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India

ISRO to launch 36 missions including 10 earth observation satellites in 2020-21: Dr Jitendra Singh

PIB New Delhi, March 19, 2020

Union Minister of State (Independent Charge) Development of North-Eastern Region (DoNER), MoS PMO, Personnel, Public Grievances & Pensions, Atomic Energy and Space, Dr Jitendra Singh said that Indian Space Research Organization (ISRO) has planned 36 missions including satellites and launch vehicles for the fiscal year 2020-21. In written reply to a question in the Rajya Sabha today, he said that ISRO will send up 10 earth observation satellites during 2020-21. Details of the missions are as follow:

- Earth observation satellite 10
- Communication satellite 3
- Navigation satellite 2
- Space science satellite 3
- Technology Demonstration 1
- PSLV 10
- GSLV MK II 3
- GSLV MK III 1
- Small Satellite Launch Vehicle 2
- Gaganyaan (Unmanned) 1

<https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1607124>

India-Pakistan nuclear war may lead to global starvation, says study

Deccan Herald, March 17, 2020

Even a limited nuclear war between India and Pakistan may lead to global starvation because of a famine, unmatched in modern history, eclipsing every historic drought and volcanic eruptions, says a new study released on Monday.

The research conducted by 19 scientists in Europe and the US has suggested that the climate and crop impacts of such a nuclear exchange would lead to unprecedented food shortages affecting at least 71 countries. The smoke from a single fire would not produce detectable climate impacts, but cumulative emissions from many fires generating several trillion grams of soot could substantially absorb sunlight in the stratosphere so that less energy reaches the earth...

<https://www.deccanherald.com/national/india-pakistan-nuclear-war-may-lead-to-global-starvation-says-study-814424.html>

10 earth-observing satellites among 36 missions lined up by Isro for FY21

T E Narasimhan

Business Standard, March 19, 2020

The Indian Space Research Organisation (Isro) lined up as many as 36 missions including ten earth observation satellites in 2020-21. Union Minister of State for Atomic Energy and Space, Jitendra Singh said that besides 10 earth observation satellites, the space agency lined up three communication satellites, three space science satellite, two navigation satellite and one technology demonstration. Gaganyaan (unmanned) is also part of Isro's mission for 2020-21.

As far as the rockets are concerned, ten PSLV launches, three GSLV MkII, one GSLV Mk III have been lined up. Two small satellite launch vehicle have also been lined up, said the Minister. "Indian Space Programme is focused on the peaceful use of outer Space. Towards this end, space technology should be used for the benefit of the country and society, and should provide solutions for developmental activities," said the Minister. Isro has completed 11 missions so far this fiscal year. These include four eEarth observation satellites, one communication satellite and one space satellite. Four PSLV and one GSLV MkIII were completed in 2019-20.

https://www.business-standard.com/article/economy-policy/10-earth-observing-satellites-among-36-missions-lined-up-by-isro-for-fy21-120031901076_1.html

India's renewable energy generation capacity has grown 72 per cent in six yrs: R K Singh

Energy World, March 24, 2020

The installed capacity of renewable energy generation in the country has grown 72 per cent from 80 gigawatt (GW) to 138.9 GW during the past six years, according to new and renewable energy minister R K Singh. He also added that the foreign direct investments of \$6.1 billion flew into the Indian clean energy sector -- including solar, wind, biomass, large hydro and nuclear -- in the five year period 2014-19.

As part of its Intended Nationally Determined Contributions, as per the Paris Climate Agreement, India has committed to install around 40 per cent of its power generation capacity based on non-fossil fuel resources by 2030. Singh also said an additional 62.4 GW clean energy capacity is currently under various stages of implementation and 34.07 GW is under various stages of bidding. Most of the clean energy projects, except nuclear power and some large hydro, are set-up in the country by the private sector.

<https://energy.economictimes.indiatimes.com/news/oil-and-gas/indias-renewable-energy-generation-capacity-has-grown-72-per-cent-in-six-yrs-r-k-singh/74789868>

India's space agency pauses rocket launches to make coronavirus supplies: report

Meghan Bartels

Space, March 30, 2020

As the coronavirus-borne disease COVID-19 spreads around the world, India's space agency has responded by pausing launches and pivoting resources to develop ventilators and hand sanitizer, according to local media reports.

The Indian Space Research Organisation (ISRO) oversees the country's launches and spacecraft missions, including its Geosynchronous Satellite Launch Vehicle rocket and the Chandrayaan-2

mission currently orbiting the moon. As work on forthcoming missions pauses, the agency has redirected its focus to aid the fight against COVID-19. Hand sanitizer is a critical ingredient to slow the spread of the virus; ventilators are vital for stabilizing patients who are critically ill with COVID-19. In particular, the ventilator ISRO is working on is meant to be simple to operate, according to the report.

<https://www.space.com/india-space-agency-stops-launches-makes-ventilators-coronavirus.html>

China

Air-defense missiles get ready for training

Global Times, March 16, 2020

HQ-16 medium-range air-defense missile systems attached to an air-defense brigade under the PLA 80th Group Army are erected during a realistic training exercise on March 9, 2020. Soldiers assigned to an air-defense brigade under the PLA 80th Group Army operate cranes to hoist and load HQ-16 medium-range air-defense missile systems onto missile launching trucks during a realistic training exercise on March 9, 2020.

<http://www.globaltimes.cn/content/1182721.shtml>

Long March-3A rocket series send 58 Beidou satellites into orbits

Yu Jianbin

China Military Online, March 17, 2020

The 54th navigation satellite of the BeiDou system was successfully launched at the Xichang Satellite Launch Center a few days ago, which means that the completion of BeiDou global navigation network is only one step away. The series of Long March 3A(LM-3A) rockets are indispensable for each launch mission of the Beidou project and thus known as the "BeiDou Express". This time, the LM-3A rockets also set a new launch record again.

The construction of the BeiDou Navigation Satellite System (BDS) has gone through three phases of BDS-1, BDS-2 and BDS-3. The BDS-3 consists of 30 satellites, and the onelaunched this time is the 29th BeiDou satellite. The last geostationary satellite will be launched in May as planned. By then, the deployment of the BDS-3 satellite constellation with global coverage will be fully completed. The LM-3A series mainly include three configurations: the launch capability of the Long March 3A is 2.6 tons, the Long March 3B 5.5 tons, and the Long March 3C 3.9 tons. According to the carrying capacity, different configurations can be selected to perform different tasks.

http://eng.chinamil.com.cn/view/2020-03/17/content_9771157.htm

Research stations established in South China Sea

China Military Online, March 20, 2020

The Chinese Academy of Sciences has established two research stations on Yongshu and Zhubi islands in the South China Sea to allow scientists to live and conduct field studies on ecology, geology and environment. The Yongshu station already has systems monitoring coral reef biomes, the island's flora and fresh water conservation. On the Zhubi islands, it recently finished the designs for its seismic stability and fresh water monitoring systems.

The academy said the stations will help scientists expand their research into deep sea ecology, geology, environment, material sciences and marine energy. They also play a part in monitoring ecological and seismic changes in key regions of the South China Sea. The two stations are branches of the academy's general research center on Meiji Island, which was built to support China's undertakings in ecological protection, resource utilization and sustainable development in the South China Sea.

http://eng.chinamil.com.cn/view/2020-03/20/content_9773606.htm

China completes new large solar telescope

Xinhua, March 24, 2020

The solar telescope will be used to observe solar activity, offering data support for solar research and space weather forecast. Scientists from the Chinese Academy of Sciences announced Tuesday that they have built the country's first and one of the world's largest solar telescope, to better observe and forecast solar activity. The Chinese Large Solar Telescope (CLST), with a 1.8-meter aperture, was developed by the academy's Institute of Optics and Electronics. It caught the first batch of high-resolution images of the solar atmosphere on Dec. 10, 2019, an academy statement said. Many countries have stepped up efforts to build 2-meter and larger solar telescopes in recent years. The world's large solar telescopes that have been built include the 1.6-meter GST in the United States and the 1.5-meter GREGOR in Germany.

The U.S. 4-meter solar telescope DKIST has not yet been put into operation, and the European 4-meter EST has just begun designing and developing. Previous to the CLST, the largest solar telescope in China was the 1-meter New Vacuum Solar Telescope developed by the academy's Yunnan Observatories. According to Rao Changhui, leading the project, the CLST will be equipped with a group of systems for adaptive optics, magnetic field detection and velocity field detection. As solar activity are increasingly frequent, space weather events will become more severe. In the future, the solar telescope will be used to observe solar activity, offering data support for solar research and space weather forecast, Rao said.

http://www.xinhuanet.com/english/2020-03/24/c_138912565.htm

China launches new remote sensing satellites

China Military Online, March 24, 2020

China successfully sent a group of new remote sensing satellites into orbit from the Xichang Satellite Launch Center in southwest China's Sichuan Province on Tuesday. The satellites have entered the planned orbits. This satellite group will work as a constellation for electromagnetic environment detection and related technological tests. The satellites were developed by the Innovation Academy for Microsatellites of the Chinese Academy of Sciences. And the carrier rocket was developed by the China Academy of Launch Vehicle Technology under the China Aerospace Science and Technology Corporation. This launch was the 329th mission of the Long March rocket series.

http://eng.chinamil.com.cn/view/2020-03/24/content_9775907.htm

Domestically developed high-end missile sees first export delivery despite pandemic

Liu Xuanzun

Global Times, March 29, 2020

A leading Chinese arms firm has delivered a batch of advanced portable HJ-12E anti-tank missiles to an undisclosed foreign buyer amid the pandemic of novel coronavirus pneumonia (COVID-19) in the first export case of this type of high-end weaponry, prompting Chinese analysts to note on Sunday that this showcased the company's reliability and its potential share of the market. Despite the COVID-19 outbreak that had brought difficulties in personnel exchanges since the Spring Festival holidays in late January and early February, state-owned China North Industries Group Corporation (Norinco) was able to deliver containers carrying the missiles to foreign clients as of Wednesday, before the scheduled shipment date, according to a statement the company released Wednesday on its WeChat account. It was the first time a third-generation anti-tank weapon system developed by the Chinese company has been exported, according to the statement. As the client was in urgent need of the missiles, the successful delivery had significant meaning for establishing Norinco's market position and further opening up the market, the company said.

Often compared with the FGM-148 Javelin missile used by the US military, the HJ-12, or Red Arrow 12, is a portable, fire-and-forget anti-tank missile domestically developed by China, Weihutang, a column on military affairs affiliated with China Central Television, reported. It can hit targets including tanks, bunkers, ships and helicopters from above, where armor is likely the thinnest, with a penetration capability of 1,100 millimeters, Weihutang reported. The HJ-12 enables soldiers to lock on target, fire and then move on without maintaining position to guide the missile to its target, providing many tactical advantages, the expert said. The missile is capable of destroying even the most advanced tanks in the world, he noted. It is expected to be a high-end weapon that not every military can afford in mass quantities, but it should be more cost-efficient than its competitors like the Javelin, the expert said.

<http://www.globaltimes.cn/content/1184117.shtml>

China General Nuclear continues clean energy growth

Zheng Xin

China Daily, March 31, 2020

China General Nuclear Power Corp, one of the country's largest nuclear power companies, has seen its total installed nuclear power capacity reach 27.14 million kilowatts and installed capacity under operation reaching 58.18 million kilowatts as of 2019. Total assets by the end of last year reached 750 billion yuan, it said in a report released.

The company, China's largest and the world's third-biggest nuclear energy company, has actively promoted clean energy development including nuclear, wind and solar power in the past few years. Its clean energy business has covered 28 countries worldwide as of last year, with on-grid power reaching 261.6 billion kilowatts, equal to a carbon dioxide reduction of more than 210 million tons, it said. The company's 19 power plants in China's Hubei province, which was hit hardest by the novel coronavirus pandemic, have generated power up to 368 million kilowatt hours from Jan 24 to March 27, it said.

<https://global.chinadaily.com.cn/a/202003/31/WS5e82d45da3101282172834fb.html>

USA

Beaver Valley deactivation notice rescinded

World Nuclear News, March 16, 2020

Energy Harbor Corp has rescinded the deactivation notices for the two-unit Beaver Valley Power Station in Shippingport, Pennsylvania, which had been scheduled to shut down in 2021. Energy Harbor's decision comes after the state began the process to join a regional initiative aiming to reduce carbon emissions through the trading of emissions allowances.

FirstEnergy Solutions became Energy Harbor in February after completing a Chapter 11 bankruptcy restructuring. In March 2018, the company notified regional transmission organisation PJM Interconnection (PJM) that it that it would deactivate the Beaver Valley, Davis-Besse and Perry nuclear power plants during the next three years because of market challenges. It notified PJM on 13 March of its decision to rescind the notices for Beaver Valley. The deactivations of the Davis-Besse and Perry units were rescinded last July after the state of Ohio passed into law a bill providing clean energy credits to zero-emission power producers.

<https://www.world-nuclear-news.org/Articles/Beaver-Valley-deactivation-notice-rescinded>

U.S. sanctions Iran, seeks release of Americans amid coronavirus outbreak

Humeyra Pamuk and Arshad Mohammed
Reuters, March 17, 2020

The United States imposed fresh sanctions on Iran on Tuesday, keeping up its economic pressure campaign even as it offered to help Tehran cope with the coronavirus pandemic and called on the Islamic Republic to release detained Americans. Iran is considering freeing some U.S. citizens, Secretary of State Mike Pompeo said at a news conference where he made clear Washington will maintain its maximum-pressure campaign to choke off Tehran's ability to export its oil. The campaign, instituted after President Donald Trump in 2018 unilaterally withdrew from the 2015 nuclear deal Iran struck with six major powers, aims to force Iran to limit its nuclear, missile and regional activities.

<https://www.reuters.com/article/us-healthcare-coronavirus-iran-usa/us-sanctions-iran-seeks-release-of-americans-amid-coronavirus-outbreak-idUSKBN2143EN>

U.S. blacklists Chinese, South African companies over Iran oil trade

Reuters, March 18, 2020

The United States on Wednesday identified seven companies that it has blacklisted for trade in Iranian petrochemicals - three based in mainland China, three in Hong Kong and one in South Africa - the State Department said in a statement. Separately, the department also named five Iranian nuclear scientists who the Commerce Department said it sanctioned on Tuesday for having taken part in Iran's pre-2004 nuclear weapons program and who continue to be employed by the Iranian state. The Trump administration on Tuesday had said it would blacklist the seven companies and five individuals but did not name them. The announcements appeared designed to signal Washington would not ease its campaign of choking off Tehran's ability to export its oil, despite appeals from China and others that it do so on humanitarian grounds because of the coronavirus outbreak.

