

# Nuclear, Missile & Space Digest

Volume 11, Number 04

A Fortnightly Newsletter from the Indian Pugwash Society

February 28, 2019

**Convener (Interim)**

**&**

**Editor**

**Dr Rajiv Nayan**

**Executive Council**

**Lt Gen (Dr) B S Malik,  
PVSM, AVSM (Retd)**

**Prof Amitav Mallik**

**Prof Rajesh Rajagopalan**

**Shri M V Rappai**

**Prof Varun Sahni**

Contents

**A. India**

- Defence Budget 2019-20
- Report of Shekatkar Committee
- Dr Jitendra Singh delivers keynote address at 'Parmanu Tech 2019'
- Nuclear Waste Disposal
- Atomic Power Generation
- INS Trikand participates in exercise Cutlass Express 2019
- Successful Flight Test of SFDR
- Atomic Energy based Power
- India must sign NPT to gain entry into NSG: China
- Pakistan Conducts Second Nasr Nuclear-Capable Ballistic Missile Test in a Week
- India needs to step up its nuclear game, say experts

**B. Pakistan**

- Any agreement on Afghan crisis to address Pakistan's equities: US
- The Chinese giants shaping the world's industries

**C. China**

- Foreign Ministry Spokesperson Geng Shuang's Regular Press Conference
- Foreign Ministry: Nation backs cooperation with Iran
- Chinese scientists make progress on nuclear submarine communication
- China opposes U.S. withdrawal from landmark nuclear pact
- China clean energy industry develops fast in 2018
- China will build 4 nuclear aircraft carriers in drive to catch US Navy, experts say
- Is China about to abandon its 'no first use' nuclear weapons policy?
- Closer NK-US ties 'fit China's intention'
- Liaoning sale to Pakistan totally false: experts
- Experts see Warsaw meeting as 'pointless'
- China expects successful DPRK-US meeting next week



**Indian Pugwash Society**

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

Tel. No (91-11) 2671-7983

Fax No. (91-11)2615-4192

#### D. South Asia

- The 2019 Nuclear Threat Assessment For South Asia
- US wants Pakistan to cease behaviour undermining regional stability in South Asia: Pentagon
- Emerging China changing South Asia balance, says ex-NSA
- The Kashmir attack could prompt a crisis in South Asia. Here's why.
- Kashmir attack: Why the timing could drive tensions in South Asia

#### E. USA & Europe

- Spain plans to close all nuclear plants by 2035
- EU and IAEA set priorities for cooperation, World Nuclear News
- U.S. Suspends Nuclear Arms Control Treaty With Russia
- US envoy Stephen Biegun 'reveals' North Korea nuclear pledge
- The Latest: Trump pulls the plug on arms treaty with Russia
- Elizabeth Warren wants to ban the US from using nuclear weapons first
- US should update nuclear warheads over their delivery systems, says DoD official
- CEOs Ask Trump to Help Them Sell Nuclear Power Plants Abroad
- U.S. Senate proposal would block Saudi path to atomic weapon in nuclear deal

#### F. Russia and Central Asia

- The U.S. And Russia Are Stocking Up On Missiles And Nukes For A Different Kind Of War
- Russian defense ministry says US started production of banned missiles two years ago
- Russia suspending missile treaty after US move: Putin
- Russia starts developing land-based hypersonic missile with intermediate range, says Putin
- Russia will exit INF nuclear missile treaty in six months
- South Africa Ready to Discuss Nuclear Energy Cooperation With Russia - Foreign Minister
- Cooperation agreement for Rosatom and Russian Academy,
- NATO's rhetoric about no new nuclear missiles in Europe to counter Russia is unclear
- Resume talks on nuclear arms treaty with Russia, Gorbachev urges US

#### G. East Asia

##### Japan

- New commander says rapid response is key for US-Japan alliance
- Fukushima Pref. dispels nuke anxiety to promote exports to HK
- Japan says broader arms treaty needed, concerned by China's reluctance
- Gov't to ask internet auction sites to prevent nuclear material transactions
- New agency eyed to continue work to rebuild from 3/11 disaster
- Kyushu Electric to decommission a 2nd reactor at its Genkai plant,
- Final mission: Keep anti-nuke message at site of Tsukiji market
- Study: No leaking radiation from Alaska island nuclear site,
- TEPCO sat by idly on reports of fires, glitches at nuclear plants

