2054. The rationale for the NRC's decision is documented in its final Safety Evaluation Report on the application, published last month, and in a final Supplemental Environmental Impact Statement published in January. The NRC's Advisory Committee on Reactor Safeguards also reviewed the safety aspects of renewing the licences, the regulator said.

https://www.world-nuclear-news.org/Articles/Second-US-plant-licensed-for-80-year-operation

US Defense Department awards microreactor contracts
World Nuclear News, March 10, 2020

The awards are under Project Pele, an initiative under the DOD's Strategic Capabilities Office (SCO) to develop a safe, mobile and advanced nuclear microreactor to support a variety of DOD missions such as generating power for remote operating bases. "We will leverage our industry partners to develop a system that can be safely and rapidly moved by road, rail, sea or air and for quick set up and shut down, with a design which is inherently safe," Jeff Waksman, Project Pele programme manager, said.

The DOD currently uses around 30 terrawatt hours of electricity per year and more than 10 million gallons of fuel per day, and expects those levels to increase. A safe, small, mobile nuclear reactor could provide a "nearly endless" clean power supply to support operations anywhere on the planet. In civilian applications, microreactors could be easily relocated to support disaster response work and

provide temporary or long-term support to critical infrastructure such as hospitals as well as remote civilian locations where delivery of electric power is difficult, the department said. The three companies were selected in a competition to develop engineering designs following an SCO request for information issued in January 2019. BWX Technologies has been awarded USD13.50 million, X-energy USD14.31 million and Westinghouse USD11.95 million. Coordination with the Department of Energy, Nuclear Regulatory Commission, National Nuclear Security Administration and industry partners will allow the rapid development of workable prototype designs that ultimately support construction and testing, the DOD said.

https://www.world-nuclear-news.org/Articles/US-Defense-Department-awards-microreactor-contract

Young will change narrative on nuclear, says ANSTO
World Nuclear News, March 10, 2020

Public perception of nuclear power "has been defined almost by its failures rather than by its successes", and the industry has thus adopted a defensive posture, Adi Paterson, CEO of the Australian Nuclear Science and Technology Organisation told delegates at the International Youth Nuclear Congress on 9 March. The challenge now for the 250 IYNC attendees is: "How to change the narrative of nuclear in a deep and profound way," he said. IYNC and the Australian Young Generation in Nuclear (AusYGN) are holding the IYNC 2020 conference in Sydney, Australia, this week under the theme 'Diversity in Nuclear'. The aim of the conference is to promote and enable the diversity of people engaged in the many peaceful uses of nuclear science and technology.

On diversity at ANSTO, Paterson said: "We are harvesting the best from divergent interests, abilities and experience, so that we create new ideas. New communities of interest enable networking beyond our own particular specialities, testing of our own assumptions, and result in a pattern of working which is inherently diverse."

https://www.world-nuclear-news.org/Articles/Young-generation-will-change-narrative-on-nuclear

Life extension for US Peach Bottom nuclear power plant
Nuclear Engineering International, March 10, 2020

The US Nuclear Regulatory Commission has granted plant operator Exelon a 20-year extension that would extend the possible life of the Peach Bottom nuclear power plant's two reactors in Pennsylvania to 80 years, allowing operation until 2054. Peach Bottom 2&3 began operation in 1974, the same year that unit 1 was shut down. Peach Bottom 1, an experimental helium-cooled, graphite-moderated reactor, which began operation in 1964, was one of the first commercial nuclear generators in the USA. However, Peach Bottom 2&3 are General Electric boiling water reactors. The two units were originally rated at 1180MWe but were uprated to 1382MWe in 2018.

Peach Bottom's operating licences run until 2033 (unit 2) and 2034 (unit 3). Exelon said it had "recently made significant investments in new equipment and technologies to increase Peach Bottom's generation capacity by approximately 12%". Many of the plant's major components, including the high and low-pressure turbines, steam dryers, main generators and main power transformers have been replaced or upgraded over the past seven years, Exelon said. Exelon Nuclear's chief nuclear officer, Bryan Hanson, said in a press release that the Peach Bottom nuclear plant is "well-suited" to keep running but noted the difficulties of trying to compete with cheaper natural gas in the electricity market.

https://www.neimagazine.com/news/newslife-extension-for-us-peach-bottom-nuclear-power-plant-7815375

The NuScale SMR and climate change
Nuclear Engineering International, March 11, 2020

It is becoming widely recognised that nuclear power must be a major component of any strategy to combat climate change, because it offers the greatest potential for reduced carbon emissions in the electricity sector. Both the International Panel on Climate Change (IPCC) and the International Energy Agency (IEA) propose a significant increase in nuclear power to achieve carbon emission reduction on a global scale. Many policy-makers view nuclear power as a mitigation for climate change and propose that the decision to use nuclear power for climate mitigation should be based on more than its carbon-free power attributes. However, others question whether nuclear power can adapt to climate change in a manner that is cost effective, ensures safety and provides reliable power, without a significant negative impact to the environment. They assert that in addition to mitigating climate change, the next generation of nuclear plants must be capable of adapting to changes in climate, such as an increased frequency in extreme weather events. The current generation of SMR designs seek to accomplish this.

In particular, the NuScale SMR (left) has significant resilience features, enabling the plant to adapt to climate change and support grid recovery. This design is in the final phases of design certification review by the US Nuclear Regulatory Commission (US NRC). With regard to natural external events, nuclear plants already have significant resilience to high velocity winds and seismic loads. Nuclear plant containments and reactor buildings are typically designed for sustained hurricane winds and tornados, with peak velocities in excess of 460 km/h — including debris generated by such winds. Safety related buildings are designed to very stringent seismic standards that require comprehensive site-specific seismic analyses and rigorous construction and inspection practices.

https://www.neimagazine.com/features/featurethe-nuscale-smr-and-climate-change-7816602/

US regulators issue draft EIS on used fuel facility
World Nuclear News, March 12, 2020

The EIS assesses the environmental impacts of the entire project, from construction to decommissioning. Impacts on land use, transportation, geology and soils, surface waters and wetlands, groundwater, ecological resources, historic and cultural resources, environmental justice and several other areas have all been considered. "The NRC's draft EIS validates our technical position that our proposed subterranean fuel storage facility entails no adverse consequences to the environment or to other enterprises such as oil and gas, ranching and farming operating in the area," Holtec President and CEO Kris Singh said.

"Our stakeholders should know that our HI-STORE underground storage system in New Mexico has the three coveted characteristics, namely readily retrievable canisters to enable at-will relocation, extreme resistance to terror and hurricanes, and a geologically stable terrain that precludes the incidence of earthquakes," he added. The company plans to bring further economic benefits to the host community through a programme to use waste heat from the stored canisters to purify waste water from fracking, he said. In partnership with the Eddy-Lea Energy Alliance (ELEA), Holtec launched the initiative to set up the HI-STORE CISF in 2015. The proposed facility would be built at a site located between Carlsbad and Hobbs on land currently owned by ELEA and would provide an option for storing used nuclear fuel from US power reactors until a permanent repository is available.

Used fuel, which is currently restored at reactor sites, would be transported by rail to the CSIF. In particular, the EIS notes, such away-from-reactor storage would mean that used fuel that is now stored at decommissioned reactor sites may be removed making land at those sites available for other uses.

https://www.world-nuclear-news.org/Articles/US-regulators-issue-draft-EIS-on-consolidated-used

BWXT to produce TRISO fuel for 3D-printed reactor
World Nuclear News, March 12, 2020

NOG is a subsidiary of BWX Technologies Inc, which last October announced it was restarting its existing uranium oxycarbide tristructural isotropic (TRISO) fuel production line at its Lynchburg, Virginia facility. Restart activities will be finalised to allow for production of the TCR fuel to be completed by the autumn of 2020, the company said today. "This contract award is strategically significant given our stated intention to find new markets for our advanced nuclear technologies," BWXT NOG President Joel Duling said. "We are exceedingly pleased with this award and look forward to working with Oak Ridge National Laboratory and the Department of Energy to demonstrate safe and clean nuclear power generation with a novel, low-cost, additively manufactured nuclear reactor."

The scope of the contract includes the fabrication and delivery of uranium kernels, TRISO coated surrogate materials, and TRISO coated uranium kernels. ORNL will use these materials as it continues the development and prototyping of the reactor's design and advanced manufacturing process. The TCR programme aims to demonstrate a revolutionary approach to deploying new nuclear power systems using rapid advanced manufacturing. By building and operating an additively manufactured microreactor, the ORNL programme will explore solutions to the high costs and lengthy deployment timelines. Additive manufacturing is also known as 3D printing. BWXT is also providing manufacturing support to the programme in addition to TRISO fuel, it said.

https://www.world-nuclear-news.org/Articles/BWXT-to-produce-TRISO-fuel-for-3D-printed-reactor

Europe

France calls on Iran to cooperate with international nuclear watchdog
Reuters, March 4, 2020

French President Emmanuel Macron on Tuesday called on Iran to cooperate immediately and fully with international nuclear watchdog IAEA. Macron was speaking after meeting IAEA chief Rafael Grossi and the organization issued a report admonishing Iran for failing to answer its questions about past nuclear activities at three sites and for denying it access to two of them.
“The President wants Iran to strictly fulfill its commitments and obligations in terms of verification and is calling on Tehran to immediately and fully cooperate with the Agency,” the Elysee palace statement said.

https://www.reuters.com/article/us-iran-nuclear-france/france-calls-on-iran-to-cooperate-with-international-nuclear-watchdog-idUSKBN20Q2P3

Europeans, Britain raise North Korea missile launches at U.N. Security Council
Michelle Nichols

Reuters, March 6, 2020

Britain, Germany, France, Estonia and Belgium raised North Korea's latest missile launches behind closed-doors in the United Nations Security Council on Thursday, condemning the tests as a provocative action in violation of U.N. resolutions.

North Korea fired two short-range missiles off the east coast into the sea on Monday, resuming testing after a three-month pause, South Korea's military said. The launch was the first since North Korea fired what it called "super-large multiple rocket launchers" on Nov. 28. In a statement after the 15-member Security Council met, the European members and Britain urged North Korea to engage in good faith negotiations with the United States aimed at Pyongyang's denuclearisation and take concrete steps toward abandoning nuclear weapons and ballistic missile programs.

https://www.reuters.com/article/us-northkorea-missiles-un/europeans-britain-raise-north-korea-missile-launches-at-u-n-security-council-idUSKBN20S2O3

'UK wants a better relationship with Iran in post-Brexit period'
Tehran Times, March 8, 2020

A spokesman for the British Prime Minister Boris Johnson has said that the United Kingdom wants a better relationship with Iran in the post-Brexit period. "The UK wants a better relationship with Iran. Our response to the coronavirus outbreak shows that we are committed to working together on issues of shared concern," the spokesperson said in an exclusive interview with IRNA correspondent in London on condition of anonymity.

https://www.tehrantimes.com/news/445891/UK-wants-a-better-relationship-with-Iran-in-post-Brexit-period

FORATOM calls for the EU to recognize nuclear as a strategic industry
EU Reporter, March 11, 2020

FORATOM welcomes the European Commission's goal of ensuring Europe's industry is fit for the ambitions of today and prepared for the realities of tomorrow, as outlined in its Industrial Strategy published yesterday (10 March). The European nuclear industry stands ready to help Europe achieve its goals in terms of providing clean energy and maintaining Europe's competitiveness. As highlighted in the Industrial Strategy, one of the key challenges ahead is ensuring that Europe's industry has access to a secure supply of clean energy at a competitive price. This is crucial for maintaining Europe's competitiveness. "Nuclear energy can contribute to making this a reality," said FORATOM Director General Yves Desbazeille. "Not only is it low-carbon, it is also flexible, dispatchable and cost-effective".

The European nuclear industry also contributes significantly to the EU's economy as it currently sustains around 1 million jobs in the EU and generates around €450 billion in GDP. This is why it is essential that EU decision-makers take steps to support the nuclear sector's important role within the EU economy. This includes a stable EU policy framework, and one which encourages investment in high-overnight costs, low-carbon technologies. Significant support to R&D and innovation as well as increase funding for research into both current and future nuclear technologies such as SMRs, is also key to prepare for the future, develop new applications and breakthrough designs and technologies.

https://www.eureporter.co/frontpage/2020/03/11/foratom-calls-for-the-eu-to-recognize-nuclear-as-a-strategic-industry/

EUROPE POWER-Day-ahead lifted by fall in wind, French nuclear output
Reuters, March 12, 2020

Prompt power prices rose in Europe's wholesale market as wind power supply was forecast to drop after hitting nearly 76% of installed total capacity in Germany. Germany's day-ahead baseload price was up 16.8% to 18.75 euros ($21.12) per megawatt hour (MWh) at 0935 GMT. The equivalent French contract gained 15.1% to 28.50 euros. Electricity generation from German wind turbines is expected to fall by 3.7 gigawatts (GW) to 35.8 GW on Friday, Refinitiv Eikon data showed. French wind power supply will drop 3.1 GW to 4.3 GW on Friday, the data showed.

French nuclear availability fell 1 percentage point to 74% of maximum capacity following a unplanned outage at EDF's 900 MW Gravelines 2 nuclear reactor. French energy major Total said on Thursday it had launched a project to construct the largest battery storage facility in France, which could help boost the growth of intermittent renewable power in the French energy mix.

https://in.reuters.com/article/europe-electricity/europe-power-day-ahead-lifted-by-fall-in-wind-french-nuclear-output-idINL8N2B52L0

German travel tech startups hunker down for 'nuclear winter'
Douglas Busvine
Reuters, March 15, 2020

Online travel startups based in Germany are hunkering down to survive a coronavirus pandemic that threatens to inflict a "nuclear winter" on the travel industry as bookings plunge and borders close. Berlin-based GetYourGuide and ticket booking website Omio said they planned to spend the expected quiet period working on tech systems to ensure they were more competitive when travel resumes in earnest.

https://in.reuters.com/article/us-health-coronavirus-europe-travel/german-travel-tech-startups-hunker-down-for-nuclear-winter-idINKBN21320N

Russia

Leningrad II unit 1 cuts cooling water usage by 15%
World Nuclear News, March 02, 2020

The VVER-1200 unit added to the site of the Leningrad nuclear power plant has enabled a reduction in the use of cooling water - sourced from the Baltic Sea - by nearly 15%, Rosatom said last week. Reducing the consumption of this natural resource has a positive effect on the environment and reduces the plant's water usage costs, the Russian state nuclear corporation added. The plant draws seawater from Koporskiy Bay, which lies in the southern part of the Gulf of Finland on the Baltic.
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https://www.world-nuclear-news.org/Articles/Leningrad-II-unit-1-cuts-cooling-water-usage-by-15

Russia's new hypersonic weapons help maintain global strategic balance — Putin
TASS News Agency, March 02, 2020

Russia's hypersonic weapons help maintain global stability and strategic balance, Russian President Vladimir Putin has said. In an interview for the special project entitled "20 Questions with Vladimir Putin", the head of state pointed out that the Americans had launched their program for creating a missile defense with the aim of upsetting strategic stability and strategic balance.

"While developing their anti-ballistic missile system, the Americans wanted to upset this strategic stability and balance thinking that if they created a missile defense umbrella, then the other side wouldn't be able to respond adequately if they use nuclear weapons," he noted. "However, after having developed these modern [hypersonic] systems, including those which easily evade any anti-missile ballistic system, we maintain this strategic stability and strategic balance. It is essential not only for us, but also for global security," Putin explained. Replying to a remark by TASS interviewer Andrei Vandenko referring to the Chekhov principle, "if there is a hypersonic rifle hanging on the wall, in the second or third chapter it will unquestionably go off," Putin said real life followed different principles.

https://tass.com/politics/1125437

Bellona's working group aims to keep depleted uranium imports honest
Bellona, March 03, 2020

Over the past several months, there has been alarm in Russian about the import of depleted uranium, a possibly dangerous substance that some regard as radioactive waste. Bellona's Alexander Nikitin, who heads our St Petersburg office, has since helmed a working group aimed at keeping this process transparent for a nervous public. The Russian government had long ago discontinued the imports, so their resumption, under terms that were less than public, took many, Bellona included, by surprise.

Rosatom had ceased the imports in 2009 after widespread environmental outcry over the conditions of its storage in Siberia, which was often in the open air. Depleted uranium, also called uranium hexafluoride, is a colorless radioactive powder that is produced as a byproduct of enriching uranium for use as fuel in nuclear power plants. Many in the nuclear industry, Rosatom included, say that the compound is a useful raw material that can be applied in fuel enrichment. Numerous environmental groups, however, contend that transporting the substance is hazardous, and say that it should be stored as waste rather than reprocessed for further use.

https://bellona.org/news/nuclear-issues/2020-03-bellonas-working-group-aims-to-keep-depleted-uranium-imports-honest

Russia to transition VVER-1200 to longer fuel cycle
Nuclear Engineering, March 03, 2020

Novovoronezh scientists will be the first to transfer a generation 3+ VVER-1200 reactor to an 18-month fuel cycle. Rosenergoatom said that Novovoronezh 6 (also known Novovoronezh II-1 NPP) with a VVER-1200 reactor is to be operated in this way. Since commissioning in 2016, Novovoronezh II-1 has operated on a 12-month fuel cycle. A transition to the 18-month fuel cycle is planned.