<https://www.reuters.com/article/us-iran-nuclear-usa-petrochemicals/us-blacklists-chinese-south-african-companies-over-iran-oil-trade-idUSKBN2152HF>

Oklo submits first advanced reactor licence application

World Nuclear News, March 18, 2020

California-based Oklo Inc has submitted a combined licence application (COLA) for its Aurora "powerhouse" to the US Nuclear Regulatory Commission (NRC). This is the first COLA to be submitted using a new application structure for advanced fission technologies and the first privately funded application for a commercial advanced reactor. Aurora is described as an "advanced fission power system" that generates about 1.5 megawatts of power. Oklo began pre-application for the Aurora powerhouse with the NRC in 2016 and in 2018 piloted the new application structure based on existing regulations, completed interactively with NRC review and feedback to drive efficiency and effectiveness for future applications. The existing application guidance is based on large light water reactors (LWRs) and is generally only appropriate to these plants, Oklo said in its application letter to the NRC. The NRC does not require applicants to follow a certain structure for applications, and it is "in the interest" of the regulator that applicants for advanced fission plants not follow the existing voluntary guidance for LWRs, since that could lead to inappropriate content, but must meet existing regulatory requirements, it said.

"We are excited to show that an application for a fundamentally different fission technology can meet and exceed existing regulations while not being impeded by guidance based on nuclear plants of decades ago," Oklo Chief Operating Officer Caroline Cochran said.

<https://www.world-nuclear-news.org/Articles/Oklo-submits-first-advanced-reactor-licence-applic>

U.S. Tests First Hypersonic Glide Body, Challenging Russia's Advanced Nuclear Weapons Lead

Tom O'connor

News Week, March 20, 2020

The United States has tested its first hypersonic glide vehicle, challenging Russia's lead in advanced weapons it, too, has been developing for years. The U.S. Navy and Army, monitored by the Missile Defense Agency, announced Friday that they jointly conducted the launch of "a common hypersonic glide body (C-HGB), which flew at hypersonic speed to a designated impact point." The flight experiment took place Thursday at the Pacific Missile Range Facility in Kauai, Hawaii, and a Pentagon readout said it "will inform its ongoing development of systems designed to defend against adversary hypersonic weapons."

The U.S. military said it has a "goal of fielding hypersonic warfighting capabilities in the early- to mid-2020s." Lead vehicle designer Vice Admiral Johnny R. Wolfe, director of the Navy's Strategic Systems Programs, said Thursday's test built upon a previous flight experiment in October 2017. Earlier that year, Russian President Vladimir Putin unveiled an arsenal of nuclear-capable, hypersonic and state-of-the-art weapons that included a boost-glide vehicle called Avangard. Moscow has claimed it could travel up to 27 times the speed of sound, though some in Washington and the Pentagon have shed doubts about this.

<https://www.newsweek.com/us-hypersonic-glide-challenging-russia-lead-1493441>

Challenging times highlight supply chain importance, says UEC chief

World Nuclear News, March 20, 2020

Recent global events and supply disruptions have highlighted the importance of domestic supply chains, the CEO of US uranium producer Uranium Energy Corp (UEC) said today. The company has postponed plans to resume a drilling programme at its Burke Hollow in-situ leach (ISL) project until

market conditions "normalise". "As we work through these challenging times, we will continue to maintain our core principles, keeping our employees safe and operating the company with fiscal discipline,"

Amir Adnani said. "Additionally, the recent global events and supply disruptions further underscore the importance of domestic supply chains for vital resources. The proposed budget from the US Administration outlining a 10-year, USD1.5 billion programme to purchase domestically mined uranium for a national Uranium Reserve will be crucial to reviving the 100% idled US uranium industry." Adnani was referring to the US Administration's 2021 budget proposal for a scheme to purchase domestically mined uranium for a national uranium reserve, announced in February. The programme would aim to address challenges to the production of domestic uranium and would ensure a backup supply of uranium in the event of a significant market disruption.

<https://www.world-nuclear-news.org/Articles/Challenging-times-highlight-supply-chain-importanc>

US report identifies nuclear workforce trends

World Nuclear News, March 24, 2020

The US nuclear power sector shed more than 2000 jobs last year, according to a newly released report by the National Association of State Energy Officials (NASEO) and the Energy Futures Initiative (EFI). The sector employed a total of 60,916 workers across the country in 2019, which was over 3% less than in 2018, although employment in the nuclear fuel sector rose slightly.

The 2020 US Energy & Employment Report (USEER), prepared under a Memorandum of Understanding between NASEO and the EFI clean energy think-tank, identifies important trends and skill sets for the USA's energy workforce. The report was first published in 2016 and 2017 by the US Department of Energy.

EFI and NASEO have since 2018 organised and implemented USEERs to provide continuity with the previous editions and to provide year-to-year comparisons. The report is intended to inform policymakers, academic decision-makers and the private sector in developing integrated energy, security, economic development and workforce plans. "This kind of integration is key to maximising the benefits of the nation's abundant energy resources, rapid pace of energy innovation, and dynamic energy markets ... Creating a single and consistent measure of employment across the entire US energy system is critical to that understanding," the two organisations said.

<https://www.world-nuclear-news.org/Articles/US-report-identifies-nuclear-workforce-trends>

US low-carbon power seeks way past pandemic

World Nuclear News, March 25, 2020

The USA's clean energy sectors have outlined the government support they need to get through the COVID-19 pandemic. Associations representing the nuclear, hydro, solar and wind energy industries have all written to Federal leaders for help.

The Nuclear Energy Institute (NEI) has written to Energy Secretary Dan Brouillette, requesting assistance to ensure continued nuclear operations during the COVID-19 crisis, and also to Treasury Secretary Steven Mnuchin and National Economic Council Director Lawrence Kudlow on the nuclear industry's recommendations for economic recovery. In her 19 March letter to Mnuchin and Kudlow, NEI President Maria Korsnick wrote that the nuclear energy industry is "committed to working with the administration to provide clean, reliable and affordable electricity as the nation

addresses the COVID-19 crisis". NEI member companies are "anticipating - or are already experiencing - severe financial strain", she wrote, "as product orders are delayed or cancelled, as industrial electricity demand falls, and as workforce availability becomes increasingly constrained". To help, NEI has identified specific policy and legislative proposals that would be of immediate benefit: enabling essential support for nuclear infrastructure; providing grants for COVID-19-related paid leave; incentivising investments in resilient nuclear generation; and providing temporary regulatory fee relief.

<https://www.world-nuclear-news.org/Articles/US-low-carbon-power-seeks-way-past-pandemic>

US national lab supercomputers to help fight COVID-19

World Nuclear News, March 26, 2020

Five US National Laboratories will play a key role in a consortium tasked with harnessing the power of supercomputers to combat COVID-19, Energy Secretary Dan Brouillette said in a video address yesterday. The supercomputing facilities at the Department of Energy's (DOE) national laboratories are used, amongst other things, to carry out research supporting the development of next-stage nuclear reactors and advanced nuclear fuel. President Donald Trump announced the launch of the consortium, which includes the Argonne, Lawrence Livermore, Los Alamos, Oak Ridge and Sandia labs, on 23 March.

The COVID-19 High Performance Computing Consortium is a private-public effort led by the White House Office of Science and Technology Policy, the DOE and IBM to bring together federal government, industry and academic leaders who are volunteering free compute time and resources on their machines. It will provide COVID-19 researchers with access to powerful high-performance computing resources. Brouillette said providing access to "the world's most powerful computing resources" would accelerate research and discovery capabilities in this fight.

<https://www.world-nuclear-news.org/Articles/US-National-Laboratories-supercomputers-to-help-CO>

Landmark lift completed at Vogtle project

World Nuclear News, March 30, 2020

The containment vessel top head for Georgia Power's Vogtle unit 4 has been lifted into place, marking the completion of all major lifts inside the containment vessels for Vogtle 3 and 4. The project to build two AP1000 reactors at the site near Waynesboro, Georgia is now about 84% complete.

The top head is 130 feet (39.6 metres) in diameter, 37 feet tall, and weighs nearly 1.5 million pounds (680 tonnes) and is made up of 58 large plates which are welded together. The lift was completed almost a year after the same step was completed for Vogtle unit 3. "Placement of the unit 4 top head is a culmination of the hard work and dedication of the Vogtle 3 and 4 team as we continue on the path to operation," said Vogtle 3 and 4 Construction Executive Vice President Glen Chick.

<https://www.world-nuclear-news.org/Articles/Landmark-lift-completed-at-Vogtle-project>

U.S. renews sanctions waivers allowing Iran nonproliferation work

Humeyra Pamuk, Arshad Mohammed
Reuters, March 31, 2020

The United States has allowed Russian, Chinese and European companies to continue their work at Iranian nuclear sites to make it harder for Tehran to develop nuclear weapons, the U.S. State Department said on Monday. Reuters earlier reported that the decision to renew waivers to sanctions that bar non-U.S. firms from dealing with Iran's Atomic Energy Organization was expected on Monday, citing four sources familiar with the matter including a U.S. official.

Jewish News Syndicate, a news outlet predominantly focused on Israel and the Jewish world, first reported that the United States was expected to renew the waivers, citing two sources familiar with the decision. The move by the Trump administration, which in 2018 withdrew from the 2015 Iran nuclear deal and reimposed sanctions on Iran, will allow nonproliferation work to continue at the Arak heavy-water research reactor, the Bushehr nuclear power plant, the Tehran Research Reactor and other nuclear initiatives.

<https://www.reuters.com/article/us-iran-nuclear-usa/u-s-renews-sanctions-waivers-allowing-iran-nonproliferation-work-idUSKBN21H33D>

Europe

France's EDF to reduce Flamanville nuclear plant staffing over virus

Reuters, March 16, 2020

EDF will reduce staff to around 100 from 800 at its Flamanville nuclear power plant in northern France due to coronavirus infections in the Cotentin region, a spokesman for the French utility said on Monday. Only people in charge of safety and security will remain on-site. The decision was made because of a cluster of COVID-19 infections in region, the spokesman said adding that some staff displayed signs of the virus.

“But today, it is no longer possible to carry out tests. There are too many cases,” he said. “As a preventive measure and because it is no longer possible to carry out tests to confirm cases, we have decided to only keep those in charge of safety and security,” the spokesman said. While the two reactors have been offline for maintenance since January and September, respectively, major maintenance work was under way. EDF also said construction work on a long-delayed third reactor on the site would be reduced.

<https://www.reuters.com/article/us-health-coronavirus-france-nuclear/frances-edf-to-reduce-flamanville-nuclear-plant-staffing-over-virus-idUSKBN21322Q>

Hungary's first 'quarantine theatre' streams post-nuclear attack play

Krisztina Fenyo, Krisztina Than

Reuters, March 17, 2020

A group of actors have set up Hungary's “first quarantine theatre”, streaming a play via Facebook about a man and a woman who find themselves in an underground nuclear fallout shelter and have to adapt to their new reality, and to each other. The two-hander was streamed on Monday just hours before the Hungarian government closed borders to all foreigners, after shutting down schools nationwide in a bid to slow the spread of the coronavirus. Dennis Kelly's play “After the End” has an unsettling topicality and will hopefully help viewers to reflect on the new situation, the stage director, Laszlo Magacs said.

<https://in.reuters.com/article/health-coronavirus-hungary-theatre/hungarys-first-quarantine-theatre-streams-post-nuclear-attack-play-idINKBN21424B>

EDF Energy says plans in place to maintain operations at UK nuclear plants

Nina Chestney

Reuters March 17, 2020

EDF Energy has plans in place to maintain operations at its nuclear power plants in Britain during the coronavirus outbreak, it told Reuters. The company operates all 15 nuclear reactors in Britain. Currently, eight of those with a combined capacity of around 4.2 gigawatts - almost half of the country's total nuclear power capacity - are offline for planned or unplanned outages. "We have comprehensive plans in place to maintain operations at all of our power stations and planned generation is not affected at any of our sites," said a spokeswoman, declining to specify what the measures were. EDF Energy's parent company EDF said it would reduce staff at its Flamanville nuclear power plant in northern France due to coronavirus infections in the Cotentin region. The plant has been offline for maintenance.

<https://in.reuters.com/article/britain-nuclear/edf-energy-says-plans-in-place-to-maintain-operations-at-uk-nuclear-plants-idINL8N2BA6DX>

UK's National Grid says it can keep the lights on during coronavirus crisis

Nina Chestney

Reuters, March 18, 2020

Britain's National Grid has plans in place to keep the lights on throughout the coronavirus outbreak as more people than usual remain at home, it said on Wednesday. "We have well-developed procedures in place to manage the effects of a pandemic and have analysed anticipated effects on electricity supply and demand of mass self-isolation of the UK's workforce," the grid operator said. Prime Minister Boris Johnson shut down social life in Britain and ordered the most vulnerable to isolate for 12 weeks, ramping up the battle against a coronavirus outbreak just as it accelerates towards its peak.

People should avoid pubs, clubs, restaurants, cinemas and theatres, the government said, though Johnson stopped short of ordering them to close. People should also avoid unnecessary travel and work from home where possible. Demand across the country is expected to reduce due to a drop in energy use from industrial consumers, which is likely to be greater than the increase in domestic demand as people stay at home, National Grid said. "Please continue to use energy as you usually would ... boil that kettle, tune in to your favourite TV show and enjoy a hot shower," National Grid electricity system operator director Fintan Slye said in a statement.

<https://www.reuters.com/article/britain-energy/update-1-uks-national-grid-says-it-can-keep-the-lights-on-during-coronavirus-crisis-idUSL8N2BB7H4>

French nuclear plants tighten hygiene procedures over coronavirus worries

Benjamin Mallet

Reuters, March 20, 2020

French utility EDF is introducing stricter hygiene procedures at its nuclear plants after walk-outs by a small number of workers who feared getting infected with coronavirus during radiation screening, union and industrial sources said on Friday. Under French labour laws, staff have the right to walk off the job if they consider there is a clear and imminent threat to their health or safety.

After working in the radioactive areas of nuclear plants, staff have to step through narrow shower-style portals in their underwear to be checked for possible radiation exposure. Workers feared the surface areas of these portals could become a source of spreading the virus. EDF has now agreed to clean the portals twice per eight-hour shift, to increase security distances between workers and provide gloves and hand sanitiser, according to new internal rules announced on Tuesday. “The problem has been solved or will be soon, provided that guidelines are respected,” CGT union member Thierry Raymond told Reuters.

<https://in.reuters.com/article/health-coronavirus-france-nuclear/french-nuclear-plants-tighten-hygiene-procedures-over-coronavirus-worries-idINL8N2BD6QG>

Bulgaria delays deadline for Belene nuclear project bids

Reuters, March 22, 2020

Bulgaria will give more time for shortlisted investors to file binding bids for its Belene nuclear power project after measures over the coronavirus outbreak have limited access to the project's data room, the energy minister said. Russia's Rosatom, China's CNNC and Korea Hydro & Nuclear Power Co had to file their offers to invest in the estimated 10 billion euro (\$10.7 billion) project by the end of April.

French energy company EDF's Framatome and U.S. group General Electric, which had both offered to provide equipment for the 2,000 megawatt project and arrange financing, will also be part of the process. “At the moment we cannot provide access to the data room for the project. So we would have to extend the deadline for filing bids until we can grant such access,” Energy Minister Temenuzhka Petkova said. “It would mean a delay of a month, month and a half.”