- 1st contact made with melted nuclear fuel at Fukushima plant
- Scientists warn Hokkaido about 'imminent' megaquake

#### H. Korea

- Sources: North Korea replaces key negotiator with U.S.,
- US envoy Stephen Biegun 'reveals' North Korea nuclear pledge
- Second Korean APR1400 unit cleared for start-up  
Next month critical in NK denuclearization: official,
- North Korea protecting nuclear missiles, U.N. monitors say, ahead of summit talks
- UN experts: North Korea nukes intact, dispersing missiles,
- Cheong Wa Dae welcomes 2nd summit between US, N. Korea
- S. Korea's Moon to focus on mediator role ahead of US-NK summit
- Speculation rises on Kaesong complex reopening ahead of US-N. Korea summit
- Pompeo sees 'every opportunity' for NK denuclearization
- [Going Renewable (1)] Korea steps in right direction for renewable energy, but challenges await,
- Confusion reigns ahead of North Korea-U.S. nuclear talks
- US nuclear envoy to brief allies on results of Pyongyang visit
- South Korea signs deal to pay more for U.S. troops after Trump demand,
- Trump-Kim summit to focus on NKorea nuke complex, US rewards,
- Investor Jim Rogers to visit North Korea next month
- Trump says S. Korea should pay US more for defense,  
US ambassador: N. Korea sanctions to linger until denuclearization  
North Korea exploring sanctions-proof energy technologies

#### I. Taiwan

- Nuclear power to be abolished in 2025,
- Taipower rules out activation of Fourth Nuclear Power Plant in face of shortages,
- Nuclear power supporters plan three new plebiscites,
- Minister leaves leeway on nuclear policy after talks,

#### J. Israel and West Asia

- Europe sets up transactions channel with Iran
- Iran seeks speedy implementation of commitments as EU sets up payment channel with Iran
- Israel's Nuclear Weapons Are Far More Dangerous to The World Than The End of INF,
- Iran says it has put 'guided warheads' on missiles that can reach Israel,
- Saudi Arabia's missile program
- US vows it will be 'relentless' in working to deter Iran missile program,
- Mossad, Mi6 Smuggled Iranian Nuclear Scientist To The Uk - Report
- Nuclear deal exemplifies success of diplomacy: diplomat
- IDF believes Iran pulling forces in Syria away from Israel border due to strikes
- Iran Could Get Nuclear Weapon Within Two Years, Intel Assessments Find
- AG gearing up to indict PM on quid pro quo deal with Yedioth's Mozes - report

**K. Global/Misc**

- Five-nation pact signers uphold treaty,

**L. Op Eds**

- Analysis: How Does The New Us-Russia Nuke Arms Race Impact Israel?
- America's National Defense Strategy and the Paradox of Technology
- Interview: 'Middle East, South Asia going through big change'
- Whistleblowers Raise Grave Concerns with Trump Administration's Efforts to Transfer Sensitive Nuclear Technology to Saudi Arabia, Interim Staff Report, Committee on Oversight and Reform
- How to Make Roads Safer for Autonomous Vehicles
- Managing Risk: Nuclear Weapons In The New Geopolitics
- How Europe can contain the new nuclear arms race
- Nuclear first strike still option
- India will continue boosting its nuclear and missile capabilities to counter China - and Beijing will keep responding
- The Weapons Making Nuclear War More Likely
- How Horizon Scanning Can Give the Military a Technological Edge
- Nuclear thoughts in Pakistan
- Why Bangladesh overtook Pakistan
- How Pakistan can get Kashmir
- Five Ways to Save INF's Legacy
- The End of the INF Treaty
- Billions Dead: That's What Could Happen if India and Pakistan Wage a Nuclear War

## A. India

### **Defence Budget 2019-20** *PIB Delhi, February 01, 2019*

Union Budget for the financial year 2019-20, presented by the Finance Minister in the Parliament today, envisaged a total outlay of Rs. 27,84,200 crore. Out of this Rs. 3,18,931.22 crore has been earmarked for Defence (excluding Defence Pension). For Defence Pension, an amount of Rs. 1,12,079.57 crore has been provided in BE 2019-20. Total Defence Allocation, including Defence Pension, accounts for 15.48% of the total Central Government expenditure for the year 2019-20.