Work is underway to finalise the changes to the operational documentation and the relevant documents will be submitted for examination to regulator Rostekhnadzor. Work in the extended fuel cycle will begin with the pilot operation, which will last about three years. Based on the results of the pilot operation, a decision will be made on the final transition to the 18-month fuel cycle. "As a result, the installed capacity utilisation factor of the unit will be increased and an increase in electricity generation will be obtained," said Evgeny Golubev, Head of the Department of Nuclear Safety and Reliability at Novovoronezh Nuclear Power Plant.

https://www.neimagazine.com/news/newsrussia-to-transition-vver-1200-to-longer-fuel-cycle-7803196

Use of LNG in Chukotka will contribute to Northern Sea Route navigation
TASS News Agency, March 03, 2020

Implementation of liquefied natural gas (LNG) projects in the territory of Chukotka will contribute to the development of shipping along the Northern Sea Route and increase the economic efficiency of industrial projects in the region, Head of the regional industrial policy department Mikhail Sobolev told TASS. At the Eastern Economic Forum in 2019, the Chukotka government concluded an agreement on cooperation with Novatek, including introduction of innovative technologies in the use of LNG as the main energy source for marine, automobile transport, and mining equipment of Chukotka enterprises. The agreement includes construction of an LNG terminal for bunkering vessels sailing along the Northern Sea Route, replacement of the Chaunskaya CHPP that works on coal with a gas engine station, which can also replace floating nuclear power plants during a fuel reloading period.

"The use of liquefied natural gas as the base energy carrier in the Chaun-Bilibino industrial region of the district will contribute to the development of shipping along the Northern Sea Route and increase the economic efficiency of Chukotka enterprises. All this will help develop the industrial potential of the Russian Arctic region and expand the use of natural gas as motor fuel," Sobolev said.

https://tass.com/economy/1125901

Shipbuilders may deliver advanced nuclear-powered sub to Russian Navy by May 9
TASS News Agency, March 03, 2020

The Project 955A (Borei-A) lead nuclear-powered submarine Knyaz Vladimir may be delivered to the Russian Navy by May 9, a source in the shipbuilding industry told TASS on Tuesday. "The Knyaz Vladimir is expected to be delivered to the customer by the Victory Day. Most probably, in April," the interlocutor said.

Head of Russia's United Shipbuilding Corporation Alexei Rakhmanov informed on February 10 that "all the finishing work has been done and the trials are over." The Knyaz Vladimir is the improved Project 955A strategic missile-carrying underwater cruiser, which represents the fourth generation of nuclear-powered subs built for the Russian Navy. It was floated out in November 2017. According to

Russia's Defense Ministry, the sub Knyaz Vladimir is less noisy and features improved maneuvering, depth and armament control systems.

https://tass.com/defense/1126225

Lavrov, Zarif discuss Iran nuclear deal, Syria
TASS News Agency, March 04, 2020

Russian Foreign Minister Sergey Lavrov and his Iranian counterpart Mohammad Javad Zarif discussed the situation concerning the Joint Comprehensive Plan of Action (JCPOA) on Iran's nuclear program and the Syrian settlement process over the phone on Wednesday, the Russian Foreign Ministry reported.

"[The two sides] had a meaningful conversation on pressing international issues, including the situation regarding the Joint Comprehensive Plan of Action on Iran's nuclear program and the Syrian settlement [process] from the perspective of the agreements reached by the Astana process guarantor nations," the ministry said. The Russian Foreign Ministry added that the sides discussed prospects for trade and economic cooperation along with other bilateral issues.

https://tass.com/politics/1126569

Recognizing Pakistan, India as nuclear states would hurt Non-Proliferation Treaty: Moscow
The Nation, March 04, 2020

Both India and Pakistan possess nuclear weapons and, along with Israel and South Sudan, they are not parties to the Non-Proliferation Treaty (NPT). Director of the Department for Nonproliferation and Arms Control Vladimir Yermakov said on Wednesday that recognising India and Pakistan as nuclear states would be catastrophic for the Non-Proliferation Treaty (NPT).

"The world is developing swiftly, technologies, including those in the nuclear field, are becoming available to more states. The fact that India, Pakistan, and Israel possess nuclear weapons doesn't help strengthen the Non-Proliferation Treaty. There is no way of discussing the possibility of Indian and Pakistan joining the treaty as nuclear states. Such recognition would be catastrophic for the treaty itself", Yermakov said. While experiencing years of tense relations, both India and Pakistan possess nuclear weapons without being parties to the Non-Proliferation Treaty (NPT).

https://nation.com.pk/04-Mar-2020/recognising-india-and-pakistan-as-nuclear-states-would-hurt-non-proliferation-treaty-moscow

Putin spotlights Kaspersky as Russia's potential answer to Elon Musk
TASS News Agency, March 05, 2020

In an interview for its project entitled "20 Questions with Vladimir Putin". "We have Kaspersky. I believe that he is really good in his line of business," Putin said when asked whom Russia might offer up to be on par with Silicon Valley's Elon Musk. Putin added that Kaspersky was not the only frontrunner.

He pointed out that the head of the Kaspersky Lab was a true leader in his industry and his company might have scored far greater achievements, if it hadn't come up against artificial hindrances in other countries. "If the screws hadn't been tightened, if competition hadn't been artificially stifled, it would

have been much better," Putin pointed out. When asked whether the name Elon Musk rang a bell, Putin replied that it certainly did. However, the head of state noted that he was not familiar with the popular meme: "How do you like it, Elon Musk?" Delving into the prospects of building a counterpart to Musk's Tesla electric-powered automobiles, Putin recalled that businessman Mikhail Prokhorov had promised to deliver on that score someday.

https://tass.com/economy/1126801

Moscow says Washington's moves to upgrade nuclear forces increase possibility of their use
TASS News Agency, March 06, 2020

The United States seeks to provide new capabilities to its nuclear forces, which increases the possibility of their use, Russian Foreign Ministry Spokeswoman Maria Zakharova said at a briefing on Friday. "We would like to point out that Washington is not only upgrading its nuclear forces but also seeks to provide them with new capabilities, which significantly increases the possibility of their use. Particularly concerning are the United States' moves to expand the range of low-powered weapons, including the development and deployment of munitions designed for strategic delivery vehicles," she stated. "This clearly lowers the threshold for the use of nuclear weapons," Zakharova pointed out.

According to her, Washington seems to "consider a nuclear standoff as an actual political option and is now working to create the necessary potential." "Unrestrained military buildup with no laws to limit it will just lead nowhere. A far more effective way to protect national security is to carry on the policy of arms control and building ties with other countries, which is what we are again calling on the US to do," the Russian Foreign Ministry spokeswoman emphasized.

https://tass.com/politics/1127391

Russia's Arctic shipments grow, despite warnings about climate change
Charles Digges
Bellona, March 06, 2020

Cargo shipments passing through the Northern Sea Route, Russia's remote Arctic sea artery, topped 30 million tons during the past year, officials have said, marking a major uptick in fossil fuel deliveries from one of the world's most vulnerable environments.

The shipping upswing, which President Vladimir Putin has made a centerpiece of his economic strategy, comes amid warnings from the president's own ministries that heavy industrialization in the Arctic could make the effects of climate change worse for Russia – which scientists say is already warming 2.5 as fast as fast as any other country in the world. Yet the shipping surge also goes toward fulfilling one of Putin's biggest demands: An order, issued in 2017, that cargo volumes flowing through the Arctic reach at least 80 million tons a year by 2024.

https://bellona.org/news/arctic/2020-03-russias-arctic-shipments-grow-despite-warnings-about-climate-change

Starting a nuclear conflict now 'a political option' for Washington, Moscow believes
Russian Times, March 06, 2020

The US is expanding its nuclear capability with new types of low-yield weapons, and Moscow believes US strategists now consider launching a nuclear strike as a viable option in a conflict.
The US has made adjustments to its nuclear posture and has been introducing low-yield nuclear warheads to its arsenal, including those that can be launched from submarines. Russia sees such developments with great concern, the spokesperson for the Russian Foreign Ministry Maria Zakharova told journalists on Friday. The developments make Moscow believe that the American leadership "has made a decision to consider a nuclear conflict as a viable political option and are creating the potential necessary for it."

https://www.rt.com/news/482489-us-nuclear-political-option/

US wants New START to cover Russian systems currently under development
TASS News Agency, March 10, 2020

The US wants the New START (Strategic Arms Reduction Treaty) to cover the range of new Russian systems currently under development, including the nuclear-powered, underwater, nuclear-armed drone Poseidon, a senior US State Department official informed during a briefing on Monday. "So we need to make sure that it covers not only what is currently covered by New START, but the range of new Russian systems that are being developed that are not and would not be New START accountable. Some of these sort of slightly exotic new systems such as the nuclear-powered, underwater, nuclear-armed drone called Poseidon; the nuclear-powered, nuclear-armed cruise missile, air-launched ballistic missile and that sort of thing," the official said.

"So these are systems that are not currently covered by New START. We hope very much to bring them within the framework of arms control, just as we hope to find an answer to systems that are currently controlled by New START, and as we hope to find an answer to the challenge presented by Russia's large and increasingly diverse range of non-strategic systems, of which they have something on the order of up to 2,000 or so today, and they are on track to increase the size of that non-strategic arsenal as well," the US diplomat noted. "We are in the process of evaluating the possibility of extending New START, taking into account the range of threats that we face today, the changing security environment, and that sort of thing," the US State Department employee noted.

https://tass.com/world/1128079

Progress continues at Russia's Kursk II
Nuclear Engineering, March 10, 2020

Russia will allocate some RUB22 billion($320 million for the construction of the Kursk II nuclear power plant in 2020. The funds will be spent on the construction of both the main facilities - the reactor buildings, turbines, cooling towers, auxiliary administrative buildings, backup energy supply, and pumping station recharge. Construction of 44 facilities is now underway at the site.

"All the construction and installation work planned for February and deliveries to the construction site of equipment ready for this period have been completed in full," said Nikolai Mitrofanov, First Deputy Director for New Unit Construction on 5 March. In February, specialists completed two key events - concreting the overlap at the level of - 0.05 metres of the auxiliary reactor building at Kursk II-2 and installation of the first tier of the outer protective shell of the reactor at Kursk II-1. Specialists fully completed reinforcement of the ring foundation of the evaporative cooling tower for unit 1. "Most of the funds in February were allocated for construction and installation works - more than RUB379 million," Mitrofanov added.

https://www.neimagazine.com/news/newsprogress-continues-at-russias-kursk-ii-7815341

Russia's VNIINM works on TRISO fuel for HTGRs
Nuclear Engineering, March 10, 2020

Scientists at Russia's AA Bochvar Research Institute of Inorganic Materials (VNIINM) have deigned methods for manufacturing fuel for high-temperature gas-cooled reactors. "Microspherical fuel is a key technology in high temperature reactors (HTGRs), said Maxim Yudin, chief specialist for reactor fuel technology at VNIINM on 6 March. "They provide the ability to achieve high coolant temperatures up to 1000°C and efficient retention of fission products inside the micro fuel at fuel temperatures up to 1600°C," he noted. VNIINM is part state nuclear corporation Rosatom's fuel company TVEL.

Scientists at VNIINM's department of fuel technologies for fast and gas reactors have developed draft technical documentation for the manufacture of experimental microspherical fuel based on uranium dioxide with TRISO (TRi-structural ISOtropic) coating. The coating, comprising layers of porous pyrocarbon, dense pyrocarbon, silicon carbide and another layer of dense pyrocarbon, is sequentially applied to the fuel core, which protects the microfuel from external mechanical stress. In addition, scientists developed a draft methodology for determining the geometrical parameters of a microfuel (diameter, non-sphericity coefficient, and thicknesses of coating layers) and carried out a monitoring of the operability of the selected method.

https://www.neimagazine.com/news/newsrussias-vniinm-works-on-triso-fuel-for-htgrs-7815472

Russia's top brass to test-launch Tsirkon hypersonic missile from submarine — source
TASS News Agency, March 11, 2020

Russia plans to test-launch the Tsirkon hypersonic missile from the Project 885 Yasen-class lead submarine Severodvinsk as part of its trials after several launches from the frigate Admiral Gorshkov, a source in the domestic defense industry told TASS on Wednesday. "As part of the continued state trials of the Tsirkon shipborne missile system, the hypersonic missile's firings are planned from the submerged position from the submarine Severodvinsk," the source said.

The Tsirkon hypersonic missile was initially planned to be test-launched from the improved Project 885M Yasen-M lead submarine Kazan but these plans were revised due to the sub's longer-than-expected trials. The source did not specify the date of the hypersonic missile's test-launch from the Severodvinsk, noting, however, that "before that, 3-4 firings from the frigate Admiral Gorshkov will be conducted."

https://tass.com/defense/1128805

Russia's Zircon Hypersonic Missile to Be Test-Launched From Underwater – Reports
Sputnik, March 11, 2020

The Zircon, a scramjet-powered maneuverable anti-ship cruise missile capable of accelerating to speeds of up to 11,100 km an hour, is one of half-a-dozen or so strategic systems being developed by Russia's military to help ensure global strategic stability. The 3M22 Zircon hypersonic cruise missile will undergo testing from aboard the K-560 Severodvinsk submarine, a source in the military industry has told Russian media.

The source did not mention a date when testing is expected to begin, but said it would take place once three-to-four more test launches from the Admiral Gorshkov frigate are completed. The test launch is expected to take place from an underwater firing position. The Russian military has not yet commented on the veracity of the reports. The Zircon was test-launched from the Admiral Gorshkov in January in the Barents Sea, home to Russia's Northern Fleet.

https://sputniknews.com/military/202003111078537074-russias-zircon-hypersonic-missile-to-be-test-launched-from-underwater--reports/

West Asia

Iran

Rouhani hopes nuclear deal will be preserved through cooperation
Tehran Times, March 1, 2020

President Hassan Rouhani has expressed hope that the 2015 nuclear deal, known as the JCPOA, would be preserved through cooperation among its signatories. In a phone conversation with Russian President Vladimir Putin on Saturday, Rouhani praised Moscow's stance on the JCPOA. He also said that Iran is prepared to expand cooperation with Russia in various areas. U.S. President Donald Trump quit the nuclear deal in May 2018 and introduced the harshest ever sanctions on Iran.
Helga Schmid, secretary general of the European External Action Service (EEAS), said in a tweet on February 25 that all sides have a "collective responsibility" to preserve the nuclear deal.

The remaining parties to the JCPOA issued a statement on Wednesday reaffirming the need to keep the multilateral nuclear agreement alive. The pledge was made as the JCPOA joint commission held a meeting in Vienna, where the agreement was struck in July 2015. The meeting was attended by diplomats from the European Union, Iran, Russia, China, Britain, Germany, and France. "All participants reaffirmed the importance of preserving the agreement recalling that it is a key element of the global nuclear non-proliferation architecture," part of the statement said.

https://www.tehrantimes.com/news/445714/Rouhani-hopes-nuclear-deal-will-be-preserved-through-cooperation

U.N. nuclear watchdog admonishes Iran for denying access to two sites
Francois Murphy, John Irish
Reuters, March 3, 2020

The U.N. watchdog policing Iran's troubled nuclear deal with major powers admonished Tehran on Tuesday for failing to answer its questions about past nuclear activities at three sites and for denying it access to two of them. Reuters first reported on Monday that the IAEA planned to issue a second report in addition to its regular quarterly update on Iran's nuclear activities, rebuking Iran for less than full cooperation in general and for failing to grant U.N. inspectors access to one or more sites of interest.

The regular report showed Iran's stockpile of low-enriched uranium nearly tripling since November to more than a tonne, as Tehran continues to breach key limits of its steadily eroding nuclear deal in response to renewed U.S. sanctions against it since Washington pulled out of the accord in May 2018. The extraordinary second report delved into the International Atomic Energy Agency's open questions and Iran's denial of access to sites which two senior diplomats said are believed to have been active in the early 2000s. "I judged it necessary to produce a second report because I thought the

situation is serious enough to merit such a move on my part," new IAEA chief Rafael Grossi, who took office in December, told Reuters in an interview in Paris. The second confidential IAEA report to member states seen by Reuters said Iran has not provided access to the agency to two locations ... and not engaged in substantive discussions to clarify agency questions related to possible undeclared nuclear material and nuclear-related activities.

https://www.reuters.com/article/us-iran-nuclear-iaea/u-n-nuclear-watchdog-admonishes-iran-for-denying-access-to-two-sites-idUSKBN20Q1UE

Iran's diplomat says IAEA will continue JCPOA verification
Tehran Times, March 3, 2020

Kazem Gharibabadi, Iran's ambassador to the Vienna-based international organizations, told reporters on Tuesday that the International Atomic Energy Agency will continue to verify and inspect the 2015 nuclear deal, officially known as the JCPOA. Gharibabadi said that the new IAEA report confirms that the UN body's verification of the JCPOA has been continuing since January 16, 2016. The report also says that the level of nuclear enrichment by Iran is up to 4.5 percent and that Iran's activities related to UF6 enrichment at Fordow have been continuing, he stated.

"Based on this report, stockpile of Iran's enriched uranium until February 19 of the current year has been 1020.9 kilogram. The report also acknowledges that Iran has installed new centrifuges as it had announced," the ambassador stated. Gharibabadi also noted that the report emphasizes that Iran continues to voluntarily and temporarily implement the Additional Protocol and that the UN nuclear watchdog will continue verifying non-diversion of the materials and declared activities.

https://www.tehrantimes.com/news/445806/Iran-s-diplomat-says-IAEA-will-continue-JCPOA-verification

No transaction has been done through INSTEX: Iranian diplomat
Tehran Times, March 4, 2020

Iran's Ambassador to Russia Kazem Jalali said on Tuesday that no transaction has been done through the Instrument in Support of Trade Exchanges (INSTEX). "The Europeans created the INSTEX, however, no transaction has been done within the framework of this mechanism up to this moment," he said during a meeting with Chairman of the Foreign Affairs Committee of the Russian Federation Council Konstantin Kosachev.