<https://in.reuters.com/article/health-coronavirus-bulgaria-nuclear/bulgaria-delays-deadline-for-belene-nuclear-project-bids-idINL8N2BF0DR>

Slovenia says sole nuclear power plant unaffected by Croatia quake

Reuters, March 22, 2020

Slovenia's only nuclear power plant, Krsko (NEK), has not been affected by a large earthquake which hit neighbouring Croatia early on Sunday but authorities said it had started inspecting systems and equipment as a normal preventive action. “The nuclear power plant continues to operate at full power,” said Igor Sirc, director of the Slovenian Nuclear Safety Administration. NEK is jointly owned by Slovenia and neighbouring Croatia, whose capital was shaken by a 5.3 magnitude earthquake that damaged buildings, sent many people into the streets, buried vehicles in rubble and caused several fires.

<https://in.reuters.com/article/croatia-quake-slovenia-nuclearpower/slovenia-says-sole-nuclear-power-plant-unaffected-by-croatia-quake-idINL8N2BF06U>

EDF to delay applying for UK nuclear plant building consent

Nina Chestney

Reuters, March 26, 2020

Utility EDF said on Thursday it will apply for development consent later than planned to build its Sizewell C nuclear plant in Britain due to the coronavirus crisis. The application for the new nuclear

power station was due to be submitted to the UK's Planning Inspectorate by the end of March, but that will be deferred by a few weeks, EDF said. "We are ready to submit the application but we recognise that many people in Suffolk, including the local authorities, are adjusting to new circumstances created by the coronavirus crisis," said Humphrey Cadoux-Hudson, EDF's managing director of nuclear development.

<https://in.reuters.com/article/britain-nuclearpower-edf/edf-to-delay-applying-for-uk-nuclear-plant-building-consent-idINL8N2BJ6MU>

Europe sends medical goods to Iran in trade test

Reuters, March 31, 2020

France, Germany and Britain have exported medical goods to Iran in the first transaction conducted under a trade mechanism set up to barter humanitarian goods and food after the U.S. withdrawal from a 2015 nuclear deal, Germany said on Tuesday. The German Foreign Ministry said the medical goods were now in Iran and added that the Instex trade mechanism and its Iranian counterpart would now work on more transactions and on enhancing the system.

The shipment is a consignment of medical goods from a European exporter, a ministry source said, adding they could not give details on the nature of the shipment due to contractual confidentiality clauses. The source said the transaction was separate from an initiative earlier this month by Britain, Germany and France to help Iran fight the coronavirus, which included an urgent shipment of medical material, including equipment for laboratory tests, protective body suits and gloves. Washington's major European allies opposed the decision by U.S. President Donald Trump in 2018 to abandon the nuclear deal, under which international sanctions on Iran were lifted in return for Tehran accepting curbs on its nuclear programme.

<https://www.reuters.com/article/us-iran-europe-trade/europe-sends-medical-goods-to-iran-in-trade-test-idUSKBN21I11B>

Russia

Kazakh-Russian enrichment JV completes share sale

World Nuclear News, March 17, 2020

Kazatomprom announced today it has completed the sale of its 50% interest (minus one share) in Uranium Enrichment Centre JSC (UEC) to its partner in the joint venture, TVEL. The world's biggest uranium producer disclosed the RUB6.253 billion (about USD100 million) transaction with the nuclear fuel manufacturer subsidiary of Russian state nuclear corporation Rosatom in January. All conditions have now been met, and the transaction has closed, with Kazatomprom receiving payment, Kazatomprom said.

UEC is a joint Kazakhstan-Russian enterprise established in 2006 as part of the implementation of the Comprehensive Programme of Kazakhstan-Russia Cooperation in the Peaceful Use of Atomic Energy. It owns 25% (plus 1 share) of the Ural Electrochemical Integrated Plant JSC in Novouralsk, which is in the Sverdlovsk region of Russia. UEC was the first company with foreign-ownership to hold an interest in a Russian uranium enrichment facility, Kazatomprom said.

<https://www.world-nuclear-news.org/Articles/Kazakh-Russian-enrichment-JV-completes-share-sale>

US deliberately hampers Iran's anti-coronavirus efforts — Russian Foreign Ministry

TASS News Agency, March 17, 2020

The United States is taking deliberate actions that hamper Iran's measures to tackle the novel coronavirus outbreak, the Russian Foreign Ministry said in a statement on Monday.

"Iranian President Hassan Rouhani recently said that along with the \$200-billion damage already dealt to the economy of the country, the May 2018 unilateral US sanctions, imposed within the framework of the maximum pressure campaign, pose a serious obstacle to efficient measures against the infection," the statement says.

"The reason behind the numerous fatalities is not only the infection itself, but also the fact that the US is deliberately hindering efforts to counter it. Millions of Iranian citizens have been deprived of the opportunity to purchase vital medical items, no matter how Washington is trying to distort this fact. We deeply regret, we are alarmed and seriously concerned by the anti-humane US policies." The Russian Foreign Ministry noted Tehran's firm determination to remain within the framework of the Joint Comprehensive Plan of Action on Iran's nuclear program.

<https://tass.com/world/1130951>

Research into Russia's fifth generation subs well in progress — Navy's commander

TASS News Agency, March 18, 2020

Research is well in progress into Russia's fifth-generation submarines, the Navy's commander-in-chief, Admiral Nikolai Yevmenov, told the Russian army daily Krasnaya Zvezda in an interview.

"Currently Russia is building fourth generation submarines, but we are obliged to look ahead. This is an imperative of our time and of progress in science and engineering that concerns the Navy's development. It is common knowledge that research into fifth generation submarines is well underway. They are to boast far better parameters," Yevmenov promised.

<https://tass.com/defense/1131767>

Russia and Bangladesh expand nuclear cooperation

World Nuclear News, March 18, 2020

A number of documents have been signed between Russian state nuclear corporation Rosatom and the government of Bangladesh that will enhance existing bilateral cooperation in the use of atomic energy for peaceful purposes. Russia is currently constructing a two-unit nuclear power plant at Rooppur, Bangladesh.

A package of documents was signed yesterday in Dhaka following a meeting between Rosatom Director General Alexey Likhachov and the Prime Minister of Bangladesh, Sheikh Hasina. Likhachov also held meetings with Bangladeshi Minister of Foreign Affairs Abulkalam Abdul Momen, and the Minister of Science and Technology, Yeafesh Osman. A package of documents was signed yesterday in Dhaka following a meeting between Rosatom Director General Alexey Likhachov and the Prime Minister of Bangladesh, Sheikh Hasina. Likhachov also held meetings with Bangladeshi Minister of Foreign Affairs Abulkalam Abdul Momen, and the Minister of Science and Technology, Yeafesh Osman.

<https://www.world-nuclear-news.org/Articles/Russia-and-Bangladesh-expand-nuclear-cooperation>

Low noise Borei class sub remained unnoticed by US during voyage to Far East

TASS News Agency, March 19, 2020

The US military failed to detect Russia's project 955 (Borei class) submarine The Alexander Nevsky during its voyage from Russia's Northern Fleet to the Pacific several years ago by virtue of its low noise and special maneuvers performed on the way, the submarine's former commander, Captain 1st Class Vasily Tankovid, told TASS in an interview. "As far as its stealth parameters are concerned, in this respect we are far ahead of our own and foreign ships. The characteristics of US ships are nowhere near our low noise levels,"

Tankovid said about The Alexander Nevsky's features. The submarine made a 42-day voyage from the Northern Fleet to the Pacific Fleet in 2015. During the journey it remained on the surface for twelve days. Tankovid recalled that the United States learned about the voyage only when the submarine arrived in Vilyuchinsk, the Kamchatka Peninsula. "Participation of the fleet's forces, competent use of the submarine's capabilities and special maneuvers upset the United States' attempts to monitor the submarine on the way. The Americans 'woke up' only when we arrived at the pier. In fact they lost our track at a certain point," Tankovid said.

<https://tass.com/defense/1132447>

Russia's Northern Fleet submariners to test fire Tsirkon hypersonic missiles

TASS News Agency, March 20, 2020

Submarines of Russian Navy's Northern Fleet will conduct test firing of hypersonic missiles shortly, Fleet Commander Vice Admiral Alexander Moiseyev said. "In the nearest future, our submarines will begin test-firing hypersonic weapons. We have already received our orders," he said, speaking to Krasnaya Zvezda newspaper. On March 11, a military-industrial complex source told TASS that the Tsirkon hypersonic missile is slated for test launch from the Severodvinsk nuclear submarine. Earlier, another source disclosed plans to test-fire this missile from the Kazan submarine, which is expected to be introduced into the Northern Fleet before the end of this year.

The Tsirkon missile has been fired for the first time from a ship in early January. The Admiral Gorshkov frigate fired the missile from the Barents Sea at a coastal target located 500 kilometers away.

<https://tass.com/defense/1132807>

Moscow, Minsk agree on construction of NPP in Belarus as planned

TASS News Agency, March 21, 2020

The Russian and Belarusian prime ministers, Mikhail Mishustin and Sergei Rumas, have focused in a phone call on the construction of a Russian-designed nuclear power plant on Belarus, the Russian government said in a statement on Saturday.

"Mikhail Mishustin and Sergei Rumas underlined the significance of successful implementation of joint construction of the Belarusian nuclear power plant designed by Russia," the statement said. "They took operational decisions aimed at ensuring the progress of work in accordance with the schedule."

<https://tass.com/politics/1133553>

Rosatom looks to smaller reactors

Nuclear Engineering, March 24, 2020

Russian state nuclear corporation Rosatom is hoping to start construction of a small-scale land-based nuclear power plant in 2024, for commissioning in 2027. Ryan Collyer, acting CEO of Rosatom Central and Southern Africa presented details of the RITM-200 reactor at Energy Indaba earlier in March.

Collyer told delegates that Rosatom SMRs could be a good alternative to diesel generators, providing reliable power supply and preventing harmful emissions at a competitive price. They could also be used for desalination, heat production and supply of electricity, he said. He also pointed out that Rosatom has already constructed six RITM-200 reactors and that two onboard the Arktika icebreaker have already attained criticality. Rosatom is looking to build a land-based SMR in Russia.

<https://www.neimagazine.com/news/newsrosatom-looks-to-smaller-reactors-7835816>

Belarus to swap gas dependence on Moscow for nuclear dependence on Moscow

Charles Digges

Bellona, March 24, 2020

A nuclear power plant built to lessen Belarus's dependence on Moscow for natural gas – but constructed and lavishly financed by Russia's state nuclear corporation Rosatom – is due to begin operation later this year, officials in the Belarus capital of Minsk have said. The plant will feature two VVER-1200 reactors – the second of which will come online next year – that will together generate some 2.4 gigawatts of power in the cloistered post-Soviet dictatorship on Russia's western border.

The International Atomic Energy Agency found that the plant largely fulfilled general safety guidelines and issued a number of recommendations for improvement. Others have raised alarm over potential safety issues. GlobalData quoted energy and nuclear policy analyst Mycele Schneider as warning: "Neighboring countries have voiced concern over the lack of review of some serious safety concerns, and Lithuania has transmitted an official note to the European Council." Since its inception in the early 2000s, the Belarus nuclear power plant, in Ostrovets near the border of Lithuania, has been fraught with difficulties. Environmentalists who oppose the plant are routinely harassed and stifled and in some cases kicked out of the country.

<https://bellona.org/news/nuclear-issues/2020-03-belarus-to-swap-gas-dependence-on-moscow-for-nuclear-dependence-on-moscow>

Russia's defense chief briefs senators on Tsirkon hypersonic missile tests

TASS News Agency, March 25, 2020

Russia's Defense Minister Army General Sergei Shoigu informed Russian senators on Wednesday about the flight development tests of the Tsirkon sea-launched hypersonic missile. "The flight development tests of the Tsirkon sea-launched hypersonic missile are under way," the defense chief said at a plenary session in the upper house of Russia's parliament. Two sources in the domestic defense industry earlier told TASS that Russia would speed up the test launches of the Tsirkon hypersonic missile from the seaborne delivery vehicles. As the sources specified, the test-

launches of the Tsirkon hypersonic missile from Yasen-class submarines will begin already this year along with the continued series of test-firings from the frigate Admiral Gorshkov.

<https://tass.com/defense/1135241>

Rosatom to upgrade equipment for two units of Kozloduy NPP in Bulgaria

TASS News Agency, March 26, 2020

Rosatom has won a tender on modernization of equipment for the fifth and sixth power units of the Kozloduy NPP in Bulgaria, the state corporation said in a statement on Thursday. The public tender on modernization of equipment was announced in September 2019. The contract signed by Rusatom Service (part of Rosatom) and the Kozloduy NPP stipulates that neutron flux control equipment will be upgraded for two units of the nuclear power plant.

Earlier Rusatom Service implemented at the Kozloduy NPP such projects as life extension of the fifth and sixth power units and increased thermal capacity to 104%. Kozloduy NPP, 1926 MWe installed capacity, is located on the Danube river in the North-West of Bulgaria. The two operational VVER-1000 power units, launched in 1987 and 1991, annually generate more than third of electricity in Bulgaria.

<https://tass.com/economy/1135725>

Russian Navy nuclear-powered sub completes trials after repairs

TASS News Agency, March 26, 2020

Shipbuilders have completed the after-repair trials of the Project 971 nuclear-powered submarine Vepr, Russian Navy spokesman Igor Dygalo said on Thursday. "Russian Navy Commander-in-Chief Nikolai Yevmenov has received a report about the completion of the sea stage of the trials for the Project 971 nuclear-powered submarine Vepr after its repairs at the Nerpa Shipyard. The sub will rejoin the Northern Fleet's submarine forces in April," the spokesman said.

During the trials at the Northern Fleet's training ranges in the Barents Sea, the shipbuilders checked all the sub's systems and onboard equipment, the spokesman stated. "A large amount of work was carried out on the submarine to restore technical readiness of its onboard systems and mechanisms," he added.

<https://tass.com/defense/1135975>

Russia, US halt inspections under New START due to coronavirus outbreak — expert

TASS News Agency, March 29, 2020

Russia and the United States have suspended bilateral inspection missions within the framework of the New START treaty on reduction of strategic nuclear arms, Executive Director of the Arms Control Association Daryl Kimball has told TASS. "The United States and Russia agreed to suspend on-site inspections under the New Strategic Arms Reduction Treaty until May 1," Kimball said.

Moscow and Washington also agreed to postpone the Bilateral Consultative Commission (BCC) meeting, scheduled for March, due to the pandemic, the leading US expert said, citing diplomatic and Congressional sources. The BCC was established to implement the New START's goals and provisions. The Treaty implies that the sides should hold inspections of two types. Under the protocol, each party has an annual allotment of 18 inspections. The sides are authorized to conduct inspections, including at the bases of inter-continental ballistic missiles, submarines and air bases.

<https://tass.com/defense/1137069>

Decision on halting inspections under New START made upon mutual agreement – diplomat

TASS News Agency, March 29, 2020

The decision on suspending inspections under the New START (Strategic Arms Reduction Treaty) was made upon the sides' mutual agreement and they will resume after the coronavirus situation normalizes, Russian Deputy Foreign Minister Sergei Ryabkov told TASS on Sunday. "The decision on suspending inspections under the New START as well as the decision on postponing the meeting of the Bilateral Consultative Commission, scheduled for the second half of March, was made upon the sides' agreement," the diplomat said.