The allocation of Rs. 3,18,931.22 crore represents a growth of 7.93% over Budget Estimates (2,95,511.41 crore) and 6.87% over Revised Estimates (Rs. 2,98,418.72 crore), respectively for the financial year 2018-19.

Out of Rs. 3,18,931.22 crore allocated for the financial year 2019-20, Rs. 2,10,682.42 crore for Revenue (Net) expenditure and Rs. 1,08,248.80 crore for Capital expenditure for the Defence Services and the Organisations/ Departments under the Ministry of Defence. The amount of Rs. 1,08,248.80 crore allocated for Capital expenditure, includes modernisation related expenditure. The Capital Allocation of the Ministry of Defence under BE 2019-20 is 32.19% of the total Central Government Capital Expenditure, which is Rs. 3,36,293.00 crore.

[http://pib.nic.in/  
PressReleaseDetail.aspx?PRID=1562374](http://pib.nic.in/PressReleaseDetail.aspx?PRID=1562374)

### **Report of Shekatkar Committee** *PIB Delhi, February 04, 2019*

The Committee of Experts (CoE) constituted by the Ministry of Defence under the chairmanship of Lt. Gen (Retd) DB Shekatkar to recommend measures to enhance combat capability and rebalance defence expenditure of the armed forces, submitted its report in December 2016.

The Report was taken up by the Ministry of Defence to frame key action points and roadmap for implementation. Measures as recommended by the Committee and taken

up for implementation include:

Optimization of Signals Establishments to include Radio Monitoring Companies, Corps Air Support Signal Regiments, Air Formation Signal Regiments, Composite Signal Regiments and merger of Corps Operating and Engineering Signal Regiments.

Restructuring of repair echelons in the Army to include Base Workshops, Advance Base Workshops and Static / Station Workshops in the field Army.

Redeployment of Ordnance echelons to include Vehicle Depots, Ordnance Depots and Central Ordnance Depots apart from streamlining inventory control mechanisms.

Better utilization of Supply and Transportation echelons and Animal Transport units.

Closure of Military Farms and Army Postal Establishments in peace locations.

Enhancement in standards for recruitment of clerical staff and drivers in the Army.

Improving the efficiency of the National Cadet Corps.

A total of 99 recommendations were forwarded for implementation to concerned agencies / stake holders. Full details of the Report and its recommendations are not being placed in the public domain as the Report covers operational aspects of the armed forces, disclosure of which is not in the interest of national security. This information was given by Raksha Rajya Mantri Dr. Subhash Bhamre in a written reply to Shri Amar Singh in Rajya Sabha today.

[http://pib.nic.in/  
PressReleaseDetail.aspx?PRID=1562586](http://pib.nic.in/PressReleaseDetail.aspx?PRID=1562586)

### **Dr Jitendra Singh delivers keynote address at 'Parmanu Tech 2019'** *PIB Delhi, February 06, 2019*

The Union Minister of State (Independent Charge) of the Ministry of Development of North Eastern Region (DoNER), MoS PMO, Personnel, Public Grievances & Pensions, Atomic Energy and Space, Dr Jitendra Singh delivered the keynote address

at the 'Parmanu Tech 2019' conference, organised by the Ministry of External Affairs and Department of Atomic Energy (DAE), here today. The conference discussed issues related to Nuclear Energy and Radiation Technologies.