Jalali also called for expansion of Tehran-Moscow ties in various spheres. For his part, Kosachev attached importance to expansion of relations. The two sides also held talks over the 2015 nuclear deal, officially known as the JCPOA. INSTEX has been designed by the European Union to facilitate legitimate trade with Tehran. It was introduced on January 31, 2019, by France, Germany, and Britain, the three countries party to the nuclear deal. INSTEX was supposed to be a financial channel and a special mechanism for transferring money in spite of U.S. sanctions on Iran. Its objective was to facilitate Iran's transactions with European companies. Iran has likened INSTEX to a beautiful car that has no gasoline. Iranian Parliament Speaker Ali Larijani said on February 23 that the INSTEX is ineffective and useless.

https://www.tehrantimes.com/news/445829/No-transaction-has-been-done-through-INSTEX-Iranian-diplomat

Iran has crossed a key threshold: IAEA
Tehran Times, March 4, 2020

The United Nations' International Atomic Energy Agency announced in a report on Tuesday that Iran's growing stockpile of nuclear fuel recently crossed a critical threshold. According to the report, for the first time since U.S. President Trump abandoned the 2015 nuclear deal, Tehran appears to have enough enriched uranium to produce a single nuclear weapon. This is while based on a fatwa of the Leader of the Islamic Revolution Ayatollah Ali Khamenei, it is illegitimate to produce or use nuclear weapons and it has no place in Iran's security ideology. Iran has on numerous occasions repeated such position.

The IAEA also documented for the first time how Iran's leadership blocked its inspectors from visiting three critical sites where there was evidence of past nuclear activity, according to the New York Times. The agency's newly appointed director, Rafael Mariano Grossi, an Argentine diplomat who has spent most of his life working on nuclear issues, said it was urgent for "Iran immediately to cooperate fully with the agency" by allowing it access to the sites, and to answer additional questions "related to possible undeclared nuclear material and nuclear-related activities." The situation is a paradox," Mr. Grossi said in a recent interview in Washington, his first since taking over at the IAEA. "What we're verifying is the gradual diminishing compliance with the agreement we're supposed to be verifying."

https://www.tehrantimes.com/news/445847/Iran-has-crossed-a-key-threshold-IAEA

Iran resisting 'dangerous precedent' in IAEA: diplomat
Tehran Times, March 4, 2020

Kazem Gharibabadi, Iran's ambassador to the Vienna-based international organizations, told reporters on Tuesday that Iran is countering a "bad and dangerous precedent" in the IAEA which tries to "give credibility to fake reports by spy services" run by the U.S. and Israel. "Unfortunately, once again the United States and the regime of Israel, by putting pressure on the Agency, are trying to undermine the relations and active and constructive cooperation between Iran and the Agency" in order to derail the UN body from its professional task, the Iranian diplomat said. Gharibabadi made the remarks in reaction to a recent IAEA report concerning the safeguards issues in Iran.

Gharibabadi made it clear that any request from the IAEA for additional verification or access on the basis of fake reports of the spy agencies, including the Israeli spy services, not only will be in contradiction to the IAEA's founding documents and to the verification system, but also do not commit Iran to agreeing to those requests, Tasnim reported "If countries do not take fundamental measures against these plots, their national sovereignty will be undermined," he warned.

https://www.tehrantimes.com/news/445851/Iran-resisting-dangerous-precedent-in-IAEA-diplomat

Iran says IAEA questions and inspection demands must be legally valid
Tehran Times, March 4, 2020

Behrouz Kamalvandi, the spokesman for the Atomic Energy Organization of Iran, said on Wednesday that Iran has "strong reasons" not to respond to "unprincipled questions and demands" by the International Atomic Energy Agency (IAEA). Kamalvandi also said no country in the world has had cooperation with the IAEA as much as Iran, adding Iran has provided "the most detailed" reports to the agency. The remarks by Kamalvandi came one day after the IAEA issued two reports about

Iran's nuclear program. In one of its reports, the agency said it had sent questions to Iran in three separate letters but received no answers.

"The agency identified a number of questions related to possible undeclared nuclear material and nuclear-related activities at three locations in Iran that had not been declared by Iran," the agency said in the report. Kamalvandi said, "Questions and accesses demanded by the International Atomic Energy Agency must have legal basis." Kamalvandi and Iran's ambassador to the Vienna-based international organizations Kazem Gharibabadi have said the IAEA is using bogus intelligence by the Israeli spy services as the basis for its reports.

https://www.tehrantimes.com/news/445853/Iran-says-IAEA-questions-and-inspection-demands-must-be-legally

Iran says IAEA case for inspecting sites based on fake Israeli intel
Reuters, March 5, 2020

Iran on Thursday stood by its decision to deny U.N. nuclear inspectors access to sites where they have questions about past activities, arguing that the agency's case is based on "fabricated" Israeli intelligence. Diplomats who follow the IAEA say the decision to inspect those sites to take environmental samples was based at least in part on a trove of documents Israel says its intelligence agents seized in Iran. Israel calls it an "archive" of past activities. "The Islamic Republic of Iran does not want to set a bad precedence by giving legitimacy to such alleged information," Iran's mission to the IAEA in Vienna said in a statement.

The U.N. nuclear watchdog says it does not take information handed to it at face value and vets it thoroughly before deciding whether to act upon it. Iran granted the IAEA access last year to another site Israel has pointed to, a place Israeli Prime Minister Benjamin Netanyahu called a "secret atomic warehouse" in Tehran. IAEA inspectors found uranium traces at that site, which Iran has described as a carpet-cleaning facility. The Islamic Republic has yet to give a satisfactory explanation for how those traces got there. As for the sites to which Tehran has denied nuclear inspectors access, Iran says the agency's case for going there was too flimsy, even though the IAEA says it has the authority to carry out snap inspections anywhere it needs to. Those so-called "complementary accesses" are often at short notice.

https://www.reuters.com/article/us-iran-nuclear-sites/iran-says-iaea-case-for-inspecting-sites-based-on-fake-israeli-intel-idUSKBN20S1M8

Pompeo says Iran must be held accountable on nuclear commitments
Reuters, March 5, 2020

U.S. Secretary of State Mike Pompeo on Thursday called on all nations to hold Iran accountable for its nuclear commitments and said Tehran's failure to report nuclear material was a clear violation of safeguard agreements. The International Atomic Energy Agency, which is policing Iran's troubled nuclear deal with major powers, sounded an alarm on Tuesday over a lack of Iranian cooperation in clearing up what the IAEA suspects are undeclared activities and materials dating back to the early 2000s.

https://www.reuters.com/article/us-usa-iran-pompeo/pompeo-says-iran-must-be-held-accountable-on-nuclear-commitments-idUSKBN20S1Y3

UN nuclear watchdog asks Iran to 'immediately' cooperate
Arab News, March 9, 2020

The head of the UN's atomic watchdog on Monday urged Iran to "cooperate immediately and fully" with a landmark nuclear agreement with world powers that is hanging by a thread. The agency called on Iran to provide access to two locations, and said Tehran had failed to engage "in substantive discussions" to clarify the agency's questions, said Rafael Grossi, the new chief of the International Atomic Energy Agency (IAEA). Grossi said the IAEA had raised questions "related to possible undeclared nuclear material and nuclear-related activities at three locations that have not been declared by Iran."

He added that the lack of access to two of the three sites and Iran's failure to engage in talks was "adversely affecting the agency's ability ... to provide credible assurance of the absence of undeclared nuclear material and activities in Iran." An IAEA report last week revealed that Tehran refused the agency access in January to the two sites. Diplomats say these are related to Iran's alleged military nuclear projects in the 2000s, and not its current activities. But the renewed focus on Iran's historic program could add to current tensions.

https://www.arabnews.com/node/1639011/middle-east

UN atomic watchdog: Iran still providing nuclear site access
Tehran Times, March 9, 2020

Rafael Grossi, the director general of the International Atomic Energy Agency, said on Monday that Iran continues to provide international inspectors access to its nuclear facilities, even after its announcement it was no longer bound by "any restrictions" of the landmark 2015 deal with world powers, known as the JCPOA. "The agency has not observed any changes to Iran's implementation of its nuclear-related commitments under the JCPOA in connection with this announcement, or in the level of cooperation by Iran in relation to agency verification and monitoring activities under the JCPOA," AP quoted Grossi as telling board members in Vienna.

In his speech to the board members, Grossi called on "Iran to cooperate immediately and fully with the agency, including by providing prompt access to the locations specified by the agency." "The agency has identified a number of questions related to possible undeclared nuclear material and nuclear-related activities at three locations that have not been declared by Iran," Grossi said, according to his prepared remarks. "The agency sought access to two of the locations. Iran has not provided access to these locations and has not engaged in substantive discussions to clarify the agency's questions."

https://www.tehrantimes.com/news/445942/UN-atomic-watchdog-Iran-still-providing-nuclear-site-access

Iran dismisses Saudi claims over safety at Bushehr plant
Tehran Times, March 10, 2020

Kazem Gharibabadi, Iran's ambassador to the Vienna-based international organizations, has dismissed Saudi Arabia's claims about safety standards at Iran's Bushehr power plant. Speaking at a meeting of the IAEA Board of Governors on Monday, Gharibabadi warne against attempts at the International Atomic Energy Agency (IAEA) to politicize technical issues. He described the Saudi envoy's allegations as "too far from reality and highly misleading." "The problem arises when

technical issues turn political," he added, according to Press TV. Riyadh had in the past claimed that potential radioactive leakage from the nuclear power plant could endanger the Persian Gulf region, including the kingdom's air, food and water desalination stations.

The Bushehr facility sits 17 kilometers southeast of the port city of Bushehr along the Persian Gulf. The Iranian diplomat further outlined the safety status of the 1,000-megawatt Bushehr power plant — the first operational nuclear facility in Iran constructed by Russia's Atomstroyexport company. He said Iran, as a state receiving technical assistance from the Agency, recognizes the importance of such support in strengthening its national nuclear safety infrastructure. Gharibabadi underlined that the IAEA had conducted an "Integrated Regulatory Review Service" mission at the Bushehr plant in February and March 2020, which was assessed as satisfactory. The IAEA delegation "concluded that Iran's nuclear safety system has the competence, capacity, and capability to monitor nuclear power activities," he said. Unlike Iran, Saudi Arabia, as a newcomer, has been developing and advancing a "non-transparent" nuclear program, said Gharibabadi. "It should be emphasized that the main responsibility in the area of nuclear safety lies with the member state itself and this is not a commodity that could be imported."

https://www.tehrantimes.com/news/445953/Iran-dismisses-Saudi-claims-over-safety-at-Bushehr-plant

Iran says IAEA questions should be technical, legal
Tehran Times, March 11, 2020

Foreign Ministry spokesman announced on Wednesday that Iran is only tasked to answer "legal and technical questions" by the International Atomic Agency Organization (IAEA). In his video news conference, Abbas Mousavi said, "Iran's cooperation framework with the agency is obvious, so the agency should keep its creditability respected and do not pursue any futile question or claim planned by anyone or any regime."

"The agency's questions should enjoy legal and technical bases," the spokesman said, rejecting any politically-tainted attempt by certain regimes to force the IAEA to put Iran under pressure. Mousavi said that Atomic Energy Organization of Iran (AEOI) spokesman Behrouz Kamalvandi has responded to the recent claims by the IAEA underscoring that "we have had the highest level of technical cooperation with the agency (and that) Iran reserves the right not to answer any baseless questions asked by the agency."

https://www.tehrantimes.com/news/446006/Iran-says-IAEA-questions-should-be-technical-legal

Bahrain accuses Iran of 'biological aggression', Gulf states try to curb coronavirus
Nafisa Eltahir, Lisa Barrington
Reuters, March 12, 2020

Bahrain accused Iran on Thursday of "biological aggression" by covering up the spread of the coronavirus and failing to stamp Bahraini travelers' passports. As the death toll continued to rise in Iran, Gulf Arab states took new steps to contain the virus, with Saudi Arabia's highest religious authority saying anyone diagnosed with coronavirus was forbidden from attending Friday prayers. Attendance is generally mandatory for able-bodied men in Islam, but Riyadh said those under quarantine and those afraid of being infected or infecting others need not attend.

Many of the recorded infections throughout the Gulf region are linked to travel to Iran, which hosts several important shrines and pilgrimage sites for Shi'ite Muslims. "With this behavior, Iran has allowed the disease to travel abroad, and in my estimation this constitutes a form of biological aggression that is criminalised by international law, as it has put in danger our safety and health and that of others," Bahraini Interior Minister General Sheikh Rashid bin Abdulla Al Khalifa said on Twitter.

https://www.reuters.com/article/us-health-coronavirus-saudi-travel/bahrain-accuses-iran-of-biological-aggression-gulf-states-try-to-curb-coronavirus-idUSKBN20Z03K

To help stem coronavirus, lift sanctions on Iran
Tehran Times, March 14, 2020

The COVID-19 (coronavirus) pandemic is far from the first proof of how intertwined we are as a global community. The climate crisis and the refugee crisis have long been glaring examples that the wars or CO2 emissions on one continent risk the lives and well-being of people on another continent. What coronavirus is providing, however, is a unique opportunity to look specifically at how the intentional damage caused to one country's healthcare system can make it harder for the entire world to address a pandemic.

On February 19, Iran announced two cases of the coronavirus, reporting within hours that both patients had died. By March 13, at the time of this writing, the total number of coronavirus infections in Iran is at least 11,362 and at least 514 people in the country have died. Per capita, it is currently the most heavily infected country in the Middle East and third in the world, after Italy and South Korea. In the Middle East, coronavirus cases have now been identified in Israel/Palestine, Saudi Arabia, Jordan, Qatar, Bahrain, Kuwait, UAE, Iraq, Lebanon, Oman, and Egypt. If Iran is not able to stem the crisis, the virus will continue to spread throughout the Middle East and beyond. By the time the coronavirus hit Iran on February 19, the country's economy, including its healthcare system, had already been devastated by U.S. sanctions.

https://www.tehrantimes.com/news/446110/To-help-stem-coronavirus-lift-sanctions-on-Iran

Israel

Netanyahu to AIPAC: No nuclear Iran on my watch
i24, March 03, 2020

Israel will work to make sure that Iran cannot obtain nuclear weapons, caretaker Prime Minister Benjamin Netanyahu told the AIPAC conference on Sunday. He pointed at the Lebanese Hezbollah as the second most dangerous threat for the Jewish State, warning that it had an arsenal of missiles capable of reaching deep into Israel --but added measures were taken on that front as well.

The PM addressed the annual event in a video message through satellite uplink, with the annual gathering being held hours before Israelis would head to the polling stations for third time in less than a year. Netanyahu said that the event worked as a perfect message for all those seeking to undermine the US-Israeli ties that they would fail and reinstated his pledge to prevent a nuclear Iran. He praised the Trump administration's Middle East peace plan, saying that it opened the door to a political settlement with the Palestinians and normalization with Arab states, and Israel will be ready to negotiate on the basis of the plan at any moment.

https://www.i24news.tv/en/news/israel/diplomacy-defense/1583099715-netanyahu-to-aipac-no-nuclear-iran-on-my-watch

The impact of AIPAC's 'international' pro-Israel advocacy
Benjamin Weinthal
The Jerusalem Post, March 13, 2020

The American Israel Public Affairs Committee (AIPAC) annual policy conference concluded last week with an increased intensification of its global pro-Israel advocacy – a showcase of diverse international political leaders and diplomats. While the usual discussions of the Israel-PLO peace process and bipartisan support for Israel played out, one key takeaway that was not front and center in the media coverage was how this American organization is playing a role in international pro-Israel advocacy.

The packed event attracted 18,000 people, including 4,000 students. Among them, however, were presidents from the Democratic Republic of the Congo, Columbia, Estonia and Serbia. There was also a cabinet-level minister from a Shi'ite majority state Azerbaijan. The packed event attracted 18,000 people, including 4,000 students. Among them, however, were presidents from the Democratic Republic of the Congo, Columbia, Estonia and Serbia. There was also a cabinet-level minister from a Shi'ite majority state Azerbaijan.

https://www.jpost.com/American-Politics/AIPAC-as-the-center-of-the-pro-Israel-world-620611

Turkey

GE Renewable Energy selected for Turkey's 70MW Guney wind farm
Power Technology, March 09, 2020

GE Renewable Energy has been awarded a wind turbine supply contract by utility company Sanko Enerji for a wind farm in Turkey. As per the terms of the contract, GE has agreed to deliver 12 Cypress units as well as two units of 3MW for the 70MW Guney wind farm. The wind facility is expected to generate clean energy that will be sufficient to power 71,000 households in the region while offsetting nearly 200,000 tonnes of CO_2 emissions into the atmosphere. Additionally, the project is expected to support Turkey's renewable energy target to power two-third of the country with renewable energy.