The agreement has been put on paper, Ryabkov said, noting that normal activities would resume after the situation normalized. The session of the Bilateral Consultative Commission (BCC) has been postponed until autumn, Ryabkov said. "This will be the last meeting unless the treaty is extended." "We will use this opportunity to remind the US administration that it is necessary to achieve the goal of extending New START," Ryabkov stressed.

<https://tass.com/world/1137135>

Aircraft firm completes small upgrade of Tu-95MS strategic bombers

TASS News Agency, March 30, 2020

The Tupolev Aircraft Company (part of Russia's United Aircraft Corporation) has completed the small upgrade of the first batch of Tu-95MS strategic missile-carrying bombers, the company's press office announced on Monday. "The small upgrade of the first batch of Tu-95MS aircraft was completed in March 2020. The aim of the program was to partially replace the outdated radio and navigation equipment with new systems," the press office said in a statement.

The larger part of the work was carried out in 2018-2019 on the premises of the Tupolev Aircraft Company and the Aviacor Aviation Plant. "In early 2020, the companies jointly started fulfilling the work for the small upgrade of the next batch of the aircraft," the statement reads. The press office did not specify the number of aircraft in each batch. The Tupolev simultaneously completed work jointly with the Beriev Aircraft Company on the first heavily upgraded Tu-95MSM bomber. Now specialists are testing its renewed systems, the press office informed.

<https://tass.com/defense/1137589>

Rosatom takes measures to protect workers from COVID-19

World Nuclear News, March 30, 2020

In response to the COVID-19 pandemic, Rosatom has introduced additional measures to protect the health of workers at both its operating nuclear power plants and those it is constructing around the world. In a statement, Rosatom Director General Alexey Likhachov said the Russian state nuclear corporation has developed additional contingency plans for various scenarios of the coronavirus pandemic. "Ensuring nuclear safety and safeguarding the lives and health of both our employees and the general public has been our first and utmost priority for decades," he said in the 26 March statement. "Safety is Rosatom's key value. We have always had contingency plans for any kind of emergency situations, including those related to the health of our employees.

"At present, we have introduced additional measures at all of Russia's nuclear power plants, including regular health check-ups of our personnel. We have arranged for as many employees as possible to work remotely and purchased personal protective equipment and hygiene-related products in bulk; we are constantly disinfecting our production facilities and vehicles and have essentially cancelled all business trips. We are monitoring our employees' health in close cooperation with local authorities across our areas of operation. We have developed a number of additional contingency plans for various scenarios of the coronavirus pandemic that may have an effect on the health of our NPP employees.

<https://www.world-nuclear-news.org/Articles/Rosatom-takes-measures-to-protect-workers-from-COV>

West Asia

Iran

Ex-Rouhani aide urges people to sign anti-sanctions petition

Tehran Times, March 17, 2020

The secretary-general of the Women's Rights Protection Society has called on people to join a campaign urging the U.S. Treasury to immediately lift sanctions on Iran due to the coronavirus outbreak. "Join the demand that the @USTreasury immediately lift the sanctions! #PeaceWithIran," said Shahindokht Molaverdi via Twitter, publishing an online petition launched by Code Pink. Molaverdi, who served as a presidential aide for civil rights in Hassan Rouhani's first term, also said the U.S. sanctions increases the number of coronavirus victims in Iran.

Foreign Minister Mohammad Javad Zarif has also sent a letter to the UN Secretary-General Antonio Guterres, urging the body to disregard Washington's illegal sanctions on Tehran. In part of his letter released on Thursday, Zarif said, "While the virus ravages our cities and towns, our population—unlike those of other countries affected—suffer under the most severe and indiscriminate campaign of economic terrorism in history, imposed illegally and extra-territorially by the Government of the United States since it reneged on its commitments under Security Council Resolution 2231 in May 2018." Resolution 2231, adopted in July 2015, endorsed the 2015 nuclear deal and annulled all the previous sanctions resolutions against Iran. Congresswoman Ilhan Omar has renewed calls for the U.S. to lift sanctions against Iran, as the country's crippled healthcare system struggles to deal with the rapid spread of the coronavirus, the Middle East Eye reported on Friday.

<https://www.tehrantimes.com/news/446205/Ex-Rouhani-aide-urges-people-to-sign-anti-sanctions-petition>

Tehran urges London to defy U.S. sanctions hampering coronavirus fight

Tehran Times, March 17, 2020

Tehran has urged London to defy the unilateral sanctions imposed by the United States against Iran due to their negative impact on the Islamic Republic' fight against the coronavirus outbreak. Foreign Minister Mohammad Javad Zarif urged Britain to defy the sanctions in accordance with its obligations under the Iran nuclear deal, also known as the Joint Comprehensive Plan of Action (JCPOA). He made the remarks in a Monday phone talk with his British counterpart Dominic Raab.

Zarif further described the U.S. sanctions as an obstacle to Iran's fight against the highly contagious virus. Earlier, Zarif also raised the issue of U.S. sanctions in a separate phone conversation with the foreign minister of Croatia, the rotating president of the European Union.

In his phone talk with his Croatian counterpart Gordan Grlic-Radman, Zarif emphasized that the EU must not abide by the U.S. unilateral and unlawful sanctions. He said the EU should do this not only as a JCPOA obligation but also to prevent the deaths of innocent Iranians due to the cruel U.S. sanctions. The Croatian foreign minister, in turn, expressed solidarity with the Iranian government and nation in their fight against the epidemic and offered his condolences to the families of the victims.

<https://www.tehrantimes.com/news/446223/Tehran-urges-London-to-defy-U-S-sanctions-hampering-coronavirus>

Zarif: U.S. ‘vengefully’ refusing to lift sanctions; all responsible for any destructive ramifications

Tehran Times, March 19, 2020

On the occasion of Nowruz, the Persian New Year, Foreign Minister Mohammad Javad Zarif released a video on Wednesday to congratulate the Iranian nation, who is under the US' tough sanctions and among the hardest-hit by the coronavirus, a happy and healthy year. "At a time when we, Iranians, normally celebrate Nowruz, our New Year concurrent with the arrival of spring, we are faced with multiple and historic challenges. My country is among the hardest-hit by the coronavirus even as like other nations we are now learning how to better confront it," he said. Zarif added that the huge part of the danger Iranians are facing now is due to restrictions "unjustly" imposed on them by the United States government.

"Iran, today, is the most intensely sanctioned country in history, not in line with United Nations decisions but contrary to them. The economic siege imposed on us impedes all legitimate trade and deprives us of our own resources -- the ones necessary to address the needs of our people, including their health and livelihoods," he noted. He criticized the US' draconian policy of maximum pressure against Iran, saying, "Even amid this pandemic, the US government has vengefully refused to lift its unlawful and collective punishment, making it virtually impossible for us to even buy medicine and medical equipment." He also took a swipe at other countries for bowing to US pressures and said, "The bigger tragedy is that many companies and countries who officially opposed these sanctions have chosen to comply with them, perhaps in hopes of avoiding the future wrath of the United States despite President Trump time and again proving that this is just wishful thinking." The top Iranian diplomat said that the battle against the fatal coronavirus pandemic was a collective job.

<https://www.tehrantimes.com/news/446257/Zarif-U-S-vengefully-refusing-to-lift-sanctions-all-responsible>

'Failure to contain coronavirus in Iran will adversely impact the entire world'

Tehran Times, March 26, 2020

The chair of the London-based NGO Islamic Human Rights Commission has censured sanctions against Iran as the country is fighting the worst coronavirus pandemic in West Asia, warning if the deadly disease is not controlled in Iran it will affect the entire world. "Any failure to contain the virus inside Iran will adversely impact the global effort against the COVID-19," Massoud Shadjareh wrote in a commentary on euronews website on March 23. In his commentary titled "Punishing sanctions

against Iran are turning the coronavirus pandemic into a massacre”, the writer said the logic of sanctions of Iran is at best “spurious”.

Coronavirus is a crisis. In Iran, it’s a massacre - because of Trump’s sanctions. Even before COVID-19, these sanctions were recognized by Human Rights Watch as undermining access to healthcare. The virus has taken lives globally but in Iran it has been particularly shocking. Hundreds of lives have been lost because of the sanctions Trump calls the “highest sanctions ever” sanctions that not only mean it is often impossible to get basic medicines but that a Coronavirus app, launched by the Iranian government to assist vulnerable citizens, was recently pulled by Google from its app store. As the world turns its back on Iran during its time of need, this indifference will define how a generation of Iranians views the West.

<https://www.tehrantimes.com/news/446323/Failure-to-contain-coronavirus-in-Iran-will-adversely-impact>

U.S. will let coronavirus kill many: Iranian scientist detained in U.S.

Tehran Times, March 27, 2020

The British daily Guardian published an interview with Iranian materials science and engineering professor Sirous Asghari on Friday detailing the “inhumane” jail conditions at his ICE facility. Asghari, which is being detained indefinitely by ICE despite being exonerated in a US sanctions trial last November, said that little is being done to protect inmates from the outbreak in his “filthy and overcrowded” detention center. In a phone call from the Alexandria Staging Facility (ASF) in Alexandria, Louisiana, Asghari said that his facility lacks basic cleaning practices and continues to bring in new detainees potentially exposed to the virus from across the country.

“The circulation of people under this coronavirus outbreak is absolutely nonsense...coronavirus is a viral bomb waiting to blow up here,” he said. He added that detainees have no access to hand sanitizers or masks and that bathrooms and sleeping areas are not being cleaned regularly despite the crowded conditions. “The way ICE looks at these people is not like they are human beings, but are objects to get rid of,” said Asghari. For two weeks, the ASF prohibited Asghari, who is 59 and has a history of serious respiratory problems, from wearing his own protective mask which he had brought to the facility. If he were to get the coronavirus there, “I don’t think I would survive,” he said, given the treatment of the detainees.

<https://www.tehrantimes.com/news/446341/U-S-will-let-coronavirus-kill-many-Iranian-scientist-detained>

Iran produces new generation of centrifuges

Tehran Times, March 27, 2020

The Atomic Energy Organization of Iran (AEOI) has designed and produced a new generation of centrifuges at the Natanz nuclear enrichment plant which will be unveiled in the near future, the Mehr news agency reported on Friday. The AEOI said experts at the Martyr Ahmadi Roshan Enrichment Complex have been working hard to produce the new generation of centrifuges in line with Iran’s need to nuclear technology for civilian uses. The AEOI said these machines mark a breakthrough in advancing Iran’s peaceful nuclear energy program. The new generation of centrifuges will most likely be displayed on Farvardin 20 (April 8), the date marking the National Nuclear Technology Day.

<https://www.tehrantimes.com/news/446338/Iran-produces-new-generation-of-centrifuges>

Analyst calls sanctions on Iran ‘a moral abomination’

Tehran Times, March 29, 2020

The Trump administration’s move to impose further sanctions against Iran at a time when the country is battling the new coronavirus pandemic is a “moral abomination,” an American political analyst said on Saturday. Rodney Martin, the former congressional staffer based in Arizona, suggested the world leaders should ignore U.S. sanctions and form a “new economic cooperative” to counter the restrictive measures.

Martin made the remarks during a phone interview with Press TV when asked to comment on Russia’s call for the urgent lifting of U.S. sanctions against Iran as the bans have led to the flare-up of the deadly virus in the country. The U.S Treasury imposed a new round of sanctions on Iran on Thursday, targeting construction and maritime sectors. Russian Foreign Ministry spokesperson Maria Zakharova said on Friday that the “unprecedented political and economic pressure” on Iran allowed the outbreak to take hold in the country as Tehran is unable to buy medicine and medical equipment due to Washington’s campaign of “maximum pressure” on the Islamic Republic. “Russia is correct to seek an end to U.S. sanctions on Iran,” Martin said.

<https://www.tehrantimes.com/news/446377/Analyst-calls-sanctions-on-Iran-a-moral-abomination>

Sanctions on Iran will hinder global response to coronavirus, Iranian envoy to UN warns

Tehran Times, March 29, 2020

Majid Ravanchi, Iran's ambassador to the United Nations, has said the illegal U.S. sanctions on Iran is “badly impeding Iran’s efforts to contain” the coronavirus pandemic. Writing an article in USA Today on March 25, Ravanchi warned that sanctions on Iran, one of the countries worst hit by the deadly virus, not only endangers the lives of many Iranians, it will also affect the entire world. The ambassador said “strict U.S. interference in Iranian trade” is further draining Iran’s “foreign currency reserves” to deal with the pandemic.

It has been more than 22 months since the U.S. withdrew from the Iranian nuclear deal — the JCPOA — and imposed an unprecedented sanctions regime on Iran which has created hardships for ordinary Iranians; particularly the most vulnerable segments of society, such as patients with special diseases who are suffering from a lack of imported medicine.

<https://www.tehrantimes.com/news/446360/Sanctions-on-Iran-will-hinder-global-response-to-coronavirus>

U.S. renews sanctions waivers allowing Iran nonproliferation work

Humeyra Pamuk, Arshad Mohammed

Reuters, March 31, 2020

The United States has allowed Russian, Chinese and European companies to continue their work at Iranian nuclear sites to make it harder for Tehran to develop nuclear weapons, the U.S. State Department said on Monday. Jewish News Syndicate, a news outlet predominantly focused on Israel and the Jewish world, first reported that the United States was expected to renew the waivers, citing two sources familiar with the decision. The move by the Trump administration, which in 2018 withdrew from the 2015 Iran nuclear deal and reimposed sanctions on Iran, will allow

nonproliferation work to continue at the Arak heavy-water research reactor, the Bushehr nuclear power plant, the Tehran Research Reactor and other nuclear initiatives.

As part of its “maximum pressure” campaign, the United States has not only restored sanctions it had removed under the Iran nuclear deal, but has tightened them to try to force Iran to curb its nuclear, missile and regional activities. However, the Trump administration has repeatedly waived the sanctions related to nonproliferation work with Iran on the argument that such projects are designed to make the Iranian nuclear program less capable of producing weapons.

<https://www.reuters.com/article/us-iran-nuclear-usa/u-s-renews-sanctions-waivers-allowing-iran-nonproliferation-work-idUSKBN21H33D>

Saudi Arabia

Saudi intercepts missiles in attacks claimed by Yemen's Houthis

Reuters, March 29, 2020

Saudi Arabia said its air defenses intercepted two ballistic missiles on Saturday night in an attack that Yemen’s Iran-aligned Houthi group on Sunday said they had launched towards the capital Riyadh and southern areas near the Yemeni border. The attacks come days after Yemen’s warring parties had welcomed a U.N. call for an immediate truce on Thursday to fight the coronavirus outbreak.

“Two civilians were slightly injured due to the falling of the intercepted missile’s debris as it exploded in mid-air over residential districts,” in Riyadh, the Saudi state news agency (SPA) reported, citing a Saudi civil defense spokesman, Lt. Colonel Mohammed al-Hammadi. Residents in Riyadh reported multiple blasts around 2320 (2020 GMT), followed by emergency vehicle sirens in some northern districts.

<https://www.reuters.com/article/us-saudi-riyadh-rockets/saudi-intercepts-missiles-in-attacks-claimed-by-yemens-houthis-idUSKBN21F0XJ>

Israel

Israeli leaders open up nuclear bunker in war on coronavirus

Reuters, March 26, 2020

The Israeli government has opened up a war bunker in the Jerusalem hills to help coordinate its campaign against the spread of the coronavirus, Israeli officials said on Thursday. The bunker, called the “National Management Centre”, was built more than a decade ago because of concern about Iran’s nuclear program and missile exchanges with Lebanese Islamist movement Hezbollah or Palestinian militant group Hamas.