Speaking on the occasion, Dr Jitendra Singh said that India has covered a long journey since inception of Atomic Energy programme by Dr Homi Bhabha based on the peaceful use of nuclear energy. He said that India has achieved a unique place in the international community for progress in space technology as well as nuclear energy. He said India has always used technology for constructive use and never for destructive purpose. The Minister said that it is a dilemma that most of the societal applications of nuclear energy are not much known to the people. He emphasized that focused efforts are required to create an awareness about benefits of nuclear energy and to allay the fears about radiation and its harms. Dr Singh added that nuclear energy will be a big and cost-effective source of energy in future when the other sources of power are gradually depleting.

Dr Jitendra Singh said that one of the biggest achievements of the Government led by Prime Minister Shri Narendra Modi, during the last five years is that the nuclear energy plants have moved to other parts of the country also including Gorakhpur in Haryana.

The Chairman, Atomic Energy Commission and Secretary, Department of Atomic Energy, Shri K. N. Vyas said that the conference aims at showcasing the societal applications that DAE is pursuing. He said that role of radio isotopes in industry and health care is well known.

During the conference sector specific sessions were held with Panel discussions on the following topics:

i). Health care: Nuclear Medicine and Radiation therapy - Care to cure, with themes including Cancer care (TMH), Radio-pharmaceuticals & RIA kits, Gamma Chambers, Blood irradiators, Bhabhatron, Brachytherapy, Stereotactic Neurosurgery

and international cooperation, etc.

ii). Food Preservation, Agricultural & Industrial Applications: From farms to factories - Serving the National Cause, with themes including Nisargruna, Food Irradiator, improved seeds varieties, water purification technologies, urban waste management technologies, industrial application of radioisotopes and radiation technologies particularly in petroleum industry for monitoring process lines, breakdown maintenance, dredging operations in sea ports, non-destructive techniques, technologies developed by ECIL and Heavy Water Board.

iii). Showcasing India's capabilities in Nuclear Energy: Energy Security with environmental responsibility - the Onward March, with themes including GCNEP and India's Nuclear power programme.

The senior officers of the DAE and foreign diplomats were also present on the occasion.

<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1562888>

### **Nuclear Waste Disposal** *PIB Delhi, February 07, 2019*

The solid wastes generated from nuclear facilities, depending upon their radioactivity content are stored/ disposed of in engineered structures such as stone lined trenches, reinforced concrete trenches and tile holes. These structures are designed on multi-barrier principle for ensuring effective containment of radioactivity. These structures are located within plant/facility premises in access-controlled areas.

The areas where the waste disposal structures are located are provided with bore-wells in a planned manner. These bore wells are routinely monitored to confirm effective confinement of radioactivity present in the disposed waste. The regular monitoring is done as per the requirements which are in line with the guidelines of International Atomic Energy Agency (IAEA).

The monitoring of various environmental matrices such as air, water, soil etc., in and around the waste disposal facilities is carried out by independent Environmental Survey Laboratories (ESL) of Bhabha Atomic Research Centre (BARC) which are stationed at all the nuclear sites.

This information was provided by the 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 in written reply to a question in Rajya Sabha today.

<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1563222>

### Atomic Power Generation *PIB Delhi, February 07, 2019*

The details of Atomic Power generation during the last three years, plant- wise is as below:

State	Location	Unit	Capacity (MW)	Commercial Generation (in Million Units, MU) <sup>§</sup>		
				2015 - 16	2016 - 17	2017 - 18
Maharashtra	Tarapur	TAPS-1	160	786	1236	174
		TAPS-2	160	500	935	1001
		TAPS-3	540	4530	4159	3680
		TAPS-4	540	4573	4530	2013
Rajasthan	Rawatbhata	RAPS-2	200	1226	1106	1555
		RAPS-3	220	1845	1618	1877
		RAPS-4	220	1668	1936	1656
		RAPS-5	220	1950	1715	1974
		RAPS-6	220	1773	1096	1543
Uttar Pradesh	Narora	NAPS-1	220	1803	1655	1836
		NAPS-2	220	1630	1724	1800
Gujarat	Kakrapar	KAPS-1	220	1608	#	#
		KAPS-2	220	421	#	#
Karnataka	Kaiga	KGS-1	220	1918	1742	1927
		KGS-2	220	1834	1708	1885
		KGS-3	220	2078	1063	1898
		KGS-4	220	1842	2021	1824
Tamil Nadu	Kalpakkam	MAPS-1	220	1861	1465	1194
		MAPS-2	220	1349	1739	1781
	Kudankulam	KKNPP-1	1000	2261	6212	4437
		KKNPP-2	1000	—	13*	4281
Total Generation (MUs)				37456	37673	38336

<sup>§</sup> The generation figures are rounded to nearest integer.