GE Renewable Energy Middle East, North Africa & Turkey onshore wind president and CEO Manar Al-Moneef said: "There is a tremendous potential in Turkey to reach ambitious wind energy targets, and we are delighted to be partnering once again with Sanko Enerji to generate more renewable energy for the country but also to help drive the cost of wind energy down through innovative technologies."

https://www.power-technology.com/news/ge-renewable-energy-selected-for-turkeys-70mw-guney-wind-farm/

UAE

UAE completes fuel loading at Barakah 1

World Nuclear News, March 02, 2020

The United Arab Emirates has declared itself the first country in the Arab world to become an operator of a nuclear power plant following Emirates Nuclear Energy Corporation's (ENEC) completion of fuel loading this week at Barakah unit 1 in Abu Dhabi. The UAE said it has thus joined a "limited group of countries worldwide", now 33 in total, that have "successfully developed the intellectual and infrastructural capacity to use nuclear energy to generate safe, clean, and reliable baseload electricity". Comprising four Korean-supplied APR1400 nuclear reactors, the plant will generate up to 25% of the UAE's electricity demand, avoiding the emission of 21 million tonnes of CO2 that would otherwise have been produced by fossil fuels.

The UAE's status as a nuclear power plant operator is a responsibility it takes "very seriously", ENEC CEO Mohamed Al Hammadi said, adding that the company was "safely and steadily transitioning through the sophisticated, highly-regulated process to advance unit 1 towards full electrical generation capacity". Fuel loading was led by a team certified by the UAE's Federal Authority for Nuclear Regulation (FANR) with more than 90% participation by Emirati personnel trained in the operation of APR1400 technology in South Korea. This team led the transferral and loading of the 241 fuel assemblies into unit 1 which was concluded earlier this week.

https://www.world-nuclear-news.org/Articles/UAE-completes-fuel-loading-at-Barakah-1

UAE becomes the first peaceful nuclear energy operating nation in the Arab World
Ashfaq Ahmed
Gulf News, March 03, 2020

The United Arab Emriates (UAE) has become the first peaceful nuclear energy operator in the Arab world following fuel assembly loading in to Unit 1 reactor at Barakah nuclear plant in Abu Dhabi. The Emirates Nuclear Energy Corporation (ENEC) announced on Tuesday the UAE has also become the first country in the Arab World to achieve this status, joining a limited group of countries worldwide that have successfully developed the intellectual and infrastructural capacity to use nuclear energy to generate safe, clean, and reliable baseload electricity.

The milestone was achieved this week, following the completion of the process to load fuel assemblies into the Unit 1 reactor, which commenced after the receipt of the Operating Licence from the UAE Federal Authority for Nuclear Regulation (FANR) in February.

https://gulfnews.com/uae/uae-becomes-the-first-peaceful-nuclear-energy-operating-nation-in-the-arab-world-1.70123175

East Asia
Japan

Japan: Images of Fukushima, Chernobyl a no-go at U.N. event
Yuka Takeshita
The Asahi Shimbun, March 4, 2020

The Foreign Ministry says it cannot sponsor an exhibit by hibakusha atomic bomb survivors at the United Nations because it contains panels about the Fukushima and Chernobyl nuclear disasters. Members were baffled because the ministry did not state its reasons for objecting to the displays

other than that “one of three pillars of the Nuclear Non-proliferation Treaty is the peaceful use of nuclear power.” Moreover, the ministry sponsored similar exhibits since 2005 by survivors of the 1945 atomic bombings of Hiroshima and Nagasaki.

At a meeting on Feb. 19, ministry officials bristled over two panels explaining the meltdowns at Chernobyl in 1986 and Fukushima in 2011, and told organizers “the ministry cannot sponsor the (exhibit).” The exhibit, scheduled to open on April 27, was organized by Nihon Hidankyo (Japan Confederation of A-and H-Bomb Sufferers Organizations) and jointly hosted by Hiroshima and Nagasaki city governments.They have held the exhibit once every five years to coincide with the NPT Review Conference held at the U.N. headquarters in New York.

http://www.asahi.com/ajw/articles/13185549

Typhoon-proof wind turbine for a non-nuclear age in Japan
Takahiro Takenouchi
The Asahi Shimbun, March 5, 2020

A bladeless wind turbine that can withstand the fiercest typhoon. The concept is a godsend to those who champion alternative sources of energy. An enterprising engineer designed just such a device in the aftermath of the 2011 nuclear disaster, figuring that Japan "would be finished" energy-wise if it was hit by another nuclear catastrophe. Atsushi Shimizu, 40, figured his invention will help Japan wean itself from nuclear power generation altogether. Another advantage is that his system is entirely safe. Shimizu was working for a leading manufacturer of sensors when the earthquake and tsunami disaster hit, triggering a triple meltdown at the Fukushima No. 1 nuclear power plant. It was then that he floated his concept of a new style of wind turbine as an energy source.

http://www.asahi.com/ajw/articles/13144489

Abe visits Futaba just days before anniversary of nuclear disaster
Naoki Matsuyama
The Asahi Shimbun, March 7, 2020

Prime Minister Shinzo Abe on March 7 visited the virtual ghost town of Futaba, a once bustling community until the 2011 nuclear disaster hit and forced all the residents to evacuate. His visit came four days before the ninth anniversary of the earthquake and tsunami disaster that triggered the crisis at the Fukushima No. 1 nuclear power plant, and just a few days after an evacuation order was lifted for a small portion of the town. Futaba is one of two towns whose jurisdictions cover the crippled facility.

Speaking with reporters, Abe was upbeat about the prospects of Futaba eventually recovering its former self, saying, “The lifting of the evacuation order for part of Futaba is a major step forward toward full-scale reconstruction.” He pledged that the government would continue with efforts to allow evacuees to return to the Hamadori district of Fukushima Prefecture facing the Pacific Ocean and which covers Futaba. It was Abe’s 20th visit to Fukushima Prefecture and his first since April 2019. He visited Futaba Station on the JR Joban Line, which will resume full service on March 14. An evacuation order for the area around the station was lifted March 4 to allow trains to run through it. While much of Futaba is still classified as a “difficult-to-return zone” because of high radiation levels, the area around the station has been designated as a core component of special reconstruction work to allow residents to return. Plans are afoot to lift the evacuation order for the entire special reconstruction work zone by spring 2022 so residents can begin returning. Abe took a test run on the

Joban Line and met with Futaba Mayor Shiro Izawa at the station platform, where Izawa explained what his town is doing to rebuild.

http://www.asahi.com/ajw/articles/13195260

Japan's plan for radioactive water defies international law
Duncan E. J. Currie and Shaun Burnie
Korea Times, March 9, 2020

Millions of tons of highly contaminated water from Fukushima Daiichi being discharged into the Pacific Ocean not only poses a threat to humans and the environment, but also raises questions on how the decision by the Japanese government relates to international law. What we conclude is that the decision by the Japanese government to treat and then release radioactive water at Fukushima into the ocean would pose a direct threat to the marine environment, including that of the jurisdictional waters of the Korean peninsula. As such, Japan would be in breach of its obligations as defined under international environmental law, including the United Nations Convention on the Law of the Sea (UNCLOS). Consequently, the Korean government has the legal right to oppose the discharging of radioactive water from the Fukushima Daiichi nuclear plant.

The discharge of radioactive materials into the marine environment from the nuclear plant will inevitably increase marine species' exposure to radioactivity, with the exact level of exposure depending on multiple variables. The concentrations in biota are of direct relevance to those who may consume them, including marine species, and ultimately, humans. The one million tons of highly contaminated water stored in nearly 1000 tanks at the Fukushima Daiichi nuclear plant currently contain concentrations of radioactive tritium much higher than is permitted by Japanese regulation for discharge into the ocean. One principle concern is that the high relative biological effectiveness (RBE) of tritium's beta radiation, its ability to bind with cell constituents to form organically-bound tritium (OBT) and its short-range beta particle, mean that it can damage DNA.

http://www.koreatimes.co.kr/www/nation/2020/03/113_285553.html

Safety of Fukushima waste water focus of sea release debate
The Asahi Shimbun, March 11, 2020

Inside a giant decontamination facility at the destroyed Fukushima nuclear power plant, workers in hazmat suits monitor radioactive water pumped from three damaged reactors, making sure it’s adequately--though not completely--reated. Three lines of equipment connected to pipes snaking around in this dimly lit, sprawling facility can process up to 750 tons of contaminated water a day. Four other lines elsewhere in the plant can process more. From there, the water is pumped to a complex of about 1,000 temporary storage tanks that crowd the plant’s grounds, where additional tanks are still being built. Officials say the huge tanks will be completely full by the summer of 2022.

http://www.asahi.com/ajw/articles/13205236

North Korea

North Korea says Kim inspected firing drill
Korea Times, March 3, 2020

North Korean leader Kim Jong-un oversaw artillery units' firing drills, state media said Tuesday, a day after South Korea said the communist nation fired what appeared to be two ballistic missiles. South Korea's military said the North fired two projectiles believed to be short-range ballistic missiles into the East Sea in the first such launches since Pyongyang warned of a "new strategic weapon" and "shocking actual action" at the beginning of the year.

After inspecting the long-range artillery sub-units' testing of the multiple rocket launcher system, Kim expressed "great satisfaction" and called for a strong "military readiness posture." "He said that the People's Army should keep full combat-readiness to protect the sky, land and sea of the country from any encroachment, steadily increase its combat capabilities," according to the Korean Central News Agency.

http://www.koreatimes.co.kr/www/nation/2020/03/103_285465.html

North Korea exported sand to China in violation of U.N. sanctions, group says
Josh Smith
Reuters, March 4, 2020

For several months last year, a steady stream of ships was observed dredging sand in a North Korean bay then transporting it to China, a Washington-based think-tank said on Wednesday. The extraction of sand from North Korea to China would violate a 2017 U.N. Security Council resolution that prohibits North Korea from “supplying, selling, or transferring sand”, the Center for Advanced Defense Studies (C4ADS) said in a report. The group’s researchers tracked the dredging and transport of the sand through commercial satellite imagery and shipping databases.

https://www.reuters.com/article/us-northkorea-china-sanctions/north-korea-exported-sand-to-china-in-violation-of-u-n-sanctions-group-says-idUSKBN20R0WB

Diplomats flown out of North Korea, missions shut amid coronavirus concern
Reuters, March 9, 2020

North Korea flew dozens of diplomats out of the country to Russia on Monday, including the staff of the German, French and Swiss missions which were shut amid concern in the isolated country about the possible spread of the coronavirus. North Korea has not reported any cases of the illness, despite bordering China where the epidemic started and South Korea which is suffering a major outbreak. Pyongyang has reinforced border checks and ordered foreigners from any country that has reported a case to spend 30 days in quarantine.

Diplomats who were flown on Monday to Vladivostok, a Russian port on the Pacific Ocean, said North Koreans now wear face masks and are clearly concerned about the spread of the disease. “There is a certain tension in the city and all of the country because people are aware of the coronavirus. They have it in their media, so it’s the biggest issue they are dealing with at the moment,” Pit Heltmann, Germany’s ambassador, told reporters after arriving in Vladivostok.

https://www.reuters.com/article/us-health-coronavirus-northkorea/diplomats-flown-out-of-north-korea-missions-shut-amid-coronavirus-concern-idUSKBN20W0HL

Isolated North Korea should allow outside coronavirus help: U.N.
Stephanie Nebehay
Reuters, March 9, 2020

A U.N. human rights investigator urged reclusive North Korea y to allow full access for medical and humanitarian experts amid concern the coronavirus could hit malnourished people hard. The World Health Organization (WHO) says North Korea has not reported any cases, despite bordering China where the epidemic started and South Korea which is suffering a major outbreak. Tomas Ojea Quintana, U.N. special rapporteur for rights in the Democratic People's Republic of Korea (DPRK), reiterated concerns on Monday about political prison camps and "pervasive" surveillance. But he acknowledged "extensive efforts" by Pyongyang's government to prevent a COVID-19 outbreak. "As the Supreme Leader of the country recently recognized, a widespread infection in the DPRK would entail serious consequences for the people," he told the U.N. Human Rights Council, referring to Kim Jong-un. "The reality is that many North Koreans are malnourished, suffering from stunted growth, and thus more vulnerable if infected." North Korea has limited medical capabilities, he added.

"Hospitals and other medical facilities lack adequate electricity, medicine, sanitation, and water," he said, noting that foreign aid groups provide most critical healthcare needs. "The Government of the DPRK should allow full and unimpeded access to medical experts and humanitarian actors, and relax restrictions on access to information," Ojea said, urging the government to adhere to rights standards during lockdowns, quarantines and treatment of potential patients. "Further isolation of the country is not the answer," he said, noting North Korea's economic suffering and the "detrimental impact" of sanctions over its nuclear and missile program. North Korea's delegation, which does not recognize his mandate, did not attend the annual debate.

https://www.reuters.com/article/us-health-coronavirus-northkorea-rights/isolated-north-korea-should-allow-outside-coronavirus-help-u-n-idUSKBN20W1G6

North Korea fires projectiles into sea; U.S., China urge return to talks
Hyonhee Shin, Sangmi Cha
Reuters, March 9, 2020

North Korea launched multiple projectiles into the sea on Monday as part of firing drills, according to South Korea's military, drawing U.S. and Chinese appeals for Pyongyang to return to talks on ending its nuclear and missile programs. Launched a week after North Korea resumed missile tests following a three-month break, the projectiles, including from a multiple-launch rocket system (MLRS), flew up to 200 km (124 miles) and reached 50 km in altitude, South Korea's Joint Chiefs of Staff (JCS) said. Hopes were raised for dialogue when North Korean leader Kim Jong Un met U.S. President Donald Trump for a historic summit in Singapore in June 2018. But no significant progress has been made despite two more meetings between the leaders.

https://www.reuters.com/article/us-northkorea-missiles/north-korea-fires-projectiles-into-sea-u-s-china-urge-return-to-talks-idUSKBN20V14H

North Korea fires 3 projectiles again
Kang Seung-woo
Korea Times, March 9, 2020

North Korea launched three projectiles into the East Sea, using multiple rocket launchers, Monday, the South Korean military said. The launch came a week after Pyongyang test-fired two projectiles from what it called a super-large multiple rocket launcher, and five days after its leader Kim Jong-un sent South Korean President Moon Jae-in a letter expressing condolences over the coronavirus

outbreak here. North Korea pundits say its "unfathomable" series of acts are aimed at strengthening its presence in the North Korea-U.S. nuclear negotiations, while trying to pursue a two-way approach of remaining on good terms with the South and advancing its military capability at the same time.
According to the Joint Chiefs of Staff (JCS), the projectiles were fired from the Sondok area of South Hamgyong Province, where the regime has carried out many of its launches, and they flew up to 200 kilometers, reaching 50 kilometers in altitude.

The North Korean leader is believed to have observed the launches, it added. However, no other details, including models, were immediately available as the JCS said South Korean and U.S. intelligence authorities were closely analyzing the details, adding that the military was "monitoring the situation in case there are additional launches and maintaining a readiness posture." The U.S. Forces Korea also confirmed the launch, saying it "would continue to monitor the situation and was consulting closely with our South Korean and Japanese allies."

http://www.koreatimes.co.kr/www/nation/2020/03/113_285876.html

North Korea leader Kim Jong Un oversaw latest missile launch: KCNA
Reuters, March 10, 2020

Kim Jong Un personally oversaw Monday's "firepower strike drill," North Korea state media reported on Tuesday, including the launch of what appeared to be short-range ballistic missiles for the second time in a week. North Korea launched multiple projectiles into the sea on Monday as part of firing drills, according to South Korea's military, drawing U.S. and Chinese appeals for Pyongyang to return to talks on ending its nuclear and missile programs. Kim was joined by the commanders of the Korean People's Army and expressed "great satisfaction with the result," North Korean state news agency KCNA reported. "The purpose of the firepower strike drill was to inspect the sudden military counterattack capability of the long-range artillery units on the front," KCNA said. Photos released by KCNA showed troops firing a number of artillery guns, as well as missiles from a multiple-launch rocket system (MLRS) with four launching tubes.

The missiles flew up to 200 km (124 miles) and reached 50 km in altitude, South Korea's Joint Chiefs of Staff (JCS) said. Britain, Germany, France, Estonia and Belgium raised North Korea's recent launches at the U.N. Security Council on Thursday, calling them provocative actions that violated U.N. resolutions. But North Korea's foreign ministry criticized the European stand as "U.S.-instigated reckless behavior" and Kim's sister said the drills were not meant to threaten anyone.

https://www.reuters.com/article/us-northkorea-missiles/north-korea-leader-kim-jong-un-oversaw-latest-missile-launch-kcna-idUSKBN20W337

Misc

Kazakh court frees ex-CEO of state nuclear firm
Reuters, March 3, 2020

A court in Kazakhstan on Tuesday set free former state nuclear firm chief executive Mukhtar Dzhakishev, whose conviction on corruption charges in 2010 many government critics called politically motivated. Dzhakishev has served about 11 years of his 14-year sentence and his family and supporters - who broadcast live from the court hearing in the city of Semey on Tuesday - have urged his release on health grounds.