According to Israeli officials, it includes living quarters and command facilities and can be accessed from the government complex in Jerusalem and the western foothills leading to Tel Aviv. “This (bunker) is another tool for managing, controlling, oversight and tracking” the coronavirus, said an Israeli official who requested anonymity. “We understand that this crisis will accompany us for an extended period of time yet.”

<https://www.reuters.com/article/us-health-coronavirus-israel-bunker/israeli-leaders-open-up-nuclear-bunker-in-war-on-coronavirus-idUSKBN21D23W>

Turkey

Turkish utility to cooperate with Rolls-Royce in SMRs

World Nuclear News, March 20, 2020

Turkey's state-owned EUAS International ICC has signed a Memorandum of Understanding (MoU) with the UK's Rolls-Royce to evaluate the technical, economical and legal applicability of small modular reactors (SMRs). In addition, they will consider the possibility of joint production of such reactors. The MoU commits to a study that will look at the technical, licensing, commercial and investment cases for the deployment of Rolls-Royce's SMR; potential construction processes; and market potential in Turkey and globally. The agreement will see phased collaboration during the next two years.

Rolls-Royce and its consortium partners have designed the UK SMR, a small pressurised water reactor that they say will be able to operate for 60 years and provide 400–450 MWe. To minimise the construction phase of the programme, the UK SMR is fully modularised to enable the plant to be transported by road, rail or sea. Targeting a 500-day modular build, they say this concept minimises the onsite time and effort required to construct and build the plant. The target cost for each station is GBP1.8 billion (USD2.1 billion) by the time five have been built, with further savings possible, they say. The consortium comprises Assystem, Atkins, BAM Nuttall, Laing O'Rourke, National Nuclear Laboratory, Rolls-Royce, Jacobs, the Welding Institute and Nuclear AMRC.

<https://www.world-nuclear-news.org/Articles/Turkish-utility-to-cooperate-with-Rolls-Royce-in-S>

UAE

Ambassador expresses hope for further Korea-UAE cooperation

World Nuclear News, March 20, 2020

The successful cooperation between South Korea and the United Arab Emirates in building the Barakah nuclear power plant in Abu Dhabi has opened a new avenue for further collaboration between the countries in global nuclear power markets, South Korea's ambassador to the UAE said this week.

"We hope that we can move into the next stage. South Korea and the UAE could collaborate in entering the nuclear power markets of third countries," Kwon Yongwoo told Emirates News Agency WAM. The four-unit Barakah nuclear power plant has been built by a South Korean consortium. Fuel loading was completed at Barakah unit 1 earlier this month. No official talks about collaboration in overseas projects have yet taken place, Kwon said. "But given our advanced technological capabilities in nuclear power generation, Korea is a new power to be reckoned with in this sector. Therefore, we will have more opportunities in future," he said, adding that he hoped South Korea could "utilise such opportunities together with the UAE".

<https://www.world-nuclear-news.org/Articles/Ambassador-expresses-hope-for-further-Korea-UAE-co>

Nuclear dreams: UAE becomes the first Arab nation to operate a nuclear power plant

Katie Burton

Geographical, March 27, 2020

After 12 years of discussion and negotiation, the UAE has finally received the go-ahead to operate the Arab world's first nuclear power plant. The Barakah nuclear power plant (now up and running) will ensure that the UAE joins a club of just 30 countries worldwide. It will also be the first new country to launch a nuclear power plant in three decades, the last being China in 1990. Officials say output will amount to 25 per cent of the country's energy needs. Financing for the plant comes from within the country and from South Korea.

Matthew Bunn, a professor at the Harvard Kennedy School and faculty lead for the Project on Managing the Atom, explains that the UAE underwent substantial security checks and agreed to a number of conditions in order to realise its nuclear dreams. 'The UAE has taken, I would argue, quite a responsible approach,' says Bunn. 'They essentially realised when they embarked on this that they were going to be the first Arab country with nuclear power, and that would make people nervous. So they decided to sign up to every international convention they could think of.' In particular, the country entered into a legally binding agreement with the United States, agreeing never to pursue uranium enrichment or plutonium reprocessing, the two technologies key to producing a nuclear bomb.

<https://geographical.co.uk/geopolitics/item/3635-sea>

East Asia

Japan

Nuclear reactor shut down due to delay in facility to survive attack

The Asahi Shimbun, March 16, 2020

One of the reactors at the Sendai nuclear plant here was shut down March 16 after the plant's operator failed to meet the deadline to complete an anti-terror facility. It is the first time a reactor has been halted for this reason in Japan. The No. 1 reactor, run by Kyushu Electric Power Co., shut down at 9 a.m. after its output was gradually lowered. The plant's No. 2 reactor is also expected to go offline in May due to delays in constructing the emergency facility.

Reactors operated by Kansai Electric Power Co. and Shikoku Electric Power Co. will also be forced to shut down later this year for the same reason. The anti-terror facilities are designed to allow nuclear plant operators to manage the cooling of reactors and other operations through remote control in an emergency such as terrorists crashing an aircraft into a nuclear complex. Operators are required to construct the facilities within five years after measures to safeguard their reactors are approved by the Nuclear Regulation Authority, the government's nuclear watchdog.

<http://www.asahi.com/ajw/articles/13219220>

Backfitting rule on nuclear safety could strain utilities' finances

The Asahi Shimbun, March 17, 2020

The Nuclear Regulation Authority not only shut down a nuclear reactor over safety standards, but it also sent a message to utilities that they can expect no more leeway concerning required anti-terrorism measures. The stricter stance of the NRA will likely further increase the costs incurred by electric power companies seeking to continue operating their reactors. The Sendai nuclear plant in Kagoshima Prefecture operated by Kyushu Electric Power Co. went offline on March 16 because it failed to meet a March 17 deadline to complete construction of anti-terror facilities. It was the first reactor shut down for this reason. Previously, utilities could continue operating nuclear plants as long as they were taking measures to meet the new safety standards that were set in 2013 following the nuclear disaster in Fukushima Prefecture.

But the NRA also implemented a “backfit” provision that year to allow it to force electric power companies to halt nuclear reactors that did not meet the latest standards. The initial deadline for constructing anti-terror facilities was July 2018, five years after the tougher safety standards took effect. Utilities pleaded for an extension of that deadline, saying they already had their hands full meeting other stricter standards required to resume operations at their nuclear plants. The NRA changed its stance and said the new deadline for the anti-terror facilities would be five years after approval of construction plans to upgrade safety standards at the plants. But even that extension left the utilities with little time to complete the anti-terrorism facilities, and they asked for another extension.

<http://www.asahi.com/ajw/articles/13221568>

TEPCO puts cost to remove melted nuclear fuel at over 1 trillion yen

Rintaro Sakurai

The Asahi Shimbun, March 31, 2020

Tokyo Electric Power Co. estimates that 1.37 trillion yen (\$12.6 billion) will be needed over 12 years to remove melted nuclear fuel from reactors at the crippled Fukushima No. 1 nuclear power plant. TEPCO's announcement on March 30 covers only two of the three reactors that suffered meltdowns triggered by the 2011 Great East Japan Earthquake and tsunami. No estimate was attempted for the cost to prepare for the removal of melted nuclear fuel from the No. 1 reactor. The situation at that reactor is the most difficult among the three reactors, and TEPCO officials are still struggling to come up with a plan for removing the debris from within. The estimate covers the period between fiscal 2020 and fiscal 2031. Of that amount, 350 billion yen will be applied as a special loss to the company's balance statement for the fiscal year ending March 31, 2020. The utility had already released its plan for decommissioning the three reactors, which foresaw a start to removing melted nuclear fuel from the No. 2 reactor before the end of 2021, while removal would begin for the No. 3 reactor by 2031. In announcing its expected profits for the current fiscal year, TEPCO also outlined its estimated expenses for melted fuel removal over the next 12 years.

A total of 330 billion would be needed as preparatory measures, such as further examining the interior of the No. 2 reactor and decontaminating radiation from the area around the three reactors. Another 20 billion yen is expected to be spent for trial removal of melted nuclear fuel from the No. 2 reactor, while 1.02 trillion yen would be required to construct the facilities needed to remove the melted fuel from the No. 2 and No. 3 reactors. The construction cost would be written off as a special loss from TEPCO's balance statement in the fiscal year when the work takes place. TEPCO forecasts a net profit of 79 billion yen for the current fiscal year, a decrease of 66 percent from fiscal 2019. Sales are expected to decrease by 2.2 percent to 6.199 trillion yen.

<http://www.asahi.com/ajw/articles/13259804>

North Korea

Delayed by sanctions, border checks, first medical aid trickles into North Korea

Ju-min Park, Sangmi Cha

Reuters, March 20, 2020

The first shipments of international medical aid are due to arrive at North Korea's borders this week to shore up its defenses against the coronavirus, but strict border controls could mean the stream of supplies remains a trickle. Some aid organizations had to get emergency sanction exemptions from the United Nations to clear the way for the shipments and are now navigating North Korea's border controls imposed in a bid to shut out the virus.

North Korea has not reported any confirmed cases of the new coronavirus that was first detected in China late last year, though a top U.S. military official said last week he is "fairly certain" there were infections in North Korea. The North's state-run KCNA news agency reported on Friday that all but three foreigners who had been in quarantine had been released after "medical monitoring and examination". It ordered all foreigners to spend 30 days in quarantine. North Korea is especially vulnerable to a coronavirus outbreak as its health system lacks resources, in part, aid organizations say, because of international sanctions imposed over its nuclear weapons and ballistic missile programs.

<https://www.reuters.com/article/us-health-coronavirus-northkorea/delayed-by-sanctions-border-checks-first-medical-aid-trickles-into-north-korea-idUSKBN2170F9>

N. Korea fires 2 short-range ballistic missiles toward East Sea

Korea Times, March 21, 2020

North Korea on Saturday fired two projectiles presumed to be short-range ballistic missiles toward the East Sea, South Korea's Joint Chiefs of Staff (JCS) said, the latest in a series of such launches this month. They were fired northeastward from areas near its western county of Sonchon in North Pyongan Province at 6:45 a.m. and 6:50 a.m., respectively, the JCS said, adding that they flew around 410 kilometers, reaching a maximum altitude of around 50 km.

"South Korean and U.S. intelligence authorities are analyzing other specifics," the authorities said. "Our military is monitoring the situation in case there are additional launches and maintaining a readiness posture." Calling the launch "a very inappropriate act" at a time when the whole world has been facing difficulties due to the coronavirus pandemic, the JCS called on the regime to immediately halt such military moves. It is the third time that the North has carried out such weapons tests so far this year after they began in March following months of hiatus.

http://www.koreatimes.co.kr/www/nation/2020/03/103_286557.html

North Korea says Trump offered virus cooperation in letter to Kim

Reuters, March 22, 2020

North Korea on Saturday welcomed what it said was a letter from U.S. President Donald Trump to North Korean leader Kim Jong Un, saying it was a sign of "the special and very firm personal relations" between the two leaders despite recent frictions. A senior Trump administration official

confirmed Trump sent the letter and said it was “consistent with his efforts to engage global leaders during the ongoing pandemic.”

The president looks forward to continued communications with Chairman Kim, the official said. Since Trump held a third summit with Kim last June and briefly stepped into North Korea from the demilitarized zone with South Korea, no progress has been made on the U.S. president’s bid to get Pyongyang to give up its nuclear and missile programs. North Korea has attempted a series of missile launches, including the launch of two apparent short-range missiles in the last day or so, as it tries to pressure the United States and its allies to lift economic sanctions.

<https://www.reuters.com/article/us-health-coronavirus-usa-northkorea/north-korea-says-trump-offered-virus-cooperation-in-letter-to-kim-idUSKBN2180YX>

North Korea praises Trump but warns on ties

Korea Times, March 22, 2020

US President Donald Trump has sent a letter to North Korean leader Kim Jong Un detailing a plan to develop ties, state media reported Sunday citing Kim's powerful sister, but she warned their good personal relationship is not enough, as a hiatus in disarmament talks drags on. The statement by Kim Yo Jong came a day after the nuclear-armed North fired what appeared to be two short-range ballistic missiles off its east coast on Saturday, the latest such action it has taken this year.

"In the letter, he... explained his plan to propel the relations between the two countries of the DPRK and the US and expressed his intent to render cooperation in the anti-epidemic work," an apparent reference to the coronavirus pandemic, Jong said in the statement reported by the North's Korean Central News Agency (KCNA). A senior administration official confirmed Trump sent a letter to Kim, "consistent with his efforts to engage global leaders during the ongoing pandemic. "The President looks forward to continued communications with Chairman Kim", the official said. While the letter reflects "excellent" ties between the two leaders, Jong warned that broader relations between their two nations are different. "We try to hope for the day when the relations between the two countries would be as good as the ones between the two top leaders, but it has to be left to time and be watched whether it can actually happen," Jong said.

http://www.koreatimes.co.kr/www/nation/2020/03/103_286569.html

North Korea fires more missiles than ever amid coronavirus outbreak

Josh Smith

Reuters, March 29, 2020

North Korea fired what appeared to be two short-range ballistic missiles into the ocean off its east coast on Sunday, the latest in an unprecedented flurry of launches that South Korea decried as “inappropriate” amid the global coronavirus pandemic. Two “short-range projectiles” were launched from the coastal Wonsan area, and flew 230 kilometers (143 miles) at a maximum altitude of 30 kilometers (19 miles), South Korea’s Joint Chiefs of Staff reported.

“In a situation where the entire world is experiencing difficulties due to COVID-19, this kind of military act by North Korea is very inappropriate and we call for an immediate halt,” South Korea’s JCS said in a statement, according to Yonhap news agency. Japan’s Ministry of Defense said they appeared to be ballistic missiles, and they did not land in Japanese territory or its exclusive economic zone. They would be the eighth and ninth missiles launched in four rounds of tests this month as

North Korean troops conduct ongoing military drills, usually personally overseen by leader Kim Jong Un. That would be the most missiles ever fired in a single month by North Korea, according to a tally by Shea Cotton, senior researcher at the James Martin Center for Nonproliferation Studies.

<https://www.reuters.com/article/us-northkorea-missiles/north-korea-fires-more-missiles-than-ever-amid-coronavirus-outbreak-idUSKBN21F0Y2>

North Korea says Pompeo undercuts its interest in restarting talks

Hyonhee Shin, Heekyong Yang

Reuters, March 30, 2020

North Korea said on Monday that U.S. Secretary of State Mike Pompeo undermined its willingness to restart stalled denuclearisation talks, criticising his recent remarks on sanctions on Pyongyang. Pompeo had said after a teleconference with G7 foreign ministers last week that all nations must remain united in calling for North Korea to return to negotiations and applying diplomatic and economic pressure over its nuclear and ballistic missile programmes.