# KAPS-1&2 have been taken in project mode for *Enmasse Coolant Channel Replacement (EMCCR)* and *Enmasse Feeder Replacement (EMFR)* activities from August 01, 2016. Of which KAPS-2 has been restarted and synchronized to grid on September 22, 2018 upon completion of these activities.

\* KKNPP-2 generated about 2327 MUs of infirm power during the year 2016-17.

This information was provided by the 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 in written reply to a question in Rajya Sabha today.

<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1563220>

### **INS Trikand participates in exercise Cutlass Express 2019** *PIB Delhi, February 08, 2019*

INS Trikand, a front-line warship of the Indian Navy, participated in a multinational training exercise 'CUTLASS EXPRESS - 19' held from 27 Jan to 06 Feb 19. The aim of the exercise was to improve law enforcement capacity, promote regional security and progress inter-operability between the armed forces of the participating nations for the purpose of interdicting illegal maritime activity in the Western Indian Ocean. During the exercise, Naval, Coast Guard and Marine Police personnel from a number of East African countries were jointly trained by mentors from USA, India, and Netherlands, with support of international organisations like the International Maritime Organisation (IMO), Combined Maritime Force (CMF) and European Naval Forces (EUNAVFOR). The Indian Navy played a significant role in 'CUTLASS EXPRESS - 19', being involved in planning, coordination and execution. Through INS Trikand, the IN provided a platform for live Visit Board Search Seizure (VBSS) drills, which proved to be of immense training value to the participating nations.

The exercise was conducted in two phases. The first, called the Command Post Exercise (CPX) was conducted from 27 Jan to 02 Feb 19. It involved training of personnel on shore for coordination and conduct of VBSS operations. During the CPX, extensive training and interaction was carried out between the officers and sailors of the Indian Navy and personnel from the participating nations. The training included exposure of the personnel to the various software tools used by the US Navy and the European Union for integration of maritime

information, with a view to positively identify a suspicious vessel and direct a VBSS operation against it.

The second phase called the Final Training Exercise (FTX) was conducted from 03 - 05 Feb 19. This phase consisted of actual boarding operations at sea and live boardings were out onboard INS Trikand, anchored off Djibouti harbour. The closing ceremony of the event was held at the Djibouti Naval Base on the morning of 06 Feb 19.

<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1563560>

### **Successful Flight Test of SFDR** *PIB Delhi, February 08, 2019*

Defence Research and Development Organisation (DRDO) successfully flight tested the second indigenously developed 'Solid Fuel Ducted Ramjet (SFDR)' propulsion based missile system from ITR, Chandipur, Odisha today. Ground booster, separation of ground booster and Nozzle-less-booster performance were found satisfactory. Missile was guided to high altitude to simulate aircraft release conditions and subsequently nozzle-less-booster was ignited. SFDR based missile accelerated to achieve ramjet Mach number successfully. The trajectory was tracked by telemetry and radar stations till touchdown. All the mission objectives have been met.

The success of SFDR propulsion technology is a significant milestone and will pave the way for development of long range air-to-air missiles in the country.

Raksha Mantri Smt Nirmala Sitharaman congratulated DRDO and associated team members for the stupendous mission.

<http://pib.nic.in/PressReleaseDetail.aspx?PRID=1563625>

### **Atomic Energy based Power** *PIB Delhi, February 13, 2019*

The share of atomic energy in the overall electricity generation in the country was about 2.93% in the year 2017-18.