Dzhakishev, who had led Kazatomprom through a period of rapid growth in the early 2000s, ended up in prison shortly after his friend Mukhtar Ablyazov fell out with then-president Nursultan Nazarbayev and fled the oil-rich nations, accusing its government of illegally seizing his assets. The government of Kazakhstan, in turn, accused both Ablyazov and Dzhakishev of embezzlement in separate criminal cases. Ablyazov now lives in France while his Kazakhstan-based political movement routinely stages public protests against Nazarbayev and his protege and successor, President Kassym-Jomart Tokayev.

https://www.reuters.com/article/us-kazakhstan-dzhakishev/kazakh-court-frees-ex-ceo-of-state-nuclear-firm-idUSKBN20Q0I8

Ionic Exchange-based Liquid Nuclear Waste Treatment Market to Witness Astonishing Growth by 2028 | Bechtel Corporation, Fluor Corporation, Areva SA, Chase Environmental Group
Open PR, March 03, 2020

ionic exchange-based liquid nuclear waste treatment market is projected to register high demand during the forecast period with increasing demand from major end-use industries such as growing nuclear power construction projects worldwide during the forecast period. Liquid nuclear waste is generated through nuclear reactors, which need intensive treatment before disposing it into the environment. Liquid nuclear waste is usually a by-product of nuclear power generation and other applications of nuclear technology, such as research and medicine. Liquid nuclear waste is hazardous to most forms of life and the environment and is regulated by government agencies to protect human health and the environment.

What is liquid nuclear waste? Liquid nuclear waste is mostly used at nuclear plants for producing cheap and sustainable energy. It can be divided into three categories, namely, high level liquid nuclear waste, low level liquid nuclear waste, and intermediate-level liquid nuclear waste. The high level liquid nuclear waste has most astounding radioactivity and these are stored separately in water ponds for characteristic reduction of their radioactivity. After the decrease in the radioactivity level, the high level radioactive liquid waste is treated through ionic exchange-based liquid nuclear waste treatment techniques. Ionic resins are utilized in exchangers, which play a vital role in filtering out radioactive nucleoids from the wastewater stream. Most ionic resins are recyclable and can be used over an extensive period of time for the treatment of liquid nuclear waste.

https://www.openpr.com/news/1956726/ionic-exchange-based-liquid-nuclear-waste-treatment-market

Uzbekistan signs over $2 billion worth of deals with Saudi's ACWA Power
Reuters, March 5, 2020

Uzbekistan has signed more than $2 billion worth of strategic agreements with Saudi developer ACWA Power to boost electricity generation and develop technical expertise, its energy ministry said on Thursday. The deals include a 25-year power purchase agreement worth $1.2 billion which will see ACWA build and operate a gas-turbine power plant in the country, the ministry said. The project, on which Tashkent invited bids this week, will boost Uzbekistan’s total capacity by 12%. The agreements also include a $550 million-$1.1 billion deal to build a wind power plant. The Central Asian nation has already struck a deal with the United Arab Emirates’ Masdar to build a 100 MW

solar plant, and has announced plans for three more 200 MW solar facilities. It is also working with Russia's Rosatom to build a nuclear power plant.

https://www.reuters.com/article/us-uzbekistan-acwa-deal/uzbekistan-signs-over-2-billion-worth-of-deals-with-saudis-acwa-power-idUSKBN20S2G9

Cabinet nods protocol to operate RNPP with Russian assistance
Dhaka Tribune, March 09, 2020

The cabinet has approved in principle the draft of a protocol to be signed with Russia for assistance in operating and maintaining the Ruppoor Nuclear Power Plant (RNPP), following its construction. The approval was given in regular cabinet meeting with Prime Minister Sheikh Hasina in the chair at her office on Monday, reports BSS.

"The cabinet gave consent in principle to the protocol for bringing amendments to the agreement between the Russian government and Bangladesh government on cooperation concerning the construction of the nuclear power plant on the territory of Bangladesh," Cabinet Secretary Khandker Anwarul Islam said at briefing at the secretariat after the meeting.

https://www.dhakatribune.com/bangladesh/2020/03/09/cabinet-nods-protocol-to-operate-rnpp-with-russian-assistance

The countries building miniature nuclear reactors
Lois Parshley
BBC, March 09, 2020

Huge computer screens line a dark, windowless control room in Corvallis, Oregon, where engineers at the company Nuscale Power hope to define the next wave of nuclear energy. Glowing icons fill the screens, representing the power output of 12 miniature nuclear reactors. Together, these small modular reactors would generate about the same amount of power as one of the conventional nuclear plants that currently dot the United States – producing enough electricity to power 540,000 homes. On the glowing screens, a palm tree indicates which of the dozen units is on "island mode", allowing a single reactor to run disconnected from the grid in case of an emergency.

This control room is just a mock-up, and the reactors depicted on the computer screens do not, in fact, exist. Yet Nuscale has invested more than $900m (£685m) in the development of small modular reactor (SMR) technology, which the company says represents the next generation of nuclear power plants. Nuscale is working on a full-scale prototype and says it is on track to break ground on its first nuclear power plant – a 720-megawatt project for a utility in Idaho – within two years. The US Nuclear Regulatory Commission has just completed the fourth phase of review of Nuscale's design, the first SMR certification the commission has reviewed. The company expect final approval by the end of 2020. The US Department of Energy has already invested $317m (£241m) in the research and development of Nuscale's SMR project.

https://www.bbc.com/future/article/20200309-are-small-nuclear-power-plants-safe-and-efficient

New nuclear projects: where and when will they be built?
Ilaria Grasso Macola
Power Technology, March 10, 2020

The International Atomic Energy Agency (IAEA) concluded its 12-day Integrated Nuclear Infrastructure Review (INIR) mission in Belarus on 4 March, aimed at reviewing the country's infrastructure development for its first nuclear power reactor. Belarus, alongside the UAE, is set to complete construction of its first nuclear power plant this year. On a global scale, 15 countries – including China, India and Russia – will conclude the development of nuclear power projects, which are currently under construction, in the next few years.

According to the World Nuclear Association, there are 440 nuclear power reactors in the world, amounting to a combined capacity of 400GWe, while more than 100 have been ordered. Estimates say that in 2018 these produced 2,563TWh of electricity, roughly 10% of the world's electricity. But how many nuclear power reactors will be built in the next years and where? Between 2020 and 2026, 48 power reactors will be built globally. The peak will take place between 2020 and 2022, with 32 reactors due to begin operations. China will lead the way with 12 plans already underway, followed by India and Korea. Power Technology looks at the two of the most important projects, Belarus' Ostrovets and the UAE's Barakah power plants.

https://www.power-technology.com/features/new-nuclear-projects-where-when/

'IAEA main weaknesses is relying on information provided by its members'
Javad Heirannia
Tehran Times, March 11, 2020

Marc Finaud, the former French Foreign Ministry spokesman, says that one of the main weaknesses of the Agency is not to have any means of collecting its own intelligence and relying on the information provided by its Member States. Former Senior Resident Fellow at the United Nations Institute for Disarmament Research (UNIDIR) adds "The only way for the IAEA to check the validity of such information is to conduct on-site inspections and report on its findings."

A senior member of Geneva Centre for Security Policy also says that "The fact that Israel, as a non-party to the Non-Proliferation Treaty (NPT), is not subject to inspections and possesses nuclear weapons, of course, does not grant Israel any particular rights but fuels the feeling of double standards in the Middle East and worldwide."

https://www.tehrantimes.com/news/446001/IAEA-main-weaknesses-is-relying-on-information-provided-by-its

Nuclear power plants are coming to the battlefield
The Economist, March 12, 2020

War zones are dangerous places. Where better, then, for a nuclear reactor? On March 9th America's government awarded a trio of firms $39.7m to design "microreactors" that can supply a few megawatts of power to remote military bases, and be moved quickly by road, rail, sea and air.
The idea of small reactors is as old as nuclear power itself. In July 1951, five months before a reactor in Idaho became the first in the world to produce usable electricity through fission, America began building uss Nautilus, a nuclear-powered submarine.

In the 1960s and 1970s small reactors powered bases in Alaska and Greenland, a radar facility in Wyoming, a research station in Antarctica and—from a cargo ship—the Panama Canal Zone.

America still uses nuclear-powered submarines and aircraft-carriers. But land-based mini-reactors proved unreliable and expensive and have fallen out of favour.

https://www.economist.com/science-and-technology/2020/03/12/nuclear-power-plants-are-coming-to-the-battlefield

NPT at 50: Celebration or mid-life crisis?
Rakesh Sood
Hindustan Times, March 12, 2020

On March 5, the Nuclear Non-Proliferation Treaty (NPT) turned 50. Often described by its supporters as the "cornerstone of global nuclear non-proliferation and disarmament", the NPT is among the most widely-adhered-to global treaties. All countries except four (India, Israel and Pakistan that never joined, and North Korea that withdrew in 2003) are parties to the NPT. Yet, the NPT's golden anniversary passed without much notice. A statement issued in New York by the spokesperson for the United Nations (UN) secretary general was notable for its brevity and anodyne character. There are suggestions that the NPT Review Conference, due to open in New York on April 27, be postponed, on account of the coronavirus outbreak, but it will also have the effect of avoiding a potentially bruising showdown.

In 1963, President Kennedy voiced an apprehension that by 1975, there could be as many as 20 countries with nuclear weapons. The erstwhile USSR shared similar concerns. This convergence of interests between the two Cold War adversaries enabled the negotiations for an NPT. To make it attractive, it was initially conceived as a three-legged stool — non-proliferation, obliging those without nuclear weapons to undertake never to acquire them and accept full-scope safeguards; disarmament, obliging the five countries with nuclear weapons (United States, USSR, United Kingdom, France and China) to negotiate to reduce and eventually eliminate their nuclear weapons; and, third, to ensure that non-nuclear weapon states would enjoy full access to peaceful applications of nuclear science and technology.

https://www.hindustantimes.com/analysis/npt-at-50-celebration-or-mid-life-crisis/story-m0on5fKwKFlbgl7dG2U9AK.html

Op-Ed
India

Why India-Pakistan's Nuclear Rivalry Is Deadly Serious
Sebastien Roblin
National Interest Blog, March 03, 2020

If peace ever collapsed, an Indian-Pakistani conflict might not stay regional. Fall out from any nuclear weapons use would devastate the entire world. While the United States is preoccupied by the threat of nuclear weapons in the hands of potential adversaries such as Russia, China or North Korea, the danger of nuclear conflict may actually be greatest between two of its allies, Pakistan and India. The two nations have engaged in four wars starting since their partition along religious lines in 1947. A fifth could be drastically more costly, as their nuclear capabilities continue to grow and diversify.
India's military has formulated a "Cold Start" doctrine to enable its forward-deployed land forces to launch an armored assault into Pakistani territory on short notice in response to a perceived provocation from Islamabad. This new strategy was devised after the Indian Army's armored strike

corps took three weeks to deploy to the border after the attack on the Indian parliament in 2001, by which time Pakistan had already mobilized its own troops.

https://nationalinterest.org/blog/buzz/why-india-pakistans-nuclear-rivalry-deadly-serious-129087

Is India's Missile Defense Making War With Pakistan More Likely?
Michael Peck
National Interest Blog, March 06, 2020

India and Pakistan are already in an arms race for all intents and purposes. India says it has successfully tested an interceptor capable of shooting down ballistic missiles. On August 2, the Defense Research Development Organization (DRDO) -- India's equivalent of the Pentagon's DARPA research agency -- launched an Advanced Area Defense (AAD) missile from Abdul Kalam island off India's eastern coast.

"The endo-atmospheric missile, capable of intercepting incoming targets at an altitude of 15 to 25 kilometers [9 to 16 miles] was launched against multiple simulated targets of 1,500 kilometer [932 mile]-class ballistic missiles," according to the DRDO announcement. "One target among simultaneously incoming multiple targets was selected on real time, the weapon system radars tracked the target and the missile locked on to it and intercepted the target with a high degree of accuracy. The complete event including the engagement and interception was tracked by a number of electro-optical tracking systems, radars and telemetry stations. All the mission objectives were successfully met."

https://nationalinterest.org/blog/buzz/indias-missile-defense-making-war-pakistan-more-likely-129967

China

China’s Nuclear Arms Are a Riddle Wrapped in a Mystery
Michael Mazza, Henry Sokolski
Foreign Policy, March 13, 2020

Beijing's plans to build new missiles, expand anti-satellite capabilities and increase nuclear material production far above civilian needs have the world guessing. China's DF-41 nuclear-capable intercontinental ballistic missiles at a military parade on Tiananmen Square in Beijing on Oct. 1, 2019. Two weeks ago, U.S. President Donald Trump agreed to a proposal that China join the four other permanent members of the United Nations Security Council at a summit to initiate a new round of arms control talks. The goal, according to administration officials, is a three-way agreement among China, Russia, and the United States to limit nuclear weapons. As National Security Adviser Robert O’Brien explained in early February, “It shouldn’t just be the U.S. and Russia. We think that China is going to need to become involved in any serious arms control negotiation.”

China, whose nuclear warheads number only in the low hundreds, may not seem a natural fit for negotiations with the United States (6,185 total warheads, of which 1,750 are deployed) and Russia (6,490 total, 1,600 deployed). Indeed, China has previously rejected participating in a trilateral nuclear arms deal on the grounds that its forces are too small. China has previously rejected participating in a trilateral nuclear arms-control deal on the grounds that its forces are too small.But Beijing’s ambitious plans for new enrichment and recycling capacities capable of producing material for nuclear weapons would make it possible for China to achieve parity with the United States and

Russia. Moreover, given the current and perhaps enduring Sino-Russian strategic alignment, the United States can no longer assume that a military conflict with China will not also involve Russia; while adding Russian and Chinese nuclear weapons numbers may not be appropriate, neither is considering them completely in isolation.

https://foreignpolicy.com/2020/03/13/china-nuclear-arms-race-mystery/

Meet China's Very First Nuclear Attack Submarine (It Was a Disaster)
Kyle Mizokami
The National Interest, March 15, 2020

While the Type 091 may be remembered as a crude effort, it was ultimately a successful one, and an important first step in China's self-sufficiency in nuclear submarines. The slow production rate hints at serious engineering issues. The first submarine took seven years to complete. The second took three years to complete, while the last three each took only one year to complete. According to the authoritative Combat Fleets of the World, the subs early on were known within the PLAN as "sharks without teeth." Overall, it took twenty-one years to complete just five submarines.

The Type 091 class weighs 5,500 tons submerged. It has a length of approximately 321 feet and a beam of thirty-two feet. The boats feature a large sail reminiscent of the Soviet Type 636 Kilo-class submarines. The teardrop-style hull was an early effort to catch up to the States in submarine hull technology. In 2015, the now-defunct Want China Times reported that Huang Xuhua claimed he developed the Type 091 hull from two toy submarines imported from the United States and Hong Kong. While a nice story, it seems unlikely that Huang could have divined enough detail from a toy to bypass years of hydrodynamic research.

https://nationalinterest.org/blog/buzz/meet-chinas-very-first-nuclear-attack-submarine-it-was-disaster-132532

Pakistan

Pakistan's peaceful nuclear overtures
Usman Ali Khan
The Nation, March 02, 2020

The origin of a commitment to develop nuclear energy for peaceful purposes can be traced to President Eisenhower's 'Atoms for Peace' speech in 1953 and the subsequent establishment of the IAEA in 1956. From the very beginning, Pakistan's civilian nuclear energy programme has contributed to its socio-economic uplift and there is ample room available for Pakistan to enhance its nuclear power generation capability to meet growing energy demands. However, due to politically motivated rhetoric and fabricated narratives, Pakistan's peaceful nuclear program remains outside the global mainstream. Markedly, Pakistan has, up till now, played a very important role in utilizing the peaceful nuclear energy sector in various domains. The peaceful applications are best utilized in power generation, minerals exploration, developing high-yield stress tolerant crops, cancer treatment, designing and fabrication of industrial plants and equipment and human resource development for many years.

Pakistan has used its Centres of Excellence to promote and share best practices in nuclear security through three affiliated institutes: the Pakistan Centre of Excellence for Nuclear Security (PCENS),

the National Institute of Safety and Security (NISAS), and the Pakistan Institute of Engineering and Applied Sciences (PIEAS). Along with this, Pakistan Nuclear Regulatory Authority (PNRA) was established under the Ordinance III of 2001 for regulation of nuclear safety and radiation protection. Pakistan also signed convention on nuclear safety in 1994 which requires states to established regulatory body separated from those involving the promotion of nuclear energy. PNRA, since its development, has demonstrated excellence as a role model for safety culture at national and international levels by adopting various precautionary measures. While exploring Pakistan's merits for nuclear safety and security these institutes' works efficiently in their own domains. The main objective of PCENS is to provide basic training and teaching regarding nuclear security and response nationally as well as internationally. The IAEA also uses Pakistan's Center for Nuclear Excellence as a regional hub to teach and promote nuclear safety and security practices. Meanwhile, NISAS was created with an objective to conduct focused and dedicated courses to provide widespread training for effective regulatory operations. In addition, PIEAS' main objective is to conduct academic courses in the field of nuclear safety and security at master's level of education.

https://nation.com.pk/02-Mar-2020/pakistan-s-peaceful-nuclear-overtures

Fact file of US nuclear policy in South Asia
Dr Rajkumar Singh
Pakistan Observer, March 14, 2020

INDIA and the United States of America had entered into an agreement of cooperation on 25 October 1963 to supply enriched uranium up to 1993 to the Tarapur Atomic Power Station. A contract incorporating the agreement was signed on 17 May 1966. The contract bound India not to obtain supplies of nuclear fuel from any other sources. On the other, the US fuel supply to the Tarapur nuclear reactor could never be consistent. It never honoured its treaty, commitments particularly after the nuclear explosion by India in May 1974. Before the event, Washington did not work hard even for horizontal non-proliferation. Its main concern was to defend its pre-eminence in the market of nuclear export vis-a-vis other nuclear powers, especially its own allies in Western Europe. Of course, some concern was expressed by public interest groups in the United States over the possible hazard to health and the pollution of the environment by the nuclear plants and the danger that the nuclear terrorists might pose to the security of the world.