That comment highlighted the United States cannot reverse its hostile policy toward North Korea “no matter how excellent and firm the relationship” their two leaders have, state media KCNA said, citing an unnamed foreign ministry official responsible for the negotiations. “Hearing Pompeo’s reckless remarks, we dropped the interest in dialogue with further conviction, but have become more zealous for our important planned projects aimed to repay the U.S. with actual horror and unrest for the sufferings it has inflicted upon our people,” the official was quoted as saying. But little progress has been made on dismantling Pyongyang’s weapons programmes, with a last round of working-level talks in October falling apart. North Korea has not confirmed any case of the coronavirus, but KCNA said Trump had sent a letter to Kim carrying a “sincere aid plan” to help prevent an outbreak, only to be followed up soon by Pompeo’s “slander” against the country. Pyongyang has touted the letter as a sign of “the special and very firm personal relations” between the two leaders despite recent frictions. “This makes us misjudge who is the real chief executive in the U.S.,” the diplomat said.

<https://www.reuters.com/article/us-northkorea-missiles/north-korea-says-pompeo-undercuts-its-interest-in-restarting-talks-idUSKBN21H1FG>

South Korea

South Korea says detected North Korea missile fire 'inappropriate' amid coronavirus

Joyce Lee

Reuters, March 21, 2020

North Korea fired two projectiles that appeared to be short-range ballistic missiles on Saturday, South Korea’s military said, calling the action “highly inappropriate” given the global coronavirus pandemic. The suspected missiles were fired around 6:45-50 a.m. KST into the sea off the east coast of the Korean peninsula from around Sonchon, North Pyongan province, South Korea’s Joint Chiefs of Staff (JCS) said. Sonchon is above Pyongyang, near the northwest corner of the Korean peninsula. “Such military action by North Korea is highly inappropriate at a time when COVID-19 is causing difficulties worldwide,” the JCS said, calling for an “immediate stop”.

The missile launch came just hours after North Korea confirmed it would go ahead with a session of the Supreme People’s Assembly, its rubber-stamp legislature, in Pyongyang. As an event that gathers almost 700 of the country’s top officials in one spot, analysts said it was a show of strength amid the

virus outbreak. “If it goes ahead, it would be the ultimate show of (North Korea’s) confidence in managing the coronavirus situation,” Rachel Minyoung Lee, of the North Korea monitoring website NK News, said on Twitter this week. North Korea has not reported any confirmed cases of the coronavirus, though a top U.S. military official said last week he is “fairly certain” there were infections in North Korea. “Not only does Pyongyang wish to avoid signs of weakness during the coronavirus crisis, it wants its people to believe that North Korea stands in a position of relative strength,” said Leif-Eric Easley, a professor at Ewha Womans University in Seoul.

<https://www.reuters.com/article/us-northkorea-missiles/south-korea-says-detected-north-korea-missile-fire-inappropriate-amid-coronavirus-idUSKBN2173MB>

Misc

Real threat: Nuclear terrorism or CBW

Amjed Jaaved

Modern Diplomacy, March 20, 2020

Nuclear terrorism: What lends credence to threat of nuclear terrorism is International Atomic Energy Investigation. It recorded over 1,000 possible cases of nuclear theft and trafficking between 1993 and 2008. Among these incidents was reported seizure in Tbilisi, Georgia, in February 2006 of 79.5 grams of bomb-grade 89 per cent HEU. These incidents actuated then CIA director to hint at possibility of ‘terrorist or subnational groups’ constructed a nuclear device stolen or purchased enriched nuclear material.

Is a ‘dirty bomb’ a possibility: According to international media reports (February 25, 2004), India reported 25 cases of “missing” or “stolen” radio-active material from its labs to the International Atomic Energy Agency (IAEA). Fifty-two per cent of the cases were attributed to “theft” and 48% to “missing mystery”. India claimed to have recovered lost material in twelve of total 25 cases. She however admitted that 13 remaining cases remained mysterious.

<https://moderndiplomacy.eu/2020/03/20/real-threat-nuclear-terrorism-or-cbw/>

Nuclear Scientists Are Working on Faster, Cheaper Covid-19 Test

Jonathan Tirone

Bloomberg, March 25, 2020

Nuclear scientists in Austria are closing in on coronavirus testing kits that could dramatically lower the cost and time it takes to diagnose people for the disease. With Covid-19 tests in short supply in many places, some individuals have turned to private laboratories that can genetically detect the pathogen. That process, called reverse transcription-polymerase chain reaction, or RT-PCR, can cost as much as \$400 in some private facilities.

But the International Atomic Energy Agency expects it can procure those Covid-19 tests at a cost of as little as 10 euros (\$10.83), which can yield a diagnosis within hours, according to a spokesperson, who stressed that labs have been using RT-PCR diagnosis methods for decades. The IAEA’s Covid-19 detection kits are close to being shipped, according to the agency, which didn’t specify where they are being manufactured.

<https://www.bloomberg.com/news/articles/2020-03-25/virus-test-in-hours-for-under-11-eyed-by-atomic-scientists>

UN says nuclear weapons conference postponed

India Today, March 27, 2020

The 191 parties to the Nuclear Nonproliferation Treaty have decided to postpone a conference to review its implementation because of the coronavirus pandemic, the United Nations said Friday. The treaty is considered the cornerstone of global efforts to prevent the spread of nuclear weapons and the parties hold a major conference every five years to discuss how it is working. The meeting had been scheduled for April 27-May 22 at U.N. headquarters in New York.

UN spokesman Stephane Dujarric said the review conference will be held "as soon as the circumstances permit, but no later than April 2021." The UN said earlier this week that the conference was likely to be postponed, but the conference president-designate, Ambassador Gustavo Zlauvinen of Argentina, wanted to consult governments that are parties to the treaty.

<https://www.indiatoday.in/world/story/un-says-nuclear-weapons-conference-postponed-1660631-2020-03-28> n

Op-Ed India

Yes a Pakistani-Indian Nuclear War Would Kill People All Over the Planet

Sebastien Roblin

National Interest Blog, March 16, 2020

Tensions wax and wane between the two nuclear powers. No matter how bad things are, other countries have a good reason to pressure them to negotiate and get along. Between February 26 and 27 in 2019, Indian and Pakistani warplanes launched strikes on each other's territory and engaged in aerial combat for the first time since 1971. Pakistan ominously hinted it was convening its National Command Authority, the institution which can authorize a nuclear strike.

The two states, which have retained an adversarial relationship since their founding in 1947, between them deploy nuclear warheads that can be delivered by land, air and sea. However, those weapons are inferior in number and yield to the thousands of nuclear weapons possessed by Russia and the United States, which include megaton-class weapons that can wipe out a metropolis in a single blast.

<https://nationalinterest.org/blog/buzz/yes-pakistani-indian-nuclear-war-would-kill-people-all-over-planet-133642>

Outer Space Diplomacy in South Asia

Akhand Pratap Rai

Modern Diplomacy, March 18, 2020

Recent SAARC Video Conference meets by the leaders of SAARC nations opens a new hope for this regional Organisation. The remark made by the Afghanistan President Ashraf Ghani on telemedicine is significant, especially for a landlocked country like Afghanistan, Bhutan and Nepal. India, as a substantial power in Space in the SAARC region, can contribute to building such satellite-based telemedicine information to their neighbours. On 14th Nov2019 India celebrated the 130th Birth Anniversary of the first Prime Minister of India, who can rightly remember as the 'architect of modern India'. Nehru was an undisputed leader of third world countries and a stalwart figure of the

Non-Alignment Movement. He was a man who believed science and technology strengthens a nation. At a time when over 130 crore Indians are proud of the achievement of ISRO Moon Mission, we should not forget the vision of Prime Minister Jawaharlal Nehru.

The Indian National Committee for Space Research (INCOSPAR) was established during Nehru's tenure under the Department of Atomic Energy (DAE) in 1962 upon the insistence of Vikram Sarabhai who was quick to highlight the need for space research. INCOSPAR grew to become ISRO in 1969. Space technology plays a vital role in various spheres of development, such as social, economic and environmental. Climate change monitoring, weather forecasting, disaster management, search and rescue operations, satellite-based telecommunications, educational field like informative online content delivered by satellite, e-learning opportunities are a few to name.

<https://moderndiplomacy.eu/2020/03/18/outer-space-diplomacy-in-south-asia/>

India's Supersonic BrahMos Cruise Missiles Are Driving China Crazy

Sebastien Roblin

National Interest Blog, March 27, 2020

A well-managed de-escalation wouldn't have to carry a huge political cost. While many of us remain mesmerized by the unfolding shambles in the Middle East, the world's two most populous countries have gotten into a tiff over missiles. And I'm not referring to the ballistic kind for once.

"India deploying supersonic missiles on the border has exceeded its own needs for self-defense and poses a serious threat to China's Tibet and Yunnan provinces," complained the People's Liberation Army Daily. "The deployment of BrahMos missile is bound to increase the competition and antagonism in the China-India relations and will have a negative impact on the stability of the region." "Our threat perceptions and security concerns are our own, and how we address these by deploying assets on our territory should be no one else's concern," an Indian military source sniffed in response.

<https://nationalinterest.org/blog/buzz/indias-supersonic-brahmos-cruise-missiles-are-driving-china-crazy-137977>

These Are the Horrific Weapons India Would Use to Fight Pakistan

Kyle Mizokami

National Interest Blog, March 27, 2020

Such a war would kill millions and impact the whole planet. Yet both countries prepare for a war anyway. Recently India alleged a series of ceasefire violations—in the form of automatic weapons fire—by Pakistan on the border between the two countries. According to India, it was the sixth attack in just five days. Such events are a reminder that tension remains high on the Indian subcontinent.

The nuclear arsenals of both sides—and the red lines that would trigger their use—have made conventional war much more risky to conduct. The 1999 Kargil War is considered the closest the world has come to a nuclear war since the Cuban Missile Crisis. If India were to use its superiority in ground forces to seize a sizable amount of Pakistani territory, Pakistan could respond with nuclear weapons.

<https://nationalinterest.org/blog/buzz/these-are-horrific-weapons-india-would-use-fight-pakistan-138692>

China

Yes China's Nuclear Missile Subs Are a Danger (But That's the Point)

David Axe

The National Interest, March 19, 2020

China for decades has struggled to develop nuclear ballistic-missile submarines. The country finally might be on the cusp of deploying reliable boomers. This piece originally appeared in October 2018 and is being republished due to reader's interest. An effective Chinese ballistic-missile submarine fleet over the long term could have a stabilizing influence on the world's nuclear balance. But in the short term, it might heighten tensions. Especially if Beijing lets popular fervor drive its build-up. That's the surprising conclusion of a new report from Tong Zhao, a fellow in the Nuclear Policy Program at the Carnegie Endowment for International Peace, based at the Carnegie–Tsinghua Center for Global Policy in Beijing.

“A fleet of survivable nuclear ballistic missile submarines (SSBNs) would reduce China’s concerns about the credibility of its nuclear deterrent and lessen the country’s incentives to further expand its arsenal,” Tong writes. “Such benefits, however, will be tempered by vulnerabilities associated with Beijing’s current generation of SSBNs. In the near to mid-term, developing an SSBN fleet will require China to substantially enlarge its previously small stockpile of strategic ballistic missiles, possibly exacerbating the threat perceptions of potential adversaries and causing them to take countermeasures that might eventually intensify an emerging arms competition.”

<https://nationalinterest.org/blog/buzz/yes-chinas-nuclear-missile-subs-are-danger-thats-point-134617>

How China And Russia Worked To Make The INF Treaty Obsolete

Ramon Marks

The National Interest, March 23, 2020

Just as China has transformed its economy in a short period of time, the same has happened with its military. In 2017, the Chinese People’s Liberation Army (“PLA”) announced plans to bring down its 2.3 million strong forces below 1 million with the Army’s share falling below 50 percent. Then last year the PLA slashed three-hundred-thousand ground troops from its rolls and announced that more than half of all noncombat positions had been eliminated. On top of that, it claims to have reduced its officer rolls by thirty percent. China is not disarming. Instead, the PLA has pursued an ambitious program to be able to fight future, not past wars. The PLA no longer sees a need to maintain a large land army to fight World War II or Korean War-style conflicts. Instead, it has organized cyber and missile commands and is significantly modernizing and strengthening its Air Force and Navy.

China’s maritime power has been multiplied by shore-based, anti-ship missile systems. The PLA Rocket Force has deployed on the mainland a new generation of medium range, anti-ship missiles, the DF21-D (with a nine-hundred-mile range) and the DF26-D (a thousand-six-hundred-mile range). They are believed to be potentially capable of hitting naval targets, including Nimitz class carrier battle groups, up to two-thousand-five-hundred miles from China’s coast. The DF26-D, called “the Guam Killer,” by Chinese media, was first seen in a parade in 2015.

It has recently been deployed, according to the PLA Rocket Force, in China’s remote, northwest plateau desert region, where it is ferried from place to place for quick launch on mobile trucks. Such capabilities mark the opening of a new era of naval strategy in which hard to locate, land-based, anti-ship missiles could become dominant over the seas. This could be particularly true against surface ships with an inherently limited ability to fend off swarming missile attacks. Armed with anti-ship missiles, China’s land mass is transforming into one big, unsinkable ship. Those conventional

systems are also capable of striking all U.S. and allied bases in the region, including Japan and Korea, raising concerns over Chinese preemptive, conventional attacks against such installations in any crisis.

<https://nationalinterest.org/blog/buzz/how-china-and-russia-worked-make-inf-treaty-obsolete-135337>

How China Used Ukrainian Missiles to Improve Its Own Nuclear Arsenal

Charlie Gao

The National Interest, March 25, 2020

While Ukraine renounced its own possession of nuclear weapons in 1994, many scientists and design bureaus in the country still have the know-how required to manufacture important components of strategic weapons. China has often been particularly keen of this knowledge, acquiring Ukrainian help in designing their first phased-array radar system. Chinese poaching of Ukrainian aerospace, tank and naval engineers is also a common phenomenon, most notably Valerii Babich, designer of the Varyag aircraft carrier.

There are even rumors of “Ukrainetowns” in some Chinese cities founded by the large number of expats hired by Chinese firms. Ukrainian and Russian businessmen even sold Kh-55 nuclear cruise missiles (without the warheads) from Ukrainian stockpiles to China in the 2000s. As China continues to modernize their ICBM fleet, it begs the question: how much help is Ukraine providing, willingly and unwillingly?

<https://nationalinterest.org/blog/buzz/how-china-used-ukrainian-missiles-improve-its-own-nuclear-arsenal-137467>

China is Willing to Negotiate on Nuclear Arms, But Not on Trump’s Terms

Gregory Kulacki

Defense one, March 30, 2020

President Trump announced to the world in a March 5 tweet that he would propose “a bold new trilateral arms control initiative with China and Russia.” China immediately rejected the idea the very next day. It would be wrong, however, to infer that Chinese leaders are opposed to nuclear arms control. They are not. They are just not interested in what Trump appears to be offering. There are good reasons for China to suspect Trump’s motives. He used China as a scapegoat when withdrawing from the Intermediate Nuclear Forces Treaty, for example, and he may be using this vague new initiative to justify allowing the New START Treaty to expire. China was not a party to either agreement. Walking away from treaties with Russia and blaming China for it is unlikely to encourage Chinese leaders to come to the negotiating table.