The Government has taken several measures to enhance the generation from nuclear power plants in the country. The measures include

- i. Securing fuel supply by conclusion of fuel supply contracts with several countries for existing and future fleet of reactors under IAEA Safeguards and augmentation of fuel supplies from domestic sources.
- ii. Augmenting nuclear power capacity:
  - a. Resolution of issues related to Civil Liability for Nuclear Damage (CLND) Act & Creation of Indian Nuclear Insurance Pool (INIP).
  - b. Accord of administrative approval and financial sanction of - ten (10) indigenous 700 MW Pressurized Heavy Water Reactors (PHWRs) to be set up in fleet mode & two (02) units of Light Water Reactors (LWRs) to be set up in cooperation with Russian Federation.
  - c. Amendment of the Atomic Energy Act to enable Joint Ventures of Public Sector Companies to set up nuclear power projects.
  - d. Enhanced project monitoring to identify and address the issues affecting project progress at multiple levels coupled with close monitoring through Pro-Active Governance And Timely Implementation "PRAGATI" platform.

The completion cost of Indigenous 700 MW PHWR in the year 2017 is about 15 crore per MW.

New nuclear power capacity is planned to be added in order to increase the share of generation of electricity through atomic energy. In this connection, nine reactors with a capacity of 6700 MW are under construction. The details are as follows:

Location & State	Project	Capacity (MW)
Kakrapar, Gujarat	KAPP-3&4	2 x 700
Rawatbhata, Rajasthan	RAPP-7&8	2 X 700
Gorakhpur, Haryana	GHAVP-1&2	2 X 700
Kudankulam, Tamil Nadu,	KKNPP- 3&4	2 X 1000
Kalpakkam, Tamil Nadu	PFBR	500

In addition, the Government has accorded administrative approval and financial sanction for setting up 12 more reactors with a capacity of 9000 MW. The details are:

Location & State	Project	Capacity (MW)
Chutka, Madhya Pradesh	Chutka -1&2	2 X 700
Kaiga, Karnataka	Kaiga - 5&6	2 X 700
Mahi Banswara, Rajasthan	Mahi Banswara - 1&2	2 X 700
Gorakhpur, Haryana	GHAVP - 3&4	2 X 700
Mahi Banswara, Rajasthan	Mahi Banswara - 3&4	2 X 700
Kudankulam, Tamil Nadu	KKNPP 5&6	2 X 1000

On progressive completion of the projects under construction and accorded sanction, the installed nuclear power capacity will reach 22480 MW by 2031.

The Government has also accorded 'in principle' approval of the following sites for setting up nuclear power plants in future:

Location & State	Project	Capacity (MW)
Jaitapur, Maharashtra	Jaitapur, Units- 1 to 6	6 x 1650
Kovvada, Andhra Pradesh	Kovvada, Units- 1 to 6	6 x 1208
Chhaya Mithi Virdi, Gujarat	Chhaya Mithi Virdi, Units- 1 to 6	6x 1000*
Haripur, West Bengal	Haripur, Units - 1 to 6	6x 1000*
Bhimpur, Madhya Pradesh	Bhimpur, Units- 1 to 4	4 X 700

\*Nominal Capacity

(e) The list of Inter-Governmental Agreements concluded by India on atomic energy in the last five years are given below:

- |                    |            |
|--------------------|------------|
| (a) Australia      | 05.09.2014 |
| (b) Sri Lanka      | 16.02.2015 |
| (c) United Kingdom | 13.11.2015 |
| (d) Japan          | 11.11.2016 |
| (e) Vietnam        | 09.12.2016 |
| (f) Bangladesh     | 08.04.2017 |

This information was provided by the 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 in written reply to a question in Lok Sabha today.

<http://pib.nic.in/PressReleseDetail.aspx?PRID=1564267>

### **India must sign NPT to gain entry into NSG: China, Livemint February 01, 2019**

India must sign the Non-Proliferation Treaty to gain entry into the Nuclear Suppliers Group, China said Thursday, asserting that "patient negotiations" were required for New Delhi's admission into the group as there is no precedent for the inclusion of non-NPT countries. China has been opposing India's entry into the 48-member Nuclear Suppliers Group (NSG) on the ground that India is not a signatory to the Non-Proliferation Treaty (NPT), though the other P5 members, including the US and Russia backed its case based on New Delhi's non-proliferation record.