US understanding of the region: However, in general, the West sharply reacted to India's nuclear detonation. Both the American government and the press decried it on the ground that it would encourage further nuclear proliferation. They did not accept India's argument that it was peaceful explosion. Earlier, Bangladesh's emergence as a free country in December 1971, followed by nuclear explosion in 1974 only effected a qualitative change in India's military potential but also torn into pieces the so-called balance between India and Pakistan and established New Delhi's pre-eminence in the sub-continent. The US was angry because a strong India, worse still a nuclear India, was bad for the US and therefore had to be contained. Despite the statements and actions of the Government of India that it was not on the nuclear path, demands were made in the US for making a complete review of the nuclear relationship between the two countries. Earlier, with the explosion of the first nuclear weapon in 1945, the chances of terrorists and additional nations going nuclear increased that caused anxiety all over the world.

https://pakobserver.net/fact-file-of-us-nuclear-policy-in-south-asia/

USA

Can we trust Joe Biden with the nuclear codes?
Dominic Green
Spector, March 1, 2020

It's Joe Biden's turn to be president, so let's give it to him and see if he can remember where he left the nuclear football and what the codes are. He's been waiting long enough: he was born in 1903. And he just oozes presidentiality, doesn't he? I don't know if it's Joe's facelift, his hair implants or his false teeth or the way he walks like he's on castors, but geriatric Joe looks the picture of youthful vigor, especially in the aviator shades that make him look like he's waiting for a cataract operation or has advanced macular degeneration. For there's nothing degenerate about Joe, is there, or the health of a party and political system that would recommend him as the next president of What Remains of the United States?

I'm all in favor of old people. They are repositories of historical experience and, unless they're feeling drowsy after lunch, collective wisdom. Those thousands of graduate-schooled white Bernie Bros who turned out for Comrade Sanders on Boston Common at the weekend might learn something from old-timers who remember the horrors of socialism, visions from the distant past like Fidel Castro forcing the Corleone family out of Cuba in *The Godfather II*. But a man of Biden's age or condition simply isn't up to the physical and mental demands of the job. And neither is Bernie Sanders, who shuffled onto the stage in Boston dressed like an elderly widower who smells of pee and lives on cat food.

https://spectator.us/joe-biden-senile-nuclear-football/

Extend a Nuclear Arms Treaty
The New York Times, March 01, 2020

Madeleine Albright and Igor Ivanov attribute challenges in U.S.-Russian relations to "the political climates in Washington and Moscow" and call for extension of the New START treaty. While President Trump's foreign policy is flawed in many ways, it cannot be put on the same scale as the Kremlin's aggressive strategy. The writers lament "the unfortunate dissolution of the Intermediate-Range Nuclear Forces Treaty last year." The treaty was signed in 1987 after President Ronald Reagan firmly countered Soviet aggressiveness, and Mikhail S. Gorbachev, the Soviet president, turned to domestic liberalization and cooperation with America.

For a long time Washington and NATO criticized Moscow's violation of the I.N.F. treaty. President Trump, a far cry from Mr. Reagan in other aspects, finally took countermeasures. The decision to extend the New START treaty should be conditioned on a thorough assessment of the ongoing military buildup, especially in Russia, and be free from wishful thinking about the Kremlin's behavior or the interests of the reality show in Washington.

https://www.nytimes.com/2020/03/01/opinion/letters/nuclear-arms-treaty.html?searchResultPosition=240

Strategic Culture of the United States
Junaid R. Soomro
Modern Diplomacy, March 01, 2020

Strategic culture provides the analytical lens through which to understand of view the communities fundamental the international predicaments and the inspirations of the state activities. Strategic culture is an elementary attempt to assimilate cultural considerations, cumulative historic remembrances and their influences in the analysis of state security policies and national interest. Strategic culture of the nations flows from its geography and resources, history and experience and society and political structure. It represents the approach that a given state has found successful in the past.

The enduring features of American strategic culture, military culture, and the organizational culture of the U.S. armed services have thus influenced how the United States has approached nuclear weapons. As a result, American strategic culture has been dominated by continuity rather than change. Six decades after the advent of the nuclear age, what is notable is the limited enduring impact of nuclear weapons on the way the U.S. military conceives of war.

https://moderndiplomacy.eu/2020/03/01/strategic-culture-of-united-states/

Threat of a US and Russian Nuclear War Is Now at Its Greatest Since 1983
Scott Ritter
Antiwar, March 03, 2020

When the Commander of NATO says he is a fan of flexible first strike at the same time that NATO is flexing its military muscle on Russia's border, the risk of inadvertent nuclear war is real. US Air Force Gen. Tod D. Wolters told the Senate this week he "is a fan of flexible first strike" regarding NATO's nuclear weapons, thereby exposing the fatal fallacy of the alliance's embrace of American nuclear deterrence policy.

It was one of the most remarkable yet underreported exchanges in recent Senate history. Earlier this week, during the testimony before the Senate Armed Services Committee of General Tod Wolters, the commander of US European Command and, concurrently, as the Supreme Allied Commander in Europe (SACEUR) also the military head of all NATO armed forces, General Wolters engaged in a short yet informative exchange with Senator Deb Fischer, a Republican from the state of Nebraska. Following some initial questions and answers focused on the alignment of NATO's military strategy with the 2018 National Defense Strategy of the US, which codified what Wolters called "the malign influence on behalf of Russia" toward European security, Senator Fischer asked about the growing recognition on the part of NATO of the important role of US nuclear deterrence in keeping the peace. "We all understand that our deterrent, the TRIAD, is the bedrock of the security of this country," Fischer noted. "Can you tell us about what you are hearing…from our NATO partners about this deterrent?"

https://original.antiwar.com/scott-ritter/2020/03/02/threat-of-a-us-and-russian-nuclear-war-is-now-at-its-greatest-since-1983/

Is Trump's Nuclear Strategy Fueling a New Arms Race?
World Politics Review, March 04, 2020

The U.S. military recently confirmed that it has fielded controversial low-yield nuclear warheads on certain submarine-launched ballistic missiles. Plans for the new warhead were included in President Donald Trump's 2018 nuclear posture review, and its explosive yield is roughly a third of the bomb that was dropped on Hiroshima during World War II. Trump administration officials argue that the new warhead will serve as a deterrent for Russia's so-called tactical nuclear weapons, but experts fear

that the prevalence of these low-yield nuclear weapons will make an eventual conflict more likely. The news of their deployment comes amid broader scrutiny of Trump's record on nonproliferation issues, including his position on key nuclear agreements like New START, which is set to expire in February 2021.

For this week's interview on Trend Lines, WPR's Elliot Waldman discusses nuclear strategy and arms control in the age of Trump with Thomas Countryman, chair of the board of directors at the Arms Control Association in Washington, D.C. He previously served for 35 years as a career foreign service officer before retiring from the State Department in early 2017, having most recently been the acting undersecretary of state for arms control and international security.

https://www.worldpoliticsreview.com/podcast/28578/is-trump-s-nuclear-strategy-fueling-a-new-arms-race

Can 50 Years of Minimizing Nuclear Proliferation Continue?
Ivo H. Daalder
The New York Times, March 05, 2020

Imagine we are living in the year 2030. New seismic activity indicates an underground nuclear explosion somewhere near the Arctic Circle. One more country announces it's joining the once-exclusive club of nuclear weapons states that has now grown to 20 nations more than double the number in 2020. The trouble started in 2023, when a group of former allies of the United States renounced their adherence to the Nuclear Nonproliferation Treaty and opted to acquire the very nuclear weapons capabilities that they foreswore decades earlier.

Since then, nations across the world had raced to acquire the bomb, and the global security situation had become increasingly precarious. Sooner or later, as centers of nuclear decision making multiplied, one of those weapons was bound to go off, with consequences incalculable for all. A far-fetched future? Perhaps. The nonproliferation treaty entered into force 50 years ago, on March 5, 1970. At the time, only five nations — the United States, the Soviet Union, China, Britain and France — were recognized as nuclear weapons states. Just four more countries — India, Israel, Pakistan and North Korea — have since acquired the bomb. And, yet, this scenario is more plausible now than many may think.

https://www.nytimes.com/2020/03/05/opinion/minimizing-nuclear-proliferation.html?searchResultPosition=189

An Unorthodox Partnership
Iulia-Sabina Joja
The American Interest, March 10, 2020

During communist times, Orthodox churches collaborated across their institutional hierarchies with communist intelligence services. The declassification of files over the past three decades has revealed how stunningly close ties were between Church leadership and secret police in Bulgaria, Romania, Ukraine, Georgia, and Moldova. This was the case too, of course, in Mother Russia itself, where Stalin himself established the Moscow Patriarchate in 1943 after executing tens of thousands of clergymen during the Great Purge of 1936-1938. All key positions in the Moscow Patriarchate were blessed by the Communist Party and controlled by the KGB, making the Russian Orthodox clergy into first-class collaborators with the secret police. Even though Orthodox churches across Eastern Europe never admitted to having collaborated on an institutional level, individual confessions by

high-level clergy after 1989, along with declassified files, paint a different picture. The Romanian Council for the Study of the Archives of the Securitate—dictator Nicolae Ceauşescu's notorious secret police—revealed that 89 clergy members of the Orthodox Church, including several archbishops, were active official collaborators. That was then.

Today, across the entire region, Orthodox churches are on the rise. They are shaping societal narratives and national identities, involving themselves in state affairs and government policymaking. The Church's climb up the new power ladder is taking place in fragile and emerging democracies, where corruption is often widespread, social capital scarce, and trust in public institutions slight. In Romania, Bulgaria, Moldova, Ukraine, and Georgia, for instance, the various national Orthodox churches rank among the top three most trusted institutions in their respective countries.

https://www.the-american-interest.com/2020/03/10/an-unorthodox-partnership/

We were lied to in the past about dumping of nuclear waste
The National, March 11, 2020

QUITE a few years back, when I was a local SNP candidate here in Inverclyde, the local small boat owners and fishermen's association approached me with their worries and problems, which resulted in me taking up the cudgels on their behalf. One of their spokesmen, who had a prawn fishing boat, was the late Brian Penny, who explained the problem and gave me the astounding fact that all the sea life had died in the Holy Loch.

The obvious cause of this was the USA nuclear submarine base of Polaris submarines, which must be discharging or dumping nuclear waste into the loch. With the help of the Greenock Telegraph we made a complaint to the far-off powers in Westminster who (according to them) sent a naval investigation team and took samples of sand, and water from the Loch, and assuring all concerned, that there was no need for any worry, as their tests had shown that the Loch was clean and no contamination was found.

https://www.thenational.scot/politics/18295704.lied-past-dumping-nuclear-waste/

The Cold War's Not Back, But Nuclear Gamesmanship Is
Hal Brands
Bloomberg, March 11, 2020

Perhaps more than at any time since the end of the Cold War, the Pentagon is getting serious about nuclear conflict. Over the past few years, the administrations of Presidents Barack Obama and Donald Trump have reportedly studied how to respond if Russia fires off a nuke during a war with the North Atlantic Treaty Organization in the Baltic region. Secretary of Defense Mark Esper recently participated in a war game simulating a limited nuclear conflict with Moscow. The Navy just deployed a submarine-launched, low-yield nuclear warhead designed for such a scenario. Critics have responded by calling these preparations provocative and dangerous.

The controversy is reviving hard questions about nuclear strategy and deterrence that U.S. officials last faced during the twilight of the conflicts against the Soviet Union. Looking back at that era reminds us that mastering the realities of geopolitical rivalry often requires embracing the apparent absurdities of nuclear statecraft. Much of the current debate revolves around the Russian strategy known as "escalate to de-escalate." It refers to a scenario in which Russia would use conventional

forces to quickly seize some piece of NATO-held territory, such as a slice of Estonia. Moscow would then introduce nuclear weapons into the intensifying conflict — perhaps by firing off a demonstration shot or even by targeting NATO forces in the field — in hopes of deterring the alliance from retaking the conquered territory.

https://www.bloomberg.com/opinion/articles/2020-03-11/the-cold-war-s-not-back-but-nuclear-gamesmanship-is

The Virus of Nuclear Proliferation
Alice Slater
Common Dreams, March 12, 2020

In an avalanche of reporting we are now assaulted with information about how the world is urgently attempting to batten down the hatches to avoid the possibility of deathly consequences from the broadly publicized outbreak of the coronavirus, causing the possibility of postponing or perhaps downsizing the upcoming five year mandatory Review Conference of the Non-Proliferation Treaty (NPT). Ironically, it is not nearly so well-reported, that the 50-year old NPT is threatening the world with an even worse illness then the new terrifying coronavirus.

The NPT's critical requirement that the nuclear armed states, which signed the treaty in 1970, must make "good faith efforts" for nuclear disarmament is virtually moribund as nations are developing new nuclear weapons, some characterized as more "usable" and destroying treaties that contributed to a more stable environment. These include the 1972 Anti-Ballistic Missile Treaty which the U.S. negotiated with USSR and walked out of in 2002, and its repeated rejections of offers from Russia and China to negotiate a treaty to keep weapons out of space, and from Russia to ban cyberwar, all of which would contribute to "strategic stability" which would enable the fulfillment of the NPT's nuclear disarmament promise.

https://www.commondreams.org/views/2020/03/12/virus-nuclear-proliferation

Trump's Chernobyl
Serge Schmemann
The New York T8imes, March 13, 2020

It seems terribly wrong that so fine a spring day should be carrying a deadly danger. The daffodils and cherry blossoms proclaim renewal and hope; the crisp, clear air seems incapable of anything so treacherous. Yet we walk in fear. We want to scrub ourselves again and again against the invisible attacker; we wonder where to hide, how to escape. What can we give our children to protect them? Should we stock up on food and toilet paper? Can we trust the government, which seems bent on making soothing sounds and putting blame elsewhere? It's the spring of 1986, and I'm in Moscow with my family as The Times's bureau chief. Since April 26, when a reactor at the Chernobyl nuclear power plant erupted and spewed radioactivity far and wide, we have been wrestling anxiously with the unknown — as reporters, trying to distinguish fact from propaganda; personally, trying to cope with a threat that rides silently and invisibly with the wind.

Today's threat is different, of course. Radioactivity is not a pathogen. The coronavirus can spread from continent to continent as fast as a jetliner can fly and from person to person with an unguarded touch; the fallout from the burning Chernobyl plant traveled only as far as the winds would carry it, and social distancing was useless against its radiation.

https://www.nytimes.com/2020/03/13/opinion/trump-coronavirus-chernobyl.html?searchResultPosition=27

Russia

Nuke the Nukes: The Air Force Wanted to Attack Russian Nuclear Bombers with Nuclear Weapons
Sebastien Roblin
National Interest Blog, March 01, 2020

On July 19, 1957 five Air Force officers assembled in the open desert basin of the Yucca Flats of Nevada and glanced with nervous smiles up at a jet fighter flying high overhead. They were accompanied by a civilian defense photographer wearing a baseball hat named George Yoshitake. On July 19, 1957 five Air Force officers assembled in the open desert basin of the Yucca Flats of Nevada and glanced with nervous smiles up at a jet fighter flying high overhead. They were accompanied by a civilian defense photographer wearing a baseball hat named George Yoshitake.

The standard F-89D mode was confined to using kludgy batteries of unguided folding-fin rockets carried in wingtip pods. These would be automatically launched in a huge volley once the Scorpion's radar gunsight determined it was aligned with a bomber target. But the new F-89J flying overhead was carrying a very different and altogether deadlier payload—a nearly three-meter long rocket with a 1.5 kiloton nuclear W25 nuclear warhead in its tip. The rocket was designated MB-1 Genie, later renamed the AIR-2A, and popularly nicknamed the "Ding Dong."

https://nationalinterest.org/blog/buzz/nuke-nukes-air-force-wanted-attack-russian-nuclear-bombers-nuclear-weapons-128732

Meet Russia's TU-95 Bomber: 60 Years Old and Still Flying
Sebastien Roblin
National Interest Blog, March 03, 2020

The T-95 is powerful and is still used in combat today. Russia will likely continue to rely on its vaunted bomber to years to come. Few aircraft are as distinctive as the massive Tupolev Tu-95 "Bear," a four-engine Russian strategic bomber and maritime patrol plane with a gigantic unicorn-like refueling probe, giving it the appearance of a monstrosity lurching in from prehistoric times—or at least from shortly after World War II, as is in fact the case.