Trump premised his announcement of this new initiative with a questionable claim that China will “double the size of its nuclear stockpile” before the end of the decade. That sounds ominous, but in fact China has only about 300 warheads and barely enough plutonium to get to 600. Meanwhile, the United States and Russia each possess more than 6,000 warheads. Any new agreement based on parity among the three states would require steep U.S. and Russian cuts even if China did indeed double its arsenal. China certainly would welcome major U.S. and Russian reductions. But there is no sign either nation is willing to make them. On the contrary, Trump and President Putin have announced ambitious nuclear modernization programs that dwarf China’s. Since neither of the two countries are planning to reduce their arsenals, it is difficult for Chinese leaders to understand what Trump wants to discuss. Neither the president nor his aides have provided a tentative agenda or cited desired outcomes.

<https://www.defenseone.com/ideas/2020/03/china-willing-negotiate-nuclear-arms-not-trumps-terms/164204/>

Pakistan

Here's How China Made Pakistan Into a Military Powerhouse

Charlie Gao

National Interest Blog, March 20, 2020

Pakistan's weapons are no joke and China helped them get there. Here's all the different assistance that Beijing has rendered over the years. As Pakistan's relationship has soured with the United States in the past two decades, Pakistan's armed forces have largely looked towards Chinese suppliers for equipment. While China has long supplied Pakistan's armed forces, the relationship has deepened in recent years, with Pakistan making major purchases of top-of-the-line Chinese export equipment.

<https://nationalinterest.org/blog/buzz/heres-how-china-made-pakistan-military-powerhouse-135137>

Dynamics of Escalation in South Asia and Pakistan's Nuclear Threshold

Haris Bilal Malik

Modern Diplomacy, March 26, 2020

The South Asian region has always been regarded vulnerable to military escalation based on its ever-changing complex security dynamics and volatile relations between India and Pakistan. Since the year 2019, the prevalent security environment of the South Asian region has once again become a dominant regional and global concern. The world witnessed India's continued brutalities in Kashmir and a prospective fear of a nuclear confrontation between India and Pakistan against the backdrop of the Balakot crisis. Moreover, in August 2019 India changed the special constitutional status of the Kashmir region by revoking Article 370 and 35A thus further adding to the volatility of the region. Despite the international criticism, India imposed a lockdown in the disputed region which is still reportedly continuing.

This demonstrates India's motives for dominating the escalation in the region with its provocative strategies. All these factors would likely provoke Pakistan revisiting its nuclear threshold level vis-à-vis India's aggressive and provocative policies to dominate the region.

Based on India's provocative strategies, there remains a continuous fear of escalation in the South Asian region which is adversely impacting regional security, stability, and strategic equilibrium. In recent years, India has continuously enhanced its counter-force offensive posture vis-à-vis Pakistan with the notion of 'Surgical Strikes' and its proactive war doctrines which include the 2017 Joint Doctrine of the Indian Armed Forces (JDIAF) and the 2018 Land Warfare Doctrine (LWD). All of them are based on proactive strategies and indirect threats of preemptive strikes against Pakistan aimed at challenging Pakistan's nuclear threshold.

<https://Moderndiplomacy.Eu/2020/03/26/Dynamics-Of-Escalation-In-South-Asia-And-Pakistans-Nuclear-Threshold/>

Real Friends

Malik Muhammad Ashraf

The News International, March 28, 2020

Paulo Coelho de Souza, Brazilian lyricist and literary figure, describing friendship once said: “Friendship is not about whom you know the longest. It is about who came and never left” What he said is quintessential of the friendship between Pakistan and China which is far beyond and above the realm of normal diplomatic relations between two states. The epithet of ‘iron brothers’ proudly claimed by the two countries reflects the impregnable nature of relations between the two countries which have withstood the vicissitudes of time.

China has played a significant role in the economic progress of Pakistan. The construction of the KKH Highway, Heavy Mechanical Complex at Taxila, Pakistan Aeronautical Complex (PAC) and Chashma Nuclear Plants are monuments of this ever-spiking relationship. In the backdrop of the US-India deal for transfer of civilian nuclear technology which Pakistan regarded as a discriminatory act, China exhibited the strength of the friendship between the two countries by agreeing to help Pakistan in building Chashma IV and V. It has also been extending support to Pakistan regarding its stance for criteria based admittance of new members to the prestigious Nuclear Suppliers Group. Pakistan and China also have very strong defence ties. It is pertinent to point out that in early March 2017 a Chinese-built Low to Medium altitude Air Defence System was inducted into the air defence system of the Pakistan Army that would considerably enhance its response capability to current and emerging threats. The co-production of JF-17 Thunder aircraft at the PAC is yet another milestone in defence relations between the two countries.

<https://www.thenews.com.pk/print/636137-real-friends>

Non-Fiction: Living With The Bomb

Haider Nizamani

Dawn, March 29, 2020

The 22 years since India’s nuclear explosions in May 1998 have been marked by several stand-offs between Pakistan and India, where nuclear sabre-rattling was not uncommon in either Islamabad or Delhi. Kargil happened within a year of the tests, followed by an attack on the Indian parliament in 2001 and mayhem in Mumbai in 2008, to name a few instances. It is a timely decision by Brig (Retd) Naeem Salik to assess what India has learned as a declared nuclear weapons state. With the inclusion of Indian authors in the book he has edited India’s Habituation with the Bomb: Nuclear Learning in South Asia Salik can rightly claim that it is more than just what Pakistani analysts associated with the Armed Forces think of what India has learned.

Of the six chapters in the slim volume, four are contributed by Indians. That Indians chose to contribute to a book that is the brainchild of a former member of Pakistan’s armed forces is a sign that the defence elite of the two countries are allowed to interact with each other in a manner that their academic counterparts in other disciplines cannot imagine. The likelihood of a Pakistani anthropologist studying the tribals of India, wanting to work with Indian anthropologists and coming up with an edited volume appears a distant possibility, if not a preposterous thought.

<https://www.dawn.com/news/1544579>

USA

Not-so-Nuclear War

Konstantin Bogdanov

Modern Diplomacy, March 17, 2020

On February 4, 2020, the U.S. Department of Defense officially announced the first combat patrol mission of a nuclear-powered submarine carrying low-yield nuclear-tipped ballistic missiles. Some details were reported several days before that: the platform was USS Tennessee, which had went on combat patrol in the Atlantic in late 2019. The low-yield combat payload in question represent the all-new W76-2 thermonuclear warhead for the Trident II D5 submarine-launched ballistic missile (SLBM). It is a derivative of the standard “light” W76-1 warhead, with the original secondary stage removed. As a result, the original yield of 100 kt has been reduced to between 5 and 7 kt.

According to official explanations, up to and including those contained in the new nuclear doctrine [1], the United States intends to use the weapon to give additional stability and flexibility to its regional (not strategic!) nuclear deterrence. The idea is that the number of such missiles will be limited, because they are intended for fairly specific purposes.

<https://moderndiplomacy.eu/2020/03/17/not-so-nuclear-war/>

If Trump Hates Obama’s Nuclear Deal, Why Is He Letting Up on Iran?

Richard Goldberg

Foreign policy, March 18, 2020

After nearly two years of stunning success imposing maximum pressure on Iran, U.S. President Donald Trump has been holding back on delivering a final blow and abolishing the ill-fated Iran nuclear deal. If he waits too long, he may inadvertently breathe new life into a deal he pledged to dismantle four years ago.

Ever since last summer, when Iran first exceeded the nuclear limits established by the 2015 agreement, Trump supporters in Congress have urged the president to exercise the United States’ right to respond to Iran’s transgression by restoring all United Nations restrictions on its nuclear, missile, and conventional arms programs. This right to fully restore sanctions, known as “snapback,” was marketed by former President Barack Obama at the time as an accountability fail-safe to ensure that the United States could always deny Iran the strategic benefits of the nuclear deal should the regime breach its own commitments.

<https://foreignpolicy.com/2020/03/18/trump-iran-nuclear-deal-snapback-sanctions/>

Trump’s callous sanctions risk tipping Iran over the nuclear precipice

Simon Tisdall

The Guardian, March 21, 2020

Displaying the sort of unthinking bellicosity that has characterised his tenure as US secretary of state, Mike Pompeo chose last week – a time of unprecedented global turmoil – to impose yet more unilateral sanctions on Iran. This was akin to pouring petrol on a burning building, then waiting to see how big an explosion ensues. The timing of the new measures was doubly inept. Iran’s freeing of thousands of political prisoners last week raised hopes of full pardons for jailed US citizens and the British-Iranian dual national Nazanin Zaghari-Ratcliffe, who has been temporarily released.

Those hopes have receded now. Meanwhile, Pompeo’s heedless intervention risked fuelling calls inside Iran to abandon not only the creaking 2015 nuclear deal but also the nuclear non-proliferation treaty (NPT) – the cornerstone since 1970 of international efforts to curb the spread of nuclear

weapons. Iran's leadership is under pressure from conservative hardliners after the latter's recent election successes. This latest manifestation of Washington's unremitting hostility may help push them over the brink. Thanks mainly to Donald Trump and his sidekick, Tehran could soon move a crucial step closer to going nuclear – the very outcome the Americans most fear.

<https://www.theguardian.com/commentisfree/2020/mar/21/trump-pompeo-iran-callous-sanctions-nuclear-precipice>

America Must Have a 'Regime Collapse' Strategic Goal for Iran

Michael Makovsky

National Interest Blog, March 25, 2020

As Secretary of State Mike Pompeo stated ten days after the January 3, 2020, drone strike that killed Iran's Maj. Gen. Qassim Suleimani, "We have re-established deterrence." Still, he correctly acknowledged, "we know it's not everlasting, that risk remains." Indeed, America's salutary killing of Suleimani marked the first direct U.S. military confrontation with Iran since 1988, and the first time the Trump administration added a military dimension to its "maximum pressure" policy against Iran.

After long believing in U.S. fecklessness—encapsulated in Khamenei's January 1 taunt that America "can't do anything"—Tehran now fears military escalation with the United States. But how long that fear will last, and whether it will yield any benefit to the United States only time, and U.S. policy can tell. Thus far, the administration's strategy toward Iran has been admirable but muddled; its rhetoric remains unsteady. Unless the killing of Suleimani becomes a major inflection point in America's approach toward Iran, the strategic benefits of this singularly gutsy action will soon ebb.

<https://nationalinterest.org/blog/middle-east-watch/america-must-have-regime-collapse-strategic-goal-iran-137227>

Europe

What is the impact of Covid-19 on the power sector?

Ilaria Grasso Macola

Power Technology, March 17, 2020

The Covid-19 coronavirus was first identified in China's Hubei province in December 2019 and has since become a global health threat, impacting 140 countries and triggering the World Health Organisation (WHO) to declare it a global pandemic. The power industry is among the sectors affected. Power Technology spoke to major stakeholders about Covid-19's impact on generation and supply. According to energy industry body Independent Commodity Intelligence Services, nuclear power availability in the EU is expected to remain consistent as many countries, including the UK and Germany, have put in place safety measures to guarantee the continuation of operations. Digital energy solutions provider Lumenaza's CEO Christian Chudoba told Power Technology: "The German energy industry is coping well, but we see a decline in industrial production. "This doesn't affect Lumenaza per se or other companies providing digital energy solutions. We are already used to working remotely, and we keep on developing new solutions."

French grid operator RTE expects nuclear availability to stay 3.6GW below the 2015 to 2019 average as well predicting a national drop in nuclear demand. These are symptoms of a bigger problem

Covid-19 presents to the nuclear sector, said energy and nuclear policy independent analyst Mycle Schneider. Schneider said: “Covid-19 constitutes an unprecedented threat on sensitive strategic infrastructure, above all the power sector. The largest nuclear operator in the world, French state controlled EDF, announce as early as 10 March 2020 that three of its employees at nuclear facilities had tested positive.

<https://www.power-technology.com/features/impact-covid-19-power-sector/>

European nuclear industry has a key role to play in boosting EU economy

Yves Desbazeille By Yves Desbazeille

New Europe, March 20, 2020

Earlier this month, the European Commission published its long-awaited industrial strategy, which aims to drive Europe’s competitiveness and its strategic autonomy at a time of “moving geopolitical plates and increasing global competition”. The success of the strategy’s implementation will depend on the EU’s ability to achieve climate neutrality whilst maintaining its competitiveness, including growth, jobs, and technological leadership. This is where nuclear energy has a key role to play.

As the European nuclear industry, we stand ready to help Europe achieve its objective of providing clean energy and maintaining Europe’s competitiveness, but meeting these goals will require joint efforts both by the nuclear industry and EU decision-makers who have to recognise nuclear as a strategic sector.

Given the importance of the nuclear industry (including its broad range of applications, including clean hydrogen production and the fact that it contributes significantly to Europe’s economy and its decarbonisation objectives) we firmly believe that nuclear should be considered as a strategic European industry as it can help the EU achieve its industrial goals. The European nuclear industry is ready to play its part in maintaining a strong and competitive European industry. Now, the question is to what extent EU decision-makers will recognise nuclear energy’s role as the backbone of a 2050 carbon-free Europe together with renewables.

<https://www.neweurope.eu/article/european-nuclear-industry-has-a-key-role-to-play-in-boosting-eu-economy/>

Macron’s vision: a European role for the French nuclear deterrent

European Leadership Network, March 31, 2020

President Macron’s speech at the Ecole de Guerre last month, contemplating the possible role of French nuclear deterrence in the context of European security and defence, did not receive the attention one would have expected for such a significant announcement. The outbreak of the coronavirus is not the only reason for this. Macron’s thoughts have been expressed by several French Presidents in the past. In the 1950s, France shared the idea of a European military nuclear program with the defence ministers of Germany and Italy, only for General De Gaulle later to abandon the initiative as he wanted an all-French bomb. However, the idea did not die out as other countries also hinted at such a possibility.

In 1968, for example, US Secretary of State Dean Rusk indicated that the NPT (which was not yet in force at the time) would not prevent a possible new European federal state from inheriting the nuclear status of a European country. Furthermore, when Italy signed the NPT Treaty, it evoked a “European clause” which implicitly included such an option in the context of “progress towards unity with a view to the creation of a European entity”. Germany too developed similar arguments. But these

precedents never led to concrete results: western European defence, through NATO, remained anchored to the US nuclear deterrence. This time, however, President Macron did not limit himself to evoking an abstract hypothesis but also made operational suggestions. He began with the premise that an authentically European element is already intrinsic in French nuclear forces since the vital interests of France now have a European dimension. The time would, therefore, be ripe for developing – with the European partners that are ready to do so – a strategic dialogue on the “role played by France’s nuclear deterrence in our collective security”. Those countries could be associated with “the exercises of French deterrence forces”. “This strategic dialogue and these exchanges,” President Macron argued, “will naturally contribute to developing a true strategic culture among Europeans.”

<https://www.europeanleadershipnetwork.org/commentary/macrons-vision-a-european-role-for-the-french-nuclear-deterrent/>

Russia

Russia's Tsar Bomba: The Most Powerful Nuclear Weapon Ever Created

Caleb Larson

National Interest Blog, March 20, 2020

“Fear is the oldest weapon in history. Throughout the life of mankind, it has been the resort of those who could not hope to prevail by reason and persuasion. It will be repelled today, as it has been repelled in the past — not only the steadfastness of free men but by the power of the arms which men will use to defend their freedom.”