<https://www.livemint.com/politics/policy/india-must-sign-npt-to-gain-entry-into-nsg-china-1548936478869.html>

### **Pakistan Conducts Second Nasr Nuclear-Capable Ballistic Missile Test in a Week** Ankit Panda, *The Diplomat*, February 04, 2019

On January 31, Pakistan's Army Strategic Forces Command conducted a test of its

Nasr/Hatf-IX nuclear-capable, close-range ballistic missile. The test was the second involving the Nasr to take place in January 2019.

The test was "was aimed at testing the extreme inflight maneuverability, including the end flight maneuverability," a statement released by Pakistan's Inter-Services Public Relations noted. The Nasr was "capable of defeating, by assured penetration, any currently available BMD (ballistic missile defense) system in our neighborhood or any other system under procurement / development," the statement added.

The emphasis on ballistic missile defense comes as India anticipates the delivery of S-400 air defense systems from Russia by October 2020. The Russian system, depending on its configuration, is capable of conducting endo- and exoatmospheric interceptions of ballistic and cruise missiles.

<https://thediplomat.com/2019/02/pakistan-conducts-second-nasr-nuclear-capable-ballistic-missile-test-in-a-week/>

### **India needs to step up its nuclear game, say experts, Rekha Dixit, *The Week*, February 13, 2019**

"Even though coal will be the mainstay of India's power for many years to come, there will come a time when we have to reach a non-coal system, and in that scenario, I cannot see anything except nuclear energy," said Anil Kakodkar, former chairperson of the Atomic Energy Commission. He was speaking at the release of a task force report on 'Nuclear Power: India's Development Imperative' by the Vivekananda International Foundation (VIF). Kakodkar headed the task force.

The task force report says that the 63 GW nuclear power target by 2032 was adopted in 2006 under the Integrated Energy Policy. "The timelines given in the document envisaged installation of 11 GW capacity by 2010 and 29 GW by 2020. Our current capacity of 6.7 GW, therefore,

represents a significant slippage.”

The document says that even a 63 GW target would only represent 10.33 per cent of installed capacity by 2032, it is a modest target and far below the capacities of other countries. “For instance, China aims at 160 GW, providing 10 per cent of the electricity by 2030. The comparison with China is relevant as it has broadly the same energy profile as India, with coal providing a major part of China’s energy needs (64.56 per cent).”

<https://www.theweek.in/news/biz-tech/2019/02/13/india-nuclear-energy-game-experts.html>

### B. Pakistan

#### **Any agreement on Afghan crisis to address Pakistan’s equities: US,**

*Anwar Iqbal, Dawn, February 08, 2019*

The US military strategy for South Asia includes assuring Pak-istan that its “equities” are acknowledged and addressed in any future agreement in Afghanistan, says a key American general.

Testifying before the Senate Armed Services Committee earlier this week, Gen Joseph Votel also said that “some military cooperation activities” between the US and Pakistan have continued even though the Trump administration has suspended security assistance to the country.

Gen Votel, however, told the committee members that Pakistan was an important regional player – not just because of the Afghan conflict – and that’s why Washington wants to retain its relationship with Islamabad. “As a state possessing nuclear weapons that sits at the nexus of Russian, Chinese, Indian, Iranian, and US geopolitical interests, Pakistan will always be a country of importance to the United States,” he said.

<https://www.dawn.com/news/1462527>

#### **The Chinese giants shaping the world’s industries,** *Dawn February 10, 2019*

It was fear of being dominated by a Chinese behemoth that sparked an attempt by large

French and German rail companies to join forces to create an European industrial champion. ChemChina also controls Italian tyre maker Pirelli and German machinery firm KraussMaffei.

Energy: The state-run China National Nuclear Corp (CNNC) launched its locally developed Hualong One nuclear reactor in 2015 to compete with French and US models, selling to Argentina and Pakistan.