Don't let its looks deceive you. Over sixty years later, the Tu-95 remains in service because few aircraft can cover such great distances for such long periods of time while carrying a hefty payload. Which is to say, the Tu-95 is Russia's B-52—but one with a decidedly maritime bent and a habit of knocking at the door of coastal air-defense systems in Europe, Asia and North America. Each of the NK-12s has two propellers, the second one spinning in the direction opposite the first. This not only counteracts the torque created by the rotational airflow of the first propeller, but harnesses it for greater speed. Contrarotating propellers are therefore modestly more efficient—but because they are more expensive to produce and maintain, and also unbelievably noisy, they have not been widely adopted. In fact, the noise produced by Tu-95s has reportedly been remarked upon by submarine crews and jet pilots.

https://nationalinterest.org/blog/buzz/meet-russias-tu-95-bomber-60-years-old-and-still-flying-129092

Russia's New Nuclear Torpedo Is A Threat To More Than Just America's Aircraft Carriers
Michael Peck
National Interest Blog, March 03, 2020

Or is this just more hype? You make the call. Russia has begun underwater tests of its Poseidon thermonuclear torpedo. The Poseidon is an 80-foot-long nuclear-powered submersible robot that is essentially an underwater ICBM. It is designed to travel autonomously across thousands of miles, detonate outside an enemy coastal city, and destroy it by generating a tsunami. "In the sea area protected from a potential enemy's reconnaissance means, the underwater trials of the nuclear propulsion unit of the Poseidon drone are underway," an unnamed Russian defense official told the TASS news agency. The source also said the "the reactor is installed in the hull of the operating drone but the tests are being held as part of experimental design work rather than full-fledged sea trials at this stage."

https://nationalinterest.org/blog/buzz/russias-new-nuclear-torpedo-threat-more-just-americas-aircraft-carriers-129207

Cruise Missiles Galore: Russia's Typhoon Submarines Now Have 200 of Them
Sebastien Roblin
National Interest Blog, March 05, 2020

The Typhoon ballistic missile submarines (SSBNs), famously featured in the film Hunt for Red October, are by far the biggest and most expensive submarines ever built. Cruise-missile-armed Typhoons would give Russia direct analogs of the United States' four Ohio-class cruise missile submarines (SSGNs), which had their launch tubes for nuclear-armed ballistic missiles replaced with vertical launch systems for 154 conventionally-armed Tomahawk cruise missiles. The Typhoon-class submarine, officially designated the Project 941 Akula ("Shark") in Russia, are Cold War behemoths measuring 175-meters in length and displacing 48,000 ton submerged. That amounts to twice the tonnage of American Ohio-class SSBN it was intended to rival. No less than five internal pressure hulls made of ultra-expensive titanium gave the Typhoon's extraordinary resilience to battle damage —and extraordinary cost to manufacture.

The Typhoons were designed to lurk under the ice of the Arctic Circle, covered by friendly Soviet naval forces, awaiting a very-low-frequency radio signal indicating that World War III had broken out and had gone nuclear. In that event, they'd rise close to the surface, counting on their reinforced sails to smash through the ice if necessary, and launch their twenty R-39 ballistic missiles. Each missile, in turn, would unleash ten independently targeted 100-kiloton yield nuclear warheads on American and European cities and military bases.

https://nationalinterest.org/blog/buzz/cruise-missiles-galore-russias-typhoon-submarines-now-have-200-them-129732

Why Russia's First Nuclear-Powered Super Aircraft Carrier Never Sailed
Paul Richard Huard
National Interest Blog, March 06, 2020

It was intended to give the Soviet Navy a blue water aviation capability. Had she ever sailed, the Soviet supercarrier Ulyanovsk would have been a naval behemoth more than 1,000 feet long, with an 85,000-ton displacement and enough storage to carry an air group of up to 70 fixed and rotary wing aircraft.

With a nuclear-powered engine—and working in conjunction with other Soviet surface warfare vessels and submarines—the supercarrier would have steamed through the oceans with a purpose. Namely, to keep the U.S. Navy away from the Motherland's shores. But the Ulyanovsk is a tantalizing "almost" of history. Moscow never finished the project, because it ran out of money. As the Cold War ended, Russia plunged into years of economic hardship that made building new ships impossible.

https://nationalinterest.org/blog/buzz/why-russias-first-nuclear-powered-super-aircraft-carrier-never-sailed-129937

Nuclear Choo Choo: The Soviets Had a Crazy Idea for a Nuclear Missile Train
Sebastien Roblin
National Interest Blog, March 10, 2020

The idea was that the train would move around and be harder to destroy. However, this was clearly an impractical idea and was not followed through on. On July 19, 2018 the Kremlin released a flurry of videos showing off various nuclear weapon systems under development ranging from the RS-28 Satan 2 ballistic missile, Kinzhal hypersonic missiles, and even an ocean-spanning nuclear torpedo designed to smash coastal metropolises with tsunami waves of irradiated water.

However, one item that didn't make the cut was a five-year project to develop a nuclear-missile launching train strait out of a James Bond movie—a successor to a Soviet "Ghost Train" that did serve operationally. The concept of railway mobile nukes went back several decades, founded on the idea that a moving nuclear delivery system is much harder for an enemy to target with a preemptive strike, and thus provides stronger deterrence. This principle has made submarines loaded with ballistic missiles the most effective form of nuclear deterrence.

https://nationalinterest.org/blog/buzz/nuclear-choo-choo-soviets-had-crazy-idea-nuclear-missile-train-131542

Russia Is Ready for a Nuclear, Chemical or Biological Weapons-Based War
Charlie Gao
National Interest Blog, March 14, 2020

The threat of chemical and nuclear warfare loomed large over most militaries during the Cold War. The development of new nerve agents during the 1940s, as well as advanced delivery systems later on meant that chemical weapons could be delivered with precision and deadly effect. As such, most militaries trained extensively for the chemical threat. However, those on the "Eastern" side, the Soviet Union and the Warsaw Pact states, developed a reputation for extensive preparation.
In the Russian CBRN (РХБЗ) troops, the legacy of Soviet preparation has not only survived, but thrived.

New CBRN defense vehicles and equipment continue to be procured, and CBRN equipment is often displayed prominently at large expositions, like Army 2019. The special battlefield role of the Russian CBRN troops is also probably a reason why their capabilities are exercised more. In addition

to chemical attack and defense, CBRN troops are in charge of operating battlefield smoke generators and the powerful TOS-1 and TOS-1A heavy flamethrower systems which can fire incendiary and thermobaric rounds. CBRN troops are also armed with the powerful RPO-A thermobaric rocket launcher, which can level weak houses in a single shot.

https://nationalinterest.org/blog/buzz/russia-ready-nuclear-chemical-or-biological-weapons-based-war-132872

This Explains Why Russia's City-Destroying Tsar Bomba Was Only Tested Once
National Interest Blog, March 14, 2020

On a clear day, an airburst at 14,000 feet above ground level would produce a nuclear fireball two miles wide that would be hotter than the surface of the sun. Maj. Andrei Durnovtsev, a Soviet air force pilot and commander of a Tu-95 Bear bomber, holds a dubious honor in the history of the Cold War.

Durnovtsev flew the aircraft that dropped the most powerful nuclear bomb ever. It had an explosive force of 50 megatons, or more than 3,000 times more powerful than the Hiroshima weapon. Over the years, historians identified many names for the test bomb. Andrei Sakharov, one of the physicists who helped design it, simply called it "the Big Bomb." Soviet Premier Nikita Khrushchev called it "Kuzka's mother," a reference to an old Russian saying that means you are about to teach someone a harsh, unforgettable lesson.

https://nationalinterest.org/blog/buzz/explains-why-russias-city-destroying-tsar-bomba-was-only-tested-once-132622

Russia Claims Its New Nuclear Weapons Are A Response To U.S. Missile Defense
Eric Gomez
National Interest Blog, March 15, 2020

The United States has long been Russia's primary nuclear rival and the technical capabilities that Moscow has chosen to spend a great deal of time, money, and effort to develop are laser-focused on defeating missile defense. In a speech before Russia's Federal Assembly, Vladimir Putin unveiled several new nuclear-weapons systems. The speech comes less than a month after the release of the Trump administration's Nuclear Posture Review, which named Russia as a primary strategic competitor of the United States and called for new low-yield nuclear weapons to counteract Russia's alleged (and highly disputed) "escalate to deescalate" strategy.

The timing of the NPR and Putin's speech gives the impression that the new Russian capabilities are a reaction to American nuclear policy. Instead, Putin stated that the new nuclear weapons were meant to counter U.S. missile defenses, which have steadily expanded since the George W. Bush administration withdrew the United States from the 1972 Anti-Ballistic Missile (ABM) Treaty in 2002.

https://nationalinterest.org/blog/buzz/russia-claims-its-new-nuclear-weapons-are-response-us-missile-defense-132747

West Asia
Iran

IAEA: Iran's enriched uranium five times higher than nuclear deal limit
Arab News, March 4, 2019

Iran's stockpile of enriched uranium is more than five times the limit fixed under a landmark 2015 deal with world powers, the UN nuclear watchdog said Tuesday. An International Atomic Energy Agency (IAEA) report said that as of February 19, 2020 the Iranian stockpile stood at 1,510 kilogrammes, as opposed to the 300 kg limit set under the agreement. Some experts consider this level to provide sufficient material to produce a nuclear weapon. However, it would still need several more steps, including further enrichment, to make it suitable for use in a weapon. The report says that Iran has not been enriching uranium above 4.5 percent. An enrichment level of around 90 percent would be needed for weapons use.

https://www.arabnews.com/node/1636226/middle-east

Amid virus crisis, Iran focuses on nuclear program
Dr. Majid Rafizadeh
Tehran Times, March 08, 2020

Amid the coronavirus crisis, the Islamic republic is advancing its nuclear program and violating the Joint Comprehensive Plan of Action (JCPOA), commonly known as the Iran nuclear deal. The UN's atomic watchdog, the International Atomic Energy Agency (IAEA), reported that Tehran has increased its uranium stockpile, which now stands at the equivalent of 1,510 kg. Under the nuclear deal, Iran was limited to 300 kg of weaker enriched uranium.

This reveals a substantial increase in Iran's enriched uranium stockpile in a short period of time. Tehran currently possesses five times more enriched uranium as it is supposed to have under the agreement. More importantly, the theocratic establishment now has enough enriched uranium to refine and build a nuclear bomb. Approximately 1000 kg of uranium enriched at just 5 percent can be refined to create one nuclear bomb. For the Iranian regime, one of the most effective times to expand its nuclear activities comes when media outlets and the international community are focusing on other urgent issues. The coronavirus has taken the global spotlight and governments around the world are attempting to halt its spread. This seems to have given the Iranian regime a perfect opportunity to work on its nuclear program at a faster pace.

https://www.arabnews.com/node/1638566

With solidarity, Iran will pull through
Martin Love
Tehran Times, March 9, 2020

Some 70,000 Iranians and veterans whose health was damaged by chemical warfare and who are still living with injuries caused by Western chemical agents supplied to Saddam Hussein in the 1980s are reportedly at extreme risk of dying from the Covid 19 virus, and some of these veterans already have been struck down in Iran. Also, a disgusted Iran native, an academic at Princeton University in New Jersey, points out that an organization called "United Against Nuclear Iran" (UANI) has long been leading efforts to pressure companies to stop doing business with Iran. Lately, pressure by this

organization has been directed at major pharmaceutical companies to halt any business they have with Iran under what has been dubbed “humanitarian exemptions” given the fact that Iran has already been hard hit by the spread of Covid 19.

A sane person can’t make this stuff up because it goes parsecs beyond ANY sense of a “humanitarian” spirit and, you guessed it, the primary funders of this group are none other than billionaire Jewish Zionists like Sheldon Adelson and Thomas Kaplan. Other names that have been or remain associated with “United Against Nuclear Iran” are individuals (to name just a few) such as former U.S. Senator Joseph Lieberman, Dennis Ross, Richard Holbrooke, John Bolton, and even Mike Pompeo -- all prominent people and Zionists who have been involved through various postings at one time or another in setting U.S. foreign policies.

https://www.tehrantimes.com/news/445928/With-solidarity-Iran-will-pull-through

Iran’s expansionist plans pose real danger to Europe
Dr. Mohammed Al-sulami

Arab News, March 09, 2020In Europe, Iran’s regime has already launched the first phase of its expansionism via proselytizing and religious indoctrination. Once this stage is complete, the second phase involving politicization will begin. In this first phase, the regime relies on soft power tools, such as establishing cultural centers and nongovernmental organizations (NGOs), holding conferences and events in European capitals, and deploying missionaries to help in indoctrination and sectarian mobilization.

The regime’s use of soft power in Europe, rather than its usual military tools, is attributable to Europe’s relative geographic remoteness from Iran, the small number of Shiites currently present there, and the region’s stable political systems, which are barriers to creating the appropriate conditions for expanding Iranian influence via hard power. The same barriers are not present in Iran’s immediate vital spheres, such as in Iraq, Syria and Lebanon, thanks to geographical proximity and weak political systems, the latter often already undermined by Iranian proxies and sectarian infighting. Iran’s regime has exploited several facets of European life to infiltrate the continent and increase its influence there, including Europe’s atmosphere of religious tolerance and openness.

https://www.arabnews.com/node/1639026

Iran’s special situation in coronavirus crisis
Mohammad Ghaderi
Tehran Times, March 12, 2020

While the outbreak of the coronavirus in Wuhan, China, had become the main subject of the world’s media outlets, the Iranian Ministry of Health have engineered comprehensive plans to counter a possible spread of the virus in Iran. It begun its job by restricting travels to China and getting prepared for the outbreak inside the country. In late February 2020, when the tests of two citizens in Qom proved positive for the new coronavirus, COVID-19, a national campaign was launched to contain the disease through a national mobilization. As a global challenge, the coronavirus requires international cooperation and the support of all countries to prevent the spread of the disease and to treat patients. The enemies of the Iranian people not only have refused to give up economic terrorism in such a difficult and complex condition, they have also worsened the situation through psychological and media warfare.

Accusing Iran of spreading the virus across the region and many countries around the world and deceiving the public opinion by spreading false news about the death toll in Iran coupled with accusation that the country's management system has failed to deal with the epidemic are only a part of the "perceptive terrorism" that the hegemonic system has carried out to exacerbate the influence of "economic terrorism" on the Iranian people. The WHO representatives have visited Iran to monitor the process of providing health services to the people as well as programs implemented to contain the coronavirus. They have applauded the performance of the Islamic Republic of Iran, even calling for using the Iranian model to combat the virus in other countries. Some great measures have been predicted to contain and fight the virus, which have so far yielded good results.

https://www.tehrantimes.com/news/446039/Iran-s-special-situation-in-coronavirus-crisis

Israel

Iran And Israel Teamed Up To Destroy This Country's Nuclear Weapons Program
Sebastien Roblin
National Interest Blog, March 03, 2020

Ironically, having pioneered the preemptive strike targeting another state's nuclear research facilities with Israel, today Iran's extensive nuclear research program is threatened with preventative air attacks from Israel and the United States. At dawn on September 30, 1980 four American-made F-4E Phantom jets screamed low over central Iraq, each laden with air-to-air missiles and three thousand pounds of bombs.

https://nationalinterest.org/blog/buzz/iran-and-israel-teamed-destroy-countrys-nuclear-weapons-program-128922

Shocking: Why Israel Was Able to Win so Greatly During the Six-Day War
National Interest Blog, March 04, 2020

Israel launched a surprise attack and kept the initiative. It would go down as a region-changing conflict. The Israeli Defense Force's (IDF's, or Zahal's) strategic invasion of the West Bank region of Jordan began at 5 pm on June 5, 1967. The assault was launched by one of two armored brigades attached to the Peled Armored Divisional Task Force (Ugdah Peled), part of Zahal's Northern Command. Initially, the attack was aimed merely at neutralizing Royal Jordanian Army 155mm artillery fire that was striking the Israeli Air Force's (IAF's) strategically vital Ramat David Air Base and numerous Israeli villages and towns within range of Jordanian Samaria.

Ugdah Peled's planning started from scratch. Absorbed for days with preparing to counter an expected all-out Arab invasion of northern Israel from the Syrian Golan Heights, the bulk of Ugdah Peled was given somewhat under five hours to figure out how to invade Samaria, and then to do it. It was not until noon on June 5 that the division commander, Brig. Gen. Elad Peled, was himself called in from a patrol along the Syrian frontier to oversee the planning.

https://nationalinterest.org/blog/buzz/shocking-why-israel-was-able-win-so-greatly-during-six-day-war-129412

Tehran Must Stop Nuclear Subterfuge
Evan Nierman

The Times of Israel, March 04, 2020

If Iran has nothing to hide, then why are its leaders denying access to the International Atomic Energy Agency (IAEA) to inspect specific sites suspected of nuclear activity? After all, this is one of the critical responsibilities that the United Nation's nuclear watchdog is tasked with. The answer is clear: Iran has a well-documented history of subterfuge and stonewalling when it comes to shielding its pursuit of nuclear power from the eyes of the global community. And the latest indications are that Tehran is continuing along this dangerous path of secrecy.

In Vienna recently, Kazem Gharib Abadi, Iran's Ambassador to the UN, reportedly said Iran is under no obligation to consider the UN nuclear watchdog's requests to inspect certain sites as a result of what he alleged with no evidence was manufactured data made up by intelligence agencies. To make matters worse, Abadi attempted to implicate both Israel and America by accusing them of exerting pressure on the IAEA in order to disrupt what Abadi called the "proactive and constructive cooperation" between the IAEA and Iran.

https://blogs.timesofisrael.com/tehran-must-stop-nuclear-subterfuge/

What we know about Iran five years after Netanyahu's speech to Congress
Yaakov Amidror, Jacob Nagel and Jonathan Schachter
Jerusalem Post, March 08, 2020

Five years ago last week, Prime Minister Benjamin Netanyahu addressed a joint meeting of Congress about the nuclear deal then taking shape with Iran (the JCPOA). The speech remains controversial. In Jerusalem, this complaint always seemed rather rich. The original sin (though certainly not the last) of the American nuclear negotiations with Iran was that they began in secret, behind Israel's back. None of the countries that Iran threatened most was told that talks were taking place. We were aghast to learn from intelligence that our greatest ally was secretly bargaining with our greatest enemy about the gravest threat facing the Jewish state. When asked directly about the meetings, our American colleagues did not reply truthfully.