Tsar Bomba was the Soviet Union’s largest nuclear test — and the largest nuclear explosion ever created by man. A specially modified Tupolev Tu-95 bomber, a turboprop first flown in 1952, and still in use with the Russian Federation today, was chosen to carry the bomb. Outwardly at least it was somewhat similar to the nuclear bombs dropped on Hiroshima and Nagasaki during the Second World War. But it was bigger. Weighing nearly 27 tons, it was truly a monster bomb.

<https://nationalinterest.org/blog/buzz/russias-tsar-bomba-most-powerful-nuclear-weapon-ever-created-135502>

Russia's Plan To Modernize Its Nuclear Bombers Is Gaining Speed

Mark B. Schneider

National Interest Blog, March 25, 2020

Putin’s Russia has been modernizing its strategic nuclear bomber strike capability for two decades. Initially, this involved upgrading the Soviet legacy Tu-95 and Tu-160 bombers plus a few newly produced Tu-160s with more advanced nuclear missiles. Not surprisingly, strategic nuclear upgrades were given first priority. Significantly, the Russians gave either nuclear only or dual capability (nuclear and conventional) with improved accuracy to all of its new long-range cruise missiles and, more recently, moved toward dual-capable hypersonic missiles.

These include the dual-capable Kh-555 cruise missile (an adaptation of the Cold War Kh-555), the new stealthy nuclear armed 5,000-km range Kh-102, and the new more accurate stealthy dual-capable 4,500-km range Kh-101, according to President Putin, the Russian Defense Ministry and Russian state media. The officially announced nuclear capability of the Kh-101 long-range cruise

missile is virtually ignored in the West, but this development is very important because it gives the Russians the ability to potentially deliver precision or near precision low-yield nuclear strikes. In 2018, Russia announced that it conducted a salvo launch of 12 Kh-101 from a Tu-160 bomber. Today, Russia is reportedly developing the Kh-BD, reportedly a longer-range version of the Kh-101 and Kh-102 cruise missiles for its bombers.

<https://nationalinterest.org/blog/buzz/russias-plan-modernize-its-nuclear-bombers-gaining-speed-136902>

Moscow, Russia: The Safest City in the World from a Nuclear War?

Caleb Larson

National Interest Blog, March 27, 2020

Essentially, the United States and the Soviet Union were limited to two Anti-ballistic missile systems. These systems could not cover the entire country. The two ABM systems had to be at least 1,300 kilometers (just over 800 miles) apart. Each ABM system could have no more than 100 missiles launchers.

Additionally, “Both Parties agreed to limit qualitative improvement of their ABM technology, e.g., not to develop, test, or deploy ABM launchers capable of launching more than one interceptor missile at a time or modify existing launchers to give them this capability, and systems for rapid reload of launchers are similarly barred. These provisions, the Agreed Statements clarify, also ban interceptor missiles with more than one independently guided warhead.”

<https://nationalinterest.org/blog/buzz/moscow-russia-safest-city-world-nuclear-war-138682>

West Asia

Iran

Iran regime’s perfect chance to change its behavior

Dr. Mohammed Al-sulami

Arab News, March 23, 2020

Since the US withdrew from the nuclear deal and the White House implemented its maximum pressure strategy, Iran has experienced rapidly worsening socioeconomic conditions, as well as multiple other crises. The outbreak of the coronavirus adds another dimension to the situation facing Iran and has led to the country deteriorating rapidly over the last few weeks, aggravating the misery of the Iranian people. From a humanitarian perspective, some Gulf states have offered aid to Iran. But the virus has spread while Tehran is still dealing with unprecedented crises. Facing popular discontent due to the deteriorating socioeconomic conditions late last year, the government launched an intense crackdown, leading to mass arrests and deaths. And the coronavirus has cast a dark cloud over the country while the government is still struggling to deal with tightening US sanctions and the dent to its regional plans in the aftermath of the death of Qassem Soleimani.

One of the primary problems facing the government is that it is now in uncharted territory. It is skilled in politicizing crises to divert public attention and maintain its rapidly eroding legitimacy, but the coronavirus has left the government in deep trouble as it has struggled to provide an adequate response. The regime’s efforts to exploit the coronavirus crisis with its customary claims, conspiracy

theories and propaganda have fallen flat. Indeed, the coronavirus crisis has exposed the unprecedented depth of the regime's problems.

<https://www.arabnews.com/node/1645931>

Iran using time of crisis to increase its regional meddling

Dr. Majid Rafizadeh

Arab News, March 26, 2020

Iran is facing one of the worst public health crises in its modern history. Tens of thousands of people there have been infected with the coronavirus disease (COVID-19) and more than 2,000 have lost their lives. But the Islamic Republic and its proxies appear to be prioritizing the regime's revolutionary ideals, military adventurism and pursuit of regional hegemony over the public health crisis that the nation is facing. For example, Iran-backed militias in Iraq are ratcheting up their rocket attacks amid the coronavirus crisis. One attack killed several members of the US-led anti-Daesh coalition at Iraq's Camp Taji base on March 11. Eighteen 107 millimeter Katyusha rockets slammed into the base, killing two Americans and one British soldier.

The Tehran regime has long been trying to boost its ballistic missile capacity throughout the region, in defiance of international norms and sanctions. Iran's transfer of ballistic missiles to other countries raises the question of whether Tehran is violating UN Security Council Resolution 2231, which stipulates that: "Iran is called upon not to undertake any activity related to ballistic missiles designed to be capable of delivering nuclear weapons, including launches using such ballistic missile technology." Most likely, Tehran's long-term ballistic missile strategy is not limited to arming militias and terror groups, but also includes having the capacity to manufacture short-range and long-range ballistic missiles in other countries. Since Iran possesses the technology, it will be much more efficient and cost-effective to produce missiles in other nations.

<https://www.arabnews.com/node/1647841>

Turkey

Turkey Once Threatened To End America's Access To A Base With U.S. Nuclear Weapons (It Could Again)

Mark Episkopos

National Interest Blog, March 16, 2020

With the future of Turkey's geopolitical orientation hanging in the balance, the Trump administration continues to tread lightly as Washington assesses the likelihood and military consequences of losing Incirlik. In what may become the latest wedge in Turkey-NATO relations since Ankara's purchase of the Russian S-400 missile system earlier in 2019, Turkish President Tayyip Erdogan has threatened to shut down the Incirlik air base.

"If it is necessary for us to take such a step, of course we have the authority ... If this is necessary, together with our delegations, we will close down Incirlik if necessary," Erdogan told Turkish state television earlier this week. President Erdogan's comments were prompted by a recent Senate vote to recognize the early 20th century massacres and mass deportations of Armenians in the Ottoman Empire as a genocide, as well as the ongoing prospect of Ankara's S-400 deal being sanctioned under the 2017 Countering America's Adversaries Through Sanctions Act (CAATSA).

<https://nationalinterest.org/blog/buzz/turkey-once-threatened-end-americas-access-base-us-nuclear-weapons-it-could-again-133567>

East Asia

Japan

Fukushima compensation guidelines need further revision

The Asahi Shimbun, March 19, 2020

The difficult-to-return-zone around Ono Station on the JR Joban Line in Okuma, Fukushima Prefecture is empty on March 1. A part of evacuation order was lifted on March 5, but most of the area remains eerily the same as when the nuclear disaster happened in 2011. (Shigetaka Kodama) The Sendai and Tokyo high courts recently said in separate rulings that Tokyo Electric Power Co. should pay more in compensation to victims of the 2011 accident at the company's Fukushima No. 1 nuclear power plant. Some 30 class action lawsuits have been filed by people who were forced to evacuate from their homes in the wake of the nuclear disaster to seek damages beyond the amounts the electric utility has agreed to pay. The fact that the two rulings, the first high court decisions concerning these cases, both questioned the adequacy of the existing Fukushima compensation program is highly significant in its legal and policy implications.

During the trials, the plaintiffs argued that it is difficult to return to their homes even if the evacuation orders are lifted. Even if they return, they claimed, they will face local towns and communities that have been radically altered by the accident. The two high courts acknowledged the seriousness of the corrosive effects of what these victims call "the loss and transformation" of their hometowns and ruled that they deserve to be compensated for this problem in addition to damages for being forced to flee their homes and the mental anguish caused by their lives as evacuees. The courts awarded the plaintiffs additional damages beyond the amounts the company has already paid. The utility has adamantly refused to pay any blanket compensation to victims beyond the amounts based on the guidelines set by the Dispute Reconciliation Committee for Nuclear Damage Compensation, a panel established within the government to settle disputes over compensation for victims of the Fukushima disaster.

<http://www.asahi.com/ajw/articles/13227560>

North Korea

Is Trump's second letter to NK leader for dialogue or status quo?

Kang Seung-woo

March 22, 2020

U.S. President Donald Trump's personal letter to North Korean leader Kim Jong-un to offer cooperation in fighting the coronavirus is raising speculation that Washington may be seeking to reopen nuclear disarmament dialogue with Pyongyang. At the very least, some critics say he is trying to preserve the status quo with the country ahead of the presidential election in November in order to portray the North Korea talks as a major foreign policy win. Since the collapse of the Hanoi summit between the two leaders in February 2019, nuclear diplomacy between the two countries has stalled. The North has carried out a series of short-range missile tests, the latest of which occurred Saturday,

while Trump is now focused on his reelection. And what the two countries pay have in common is containment of the COVID-19 outbreak, as per Trump's letter.

"We regard it as a good judgment and proper action for the U.S. president to make efforts to keep the good relations he had with our chairman by sending a personal letter again at a time as now when big difficulties and challenges lie in the way of developing the bilateral relations, and think that this should be highly estimated," Kim Yo-jong, the North Korean leader's sister and first vice department director of the Central Committee of the ruling Workers' Party, said in a statement released Sunday. This is the second time that Trump has written to Kim this year following a birthday message in January.

http://www.koreatimes.co.kr/www/nation/2020/03/103_286612.html

South Korea

North Korea fires suspected missiles as world fights COVID-19

Yi Whan-woo

Korea Times, March 29, 2020

North Korea launched two suspected short-range ballistic missiles, Sunday, the fourth in a series of tests of major weapons this month. The Joint Chiefs of Staff (JCS) called the launches "very inappropriate," as they came as the world is battling the coronavirus pandemic. The JCS said the two projectiles were fired into the East Sea from the eastern coastal city of Wonsan at 6:10 a.m. They flew 230 kilometers at a maximum altitude of around 30 kilometers. South Korean and U.S. intelligence authorities are analyzing the flight characteristics. "In a situation where the entire world is experiencing difficulties due to COVID-19, this kind of military act by North Korea is very inappropriate and we call for an immediate halt," the JCS said.

It added the military was closely monitoring the situation while maintaining its readiness posture. Cheong Wa Dae said it was "keeping an eye" on the situation, while receiving up-to-date reports from the Ministry of National Defense and the National Intelligence Service (NIS). The presidential office, however, did not convene a National Security Council (NCS) meeting. The move was seen as a bid not to provoke the North and not to disrupt President Moon Jae-in's cross-border peace initiative.

http://www.koreatimes.co.kr/www/nation/2020/03/113_286994.html

Think Tanks

No, we don't need a "Manhattan Project" to fight the coronavirus pandemic

Dawn Stover

Bulletin of Atomic Scientists, March 18, 2020

Five days after 9/11, the George W. Bush administration declared a "war on terror." We are still fighting that war—along with the wars on drugs, cancer, and other public enemies. Some experts have called for a war on climate change. With the novel coronavirus breaking out across the United States, it was inevitable that some people would not only declare war on the coronavirus, but

also demand a “Manhattan Project” to fight that war. But is this analogy really useful for anything other than getting people’s attention?

<https://thebulletin.org/2020/03/no-we-dont-need-a-manhattan-project-to-fight-the-coronavirus-pandemic/#>

Trilateral Arms Control? Perspectives From Washington, Moscow, and Beijing

Ulrich Kühn, Alexey Arbatov, David Santoro and Tong Zhao
Carnegie, March 19, 2020

With the end of the INF Treaty in 2019, trilateral arms control – meaning arms control between the United States, Russia, and China – has gained center stage. Only shortly after the U.S. withdrawal, U.S. President Trump declared that he wants a new nuclear pact to be signed by both Russia and China. Other U.S. administration officials have set the goal of including China in a future follow-on framework to the New START agreement, which expires in February 2021. However, could trilateral arms control be possible at all, and what would be necessary conditions?

In this IFSH Research Report, internationally renowned experts Alexey Arbatov (Russia), David Santoro (United States), and Tong Zhao (China) discuss what is possible and what is not. Edited by Ulrich Kühn (IFSH), the report includes a number of very specific proposals, including from China, on how to move forward on trilateral arms control.

<https://carnegieendowment.org/2020/03/19/trilateral-arms-control-perspectives-from-washington-moscow-and-beijing-pub-81324>

Cyber Warfare and Inadvertent Escalation

James M. Acton
Carnegie, March 25, 2020

Cyber weapons may be relatively new, but non-nuclear threats to nuclear weapons and their command, control, communication, and intelligence (C3I) systems are not. In fact, before the United States dropped the bomb on Hiroshima in August 1945—before it even conducted the world’s first nuclear test in July of that year—it had started to worry about non-nuclear threats to its nascent nuclear force, in particular, Japanese air defenses. As the Cold War developed, fears multiplied to encompass threats to almost every component of the United States’ nuclear forces and C3I systems. While these threats emanated primarily from Moscow’s nuclear forces, they were exacerbated by its improving non-nuclear capabilities, particularly in the final decade of the Cold War. A two-decade hiatus in worry following the Soviet Union’s collapse is now over; today, non-nuclear threats to U.S. nuclear C3I assets—in particular, the growing capability of Chinese and Russian antisatellite weapons—are a major concern.

The United States’ experience is the norm. All nuclear-armed states have felt, and continue to feel, similar concerns. Indeed, the last few decades have seen the emergence of new potential vulnerabilities—this time in cyberspace—as nuclear weapons and C3I systems have come to rely increasingly on digital technology. To be sure, the networks involved in nuclear operations are almost certainly among the most secure anywhere. Yet there is broad agreement among technical experts that perfect network security is “impossible.” As a result, the possibility of cyber interference with nuclear forces and C3I systems is real.

<https://carnegieendowment.org/2020/03/25/cyber-warfare-and-inadvertent-escalation-pub-81377>

As US-Russian arms control faces expiration, sides face tough choices

Steven Pifer

Brookings, March 24, 2020

The Trump administration's proposal for trilateral arms control negotiations appears to be gaining little traction in Moscow and Beijing, and the era of traditional nuclear arms control may be coming to an end just as new challenges emerge. This is not to say that arms control should be an end in itself. It provides a tool that, along with the right combination of deterrence and defense forces and proper doctrine, can enhance U.S. and allied security and promote stability. Applying that tool will require overcoming a variety of challenges, not just regarding nuclear weapons but related issues, such as missile defense and conventional strike systems. Policymakers face some hard choices.

<https://www.brookings.edu/blog/order-from-chaos/2020/03/23/as-us-russian-arms-control-faces-expiration-sides-face-tough-choices/>

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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