<https://www.dawn.com/news/1462929>

### C. China

#### **Foreign Ministry Spokesperson Geng Shuang’s Regular Press**

**Conference** *Ministry of Foreign Affairs, the People’s Republic of China, February 01, 2019*

**Q: On January 31, French, German and UK Foreign Ministers announced the creation of the Instrument for Supporting Trade Exchanges for Iran in a joint statement. What is your comment?**

A: The Chinese side highly appreciates these efforts made by the European countries in upholding the JCPOA and supports the creation of the Instrument for Supporting Trade Exchanges (INSTEX). This showcases the European side’s determination to safeguard multilateralism. China supports their efforts in sustaining cooperation with Iran, getting INSTEX up and running at an early date, and opening it to third parties to promote normal economic and trade cooperation between the international community and Iran. We also firmly support the EU’s leading role in upholding the JCPOA through political and diplomatic means.

China maintains that the JCPOA, as an important outcome of multilateralism endorsed by the United Nations Security Council, should be implemented in a comprehensive and effective way. This will serve peace and stability in the Middle East, the international nuclear non-proliferation regime and the common interests of the international community.

We hope that all relevant parties could view it from an overall and long-term perspective, stick to the direction of political and diplomatic settlement, and work together to uphold the JCPOA.

[https://www.fmprc.gov.cn/mfa\\_eng/xwfw\\_665399/s2510\\_665401/2511\\_665403/t1634957.shtml](https://www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/2511_665403/t1634957.shtml)

**Foreign Ministry: Nation backs cooperation with Iran** *Cao Desheng, China Daily, February 02, 2019*

Beijing backs European countries' unveiling of the Instrument for Supporting Trade Exchanges for facilitating trade with Iran and preserving the Iran nuclear deal, the Foreign Ministry said on Friday. Speaking at a regular news conference, ministry spokesman Geng Shuang said the creation of the trading instrument demonstrates the resolve of the Europe to uphold multilateralism.

The foreign ministers of Britain, France and Germany said in a joint statement on Thursday that they created the instrument to support legitimate European trade with Iran, focusing initially on the sectors most essential to the Iranian population, such as pharmaceuticals, medical devices and food. Noting that the instrument will follow a step-by-step approach, the statement said the long-term goal is openness to economic operators from third countries that want to trade with Iran.

"China firmly supports the European side in cooperating with Iran, putting the instrument into operation at an early date and allowing it to be open to third parties in a bid to help the international community develop normal trade relations with Iran," Geng said. He added that China also resolutely supports the European Union's political and diplomatic efforts in taking the lead to preserve the Iran nuclear deal, formally known as the Joint Comprehensive Plan of Action, which was endorsed by the United Nations in Security Council Resolution 2231.

<http://global.chinadaily.com.cn/a/201902/02/WS5c54e159a3106c65c34e7e04.html>

**Chinese scientists make progress on nuclear submarine**

**communication,** *Liu Zhen, South China Morning Post, February 02, 2019*

Researchers conduct test transmission of real-time data between deep ocean transponders and Beidou navigation satellite system in western Pacific. Analysts say it could benefit China's fledgling nuclear-powered ballistic missile submarine fleet. China's nuclear submarines may be stealthier and better able to communicate in the deep ocean after progress was made on key technology, according to state media. People's Daily reported on Friday that a successful test transmission of real-time high-capacity data between deep ocean transponders and the Beidou navigation satellite system had been carried out. Marine research ship Kexue, or "Science", conducted the test in the western Pacific along with several other missions on a 74-day trip before returning to its home base of Qingdao, Shandong on Thursday.

<https://www.scmp.com/news/china/military/article/2184812/chinese-scientists-make-progress-nuclear-submarine-communication>

**China opposes U.S. withdrawal from landmark nuclear pact**

*Xinhua, February 03, 2019*

"China opposes the withdrawal of the United States and urges the U.S. and Russia to properly settle their differences through constructive dialogue," spokesperson Geng Shuang said on Saturday. U.S. Secretary of State Mike Pompeo on Friday announced that the United States will suspend its compliance to the nuclear treaty from Saturday, which will trigger a six-month countdown period leading to a permanent exit from the pact inked in