Netanyahu warned of three dangers stemming from the deal. First, he argued that "Israel's neighbors, Iran's neighbors, know that Iran will become even more aggressive and sponsor even more terrorism when its economy is unshackled...." Second, leaving Iran with an expansive and expanding nuclear infrastructure unnecessary for a peaceful energy program, as its advanced centrifuge research and development went untouched, would put Tehran "weeks away from having enough enriched uranium for an entire arsenal of nuclear weapons" when the deal's restrictions were lifted after 10 to 15 years. Third, the deal would be "a farewell to arms control" because Iran's neighbors would insist on having the same capabilities for themselves, potentially leading to a regional nuclear arms race.

https://www.jpost.com/Opinion/What-we-know-about-Iran-five-years-after-Netanyahus-speech-to-Congress-620259

Proliferators Could Learn From Israel's Success In Secretly Building The Nuclear Triad
Kyle Mizokami
National Interest Blog, March 15, 2020

Not much is known about early Israeli weapons, particularly their yield and the size of the stockpile. In a private email leaked to the public in September of 2016, former secretary of state and retired U.S. Army general Colin Powell alluded to Israel having an arsenal of "200 nuclear weapons." While

this number appears to be an exaggeration, there is no doubt that Israel does have a small but powerful nuclear stockpile, spread out among its armed forces. Israeli nuclear weapons guard against everything from defeat in conventional warfare to serving to deter hostile states from launching nuclear, chemical and biological warfare attacks against the tiny country. Regardless, the goal is the same: to prevent the destruction of the Jewish state.

Israel set off to join the nuclear club in the 1950s. David Ben-Gurion was reportedly obsessed with developing the bomb as insurance against Israel's enemies. Although an ambitious goal for such a small, initially impoverished country, Israel did not have any security guarantees with larger, more powerful states—particularly the United States. The country was on its own, even buying conventional weapons off the black market to arm the new Israeli Defense Forces. Nuclear weapons would be the ultimate form of insurance for a people that had suffered persecution but now had the means to control their own destiny.

http://7nationalinterest.org/blog/buzz/proliferators-could-learn-israels-success-secretly-building-nuclear-triad-132867

Turkey

Can Turkey Defeat Russia's Army in Syria?
Michael Peck
National Interest Blog, March 10, 2020

Turkey and Russia are hardly equal in size or military capability. But should Turkish and Russian forces actually engage in combat in Syria, Turkey would have the edge, according to one American analyst. "The correlation of forces is decidedly against Russia in Syria," says Michael Kofman, a researcher at the Center for Naval Analyses thinktank, and an expert on the Russian military.
How could this be? Russia is a former superpower that still retains a large military and the world's biggest arsenal of nuclear warheads.

Turkey, though one of the strongest members of NATO, is a middleweight power that lacks nuclear weapons. But as in real estate, location is everything. Russia's overall military superiority doesn't translate into superior strength on the ground in northeastern Syria, where Moscow's Syrian ally has launched an offensive to recapture Idlib province – on the Syria-Turkish border – from Turkish troops and Turkish-backed Syrian rebels.

https://nationalinterest.org/blog/buzz/can-turkey-defeat-russia%E2%80%99s-army-syria-131212

UAE

A Successful Mideast Nuclear Deal
Yousef Al Otaiba
Wall Street Journal, March 04, 2020

The Middle East nuclear agreement is working well. It contains the strongest commitments ever agreed to for nonproliferation and transparency and no pathway to weaponization. No, not that nuclear deal.

On March 3, the United Arab Emirates announced it had finished loading fuel into Unit 1 of the Barakah Nuclear Energy Plant. When all four units become operational, the plant will provide up to 25% of the U.A.E.'s electricity with zero carbon emissions.

https://www.wsj.com/articles/a-successful-mideast-nuclear-deal-11583367406

Reports/interviews

U.S. Seeks to Maintain Credible Nuclear Deterrent
C Todd Lopez
US Dept of Defence, March 03, 2020

The United States maintains a robust nuclear arsenal that consists of ground-based, air-launched and sea-launched weapons. Together, it's commonly called the "nuclear triad," and it remains the centerpiece of the U.S. nuclear deterrent. The triad is fast approaching the end of its service life and must quickly be replaced before it's lost. Victorino G. Mercado, currently performing the duties of the assistant secretary of defense for strategy, plans and capabilities testified today before the House Armed Services Committee, subcommittee on strategic forces. He told lawmakers that efforts to replace the triad are not part of an arms race.

"The U.S. seeks only what it needs to maintain a credible nuclear deterrent," he said. "In contrast to Russia, who maintains about 2,000 non-strategic nuclear weapons and are pursuing and fielding other novel nuclear capabilities, we have no desire or intent to engage in an arms race nor match weapon-for-weapon the capabilities being fielded by Russia." The DOD's fiscal year 2021 budget request for nuclear forces, Mercado said, is $28.9 billion, or 4.1% of the total DOD request. The funding request to modernize the existing triad is about 1.7% of the budget request, he added. "The nation's nuclear modernization program is affordable," he said.

https://www.defense.gov/Explore/News/Article/Article/2101067/us-seeks-to-maintain-credible-nuclear-deterrent/

East Asia

Japan

The reality of Fukushima 9 years after 3/11; still more to do
The Asahi Shimbun, March 11, 2020

Nine years have passed since the Great East Japan Earthquake struck on March 11, 2011, leaving more than 18,000 people dead or missing. The catastrophe triggered a triple meltdown at the Fukushima No. 1 nuclear power plant that contaminated more than a million tons of water with radiation. But Prime Minister Shinzo Abe declared the situation "under control" in the successful bidding process for the 2020 Olympics.

The Tokyo Olympics, dubbed "Fukko Gorin" (Recovery Olympics, in reference to recovery from the mega-quake and tsunami), are now less than five months away. Levees have been raised and progress has been made in the recovery of disaster-ravaged areas over the years, but many land plots in those areas still remain vacant and idle. In Fukushima Prefecture in particular, 40,000 people are still living as evacuees. There are still high-radiation areas designated as "difficult-to-return zones" that remain

uninhabitable. During a March 7 visit to the prefecture, the prime minister noted, "Without Fukushima's recovery, there is no reconstruction for Japan." But Abe had nothing to say about his personal thoughts on Fukushima's current state.

http://www.asahi.com/ajw/articles/13205090

North Korea

Nuclear powers must lead on arms control
Tong Zhao
Korea Times, March 11, 2020

The once-every-five-years review conference of the 191-member Nuclear Non-Proliferation Treaty (NPT) will start in April in New York. One of the most divisive issues at the conference will be the lack of sufficient progress by nuclear weapons states (NWS) toward fulfilling their legal obligation on nuclear disarmament. Against the background of an increasingly intensive nuclear arms competition among the major powers, the collapsing of existing arms control treaties, and the simmering crises around North Korea and Iran, the five NWS, who are also the permanent members of the U.N. Security Council, must exercise leadership to safeguard a stable nuclear order.

The NWS created the P5 Process in 2009 to discuss steps to implement their NPT obligations, and especially to promote disarmament through transparency and confidence-building measures. This mechanism is being underused, but has potential to make greater contribution to arms control. NWS have generally argued that it is the responsibility of all countries to improve the international security environment so as to create the necessary conditions for nuclear disarmament. But non-nuclear weapons states (NNWS) also have a point in noting that the existence of nuclear weapons has continued to poison the international security environment.

http://www.koreatimes.co.kr/www/opinion/2020/03/137_285964.html

Think Tanks

Iran and the NPT: Safeguards at Stake
Mark Hibbs
Carnegie, March, 2020

During the week of 9th March, member states of the International Atomic Energy Agency (IAEA) have an opportunity to de-escalate rising international tension over Iran’s refusal to provide the IAEA information about its nuclear activities. Whether they succeed may depend on the agency’s Board of Governors (BOG) transcending polarisation that in 2019 factored in BOG debate and that has again broken out on the eve of the March conclave. In the view of the overwhelming majority of board members, Tehran must comply with its safeguards obligations under the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) by answering questions based on the IAEA’s findings and information.

On March 3, the IAEA Secretariat updated the BOG on its verification activities related to both Iran’s NPT safeguards agreement and to the 2015 Joint Comprehensive Plan of Action (JCPOA). In providing the BOG two separate reports on these matters, the Secretariat intentionally underscored

that Iran's NPT obligations are separate and legally independent from Iran's commitments under the JCPOA.

https://carnegieendowment.org/2020/03/06/iran-and-npt-safeguards-at-stake-pub-81242

Trump appointee wants "arms control for adults." Experts couldn't agree more.
Sharon Squassoni
Bulletin of Atomic Scientists, March 02, 2020

Many Washington experts welcomed the appointment of Chris Ford to the position of Assistant Secretary of State for International Security and Nonproliferation in 2017. In an administration famous for installing officials with little or no previous experience related to their jobs, Ford is a rare exception. Not only is he a Washington insider willing to work for Trump; he has actually handled similar issues in previous administrations, and his views are well-documented in publications from his time in the think tank community. He is a Rhodes Scholar, with degrees from Harvard, Yale, and Oxford, no less. While other Trump appointees are struggling to learn the ropes of government, Ford has been speaking at every opportunity about nuclear arms control and nonproliferation. (He gave 29 speeches in 2019.)

Normally, nuclear experts would welcome the attention to arms control, since silence about a policy area can mean that it is a low priority, or that there is no progress to publicize. The transparency of Ford and the State Department is especially remarkable because nothing is afoot in arms control, and no nonproliferation deals for Iran or North Korea are in the making. With free time on his hands, Ford is attempting to disarm his critics rather than create real solutions to persistent problems. Ironically, many of his critiques fall flat not just because they defy the facts and logic, but because they could also be quite accurately directed at the very administration he serves. In February, in what seemed a deliberate attempt to provoke, Ford delivered a speech in London at the Institute for International Strategic Studies (IISS) that offered a cartoonish vivisection of "certain circles" of Western civil society organizations and diplomats that are engaged in arms control and disarmament. In Ford's view, these types of groups and people are "in thrall" to a strain of identity politics that compels them to advocate not just for arms control but also for nuclear disarmament. This infatuation results in "bad habits" and "poor choices"—a stark contrast from the "arms control for adults" that Ford endorses, which pursues security above all. While the infantilizing of nuclear policy experts who have spent their lives doing something more than pursuing money or profit is unfortunate and sure to earn Ford less respect than he might otherwise deserve, there are other disturbing elements in Ford's speech that deserve attention.

https://thebulletin.org/2020/03/a-top-us-officials-straw-man-critique-of-arms-control-experts-explained/

For UAE, the political perks of nuclear power eclipse economics
Jim Krane
Bulletin of Atomic Scientists, March 02, 2020

The exclusive global club of nuclear power producers is welcoming its latest member: the United Arab Emirates (UAE), an absolute monarchy that is one of the world's leading oil producers and one of the world's leading per capita electricity consumers. In February, the UAE government in Abu Dhabi licensed the first of four 1.4 gigawatt nuclear reactors after 12 years of construction on the Persian Gulf coast at Barakah, just east of the UAE border with Saudi Arabia. When the remaining

three reactors at the $25 billion plant are completed, Barakah will reach its total nameplate capacity of 5.6 gigawatts.

As the South Korea-led consortium loads fuel rods and tests the reactor's output, the UAE will finally have a major source of zero-carbon electricity on a power grid that relies upon fossil fuels—mainly natural gas—for 97 percent of its electric power generation, a much higher percentage than that of other countries where consumption is high. Nuclear power confers several benefits to Abu Dhabi beyond always-on carbon-free electricity. These range from freeing domestic oil and gas for export, leveraging waste heat for desalination, and creating high-value employment. Going nuclear also enhances the UAE's strategic profile at a time when climate concerns are calling into question the long-term stature of major petrostates like those in the Persian Gulf.

https://thebulletin.org/2020/03/for-uae-the-political-perks-of-nuclear-power-eclipse-economics/

Experts assess the nuclear Non-Proliferation Treaty, 50 years after it went into effect
Michael E. O'Hanlon, Robert Einhorn, Steven Pifer, and Frank A. Rose
Brookings, March 03, 2020

Current arsenals are big, but they are only about one-fifth the size of what they were a half-century ago. While superpower arms control, and the end of the Cold War, deserve most of the credit for the reductions (along with restraint by China, in particular, in not building up too much), the NPT created some of the broader political context and moral pressure that led to these reductions. While it sought to prevent non-nuclear states from ever getting the bomb, its main bargain also required the existing nuclear weapons states to reduce and ultimately eliminate their arsenals to hold up their own ends of the bargain.

The arsenals of the United States and Russia still account for more than 90% of the total number of warheads on Earth today. The United Kingdom, France, China, India, and Pakistan each likely possesses between 150 and 300, with Israel's unconfirmed arsenal totaling almost 100 bombs. North Korea probably has a couple dozen nuclear weapons, with enough fissile material to make a few dozen more. That said, the situation is not entirely grim. While nuclear proliferation continues, and nine countries are known to possess nuclear weapons, the fear once expressed by John F. Kennedy that at least a couple dozen countries could have the bomb by the 21st century has not panned out. And of course, nuclear weapons have not been used again in combat.

https://www.brookings.edu/blog/order-from-chaos/2020/03/03/experts-assess-the-nuclear-non-proliferation-treaty-50-years-after-it-went-into-effect/

The NPT took effect 50 years ago; its purpose has been debated from the beginning
Jonathan R. Hunt
Bulletin of Atomic Scientist, March 05, 2020

The Treaty on the Non-Proliferation of Nuclear Weapons (NPT) took effect (or, in diplomats' parlance, "entered into force") 50 years ago, on Thursday, March 5, 1970. The milestone global agreement is beginning to show its age. Hailed in 2003 by US Ambassador Thomas Graham Jr. as "the centerpiece of international efforts to control the spread of nuclear weapons"—a common refrain among treaty supporters around the world—the NPT has weathered a line of storms since the turn of the millennium: the termination of the 1972 Anti-Ballistic Missile Treaty, the 2003 Iraq War, North Korea's nuclear-weapons program, the dismantlement of the nuclear agreement between Iran and major world powers, a long-heralded nuclear renaissance with implications for global fissile-material

production, the demise of the 1987 Intermediate-range Nuclear Forces Treaty, parallel modernization efforts by the nuclear powers, President Donald Trump's unabashed nationalism, and the rival Treaty for the Prohibition of Nuclear Weapons' that opened for signature nine years ago.

Against these headwinds, the states that are party to the NPT will meet from April 27 to May 22, 2020, at the NPT Review Conference at UN Headquarters in New York, which happens regularly at five-year intervals. Amid deep, enduring divisions over matters ranging from a WMD-free zone in the Middle East to moribund New START talks between Washington and Moscow (which the Trump administration wants to expand to include all five authorized nuclear-weapon states), it remains unclear as to whether conference delegates will succeed in forging a consensus document—and what will happen if they fail.

https://thebulletin.org/2020/03/the-npt-took-effect-50-years-ago-its-purpose-has-been-debated-from-the-beginning/

Why Arms Control Is (Almost) Dead
Carnegie Europe, March 05, 2020

Imagine the following: tomorrow, Vladimir Putin—almighty president of Russia—takes to the United Nations and announces the withdrawal of Russia's remaining forces in Georgia, Moldova, and other post-Soviet territories. In exchange, he only wants "peaceful relations with the West, economic prosperity for all, and the establishment of a common framework for jointly governing the security space from Vancouver to Vladivostok."

It was the irreversible sign that the politics of glasnost (openness) and perestroika (restructuring) had become reality. It was the moment Moscow relinquished its trump card in the military standoff with NATO. It was the signal for the other Warsaw Pact members that the Kremlin would not constrain their foreign and security policy choices the way it had done in the past.

https://carnegieeurope.eu/strategiceurope/81209

Erdogan's Ottoman Dreams Lie Broken in Syria
Marc Champion
Bloomberg, March 06, 2020

When Recep Tayyip Erdogan was inaugurated as Turkey's president with enhanced powers in 2018, Venezuelan counterpart and admirer Nicolas Maduro called him the "leader of the new multi-polar world." In Syria, however, Erdogan appears to have tested to destruction the ability of a country with no nuclear arsenal, few natural resources and an economy roughly the size of Spain's to carve a sphere of influence for itself.

Under Erdogan, Turkey has tried to re-establish sway in nations of the former Ottoman Empire. It's been an enthusiastic competitor in the Middle East to fill the growing power vacuum left behind as the U.S. seeks to disengage. But although he secured another cease-fire for Idlib from Russian President Vladimir Putin on Thursday, Erdogan was a supplicant. Russian jets and air defenses have demonstrated the vulnerability of Turkish troops in Syria and, in a political threat to the Turkish leader, their ability drive more than a million refugees to the border.

https://www.bloomberg.com/news/articles/2020-03-06/erdogan-s-ottoman-dreams-lie-broken-in-syria

Representatives from Nuclear Newcomer Countries Learn about Nuclear Liability
Andrea Gioia
International Atomic Energy Agency, March 10, 2020

Over 50 representatives from 20 countries met in Abu Dhabi with experts from the IAEA International Expert Group on Nuclear Liability (INLEX) to learn about and discuss the international nuclear liability regime, and to exchange information on possible difficulties, concerns and issues relating to its national implementation.

The Workshop on Civil Liability for Nuclear Damage for Newcomer Countries was part of outreach activities regularly conducted by the IAEA, with the assistance of experts from INLEX, aimed at facilitating achievement of a global nuclear liability regime. It was organized in cooperation with the Federal Authority for Nuclear Regulation (FANR) of the United Arab Emirates.

https://www.iaea.org/newscenter/news/representatives-from-nuclear-newcomer-countries-learn-about-nuclear-liability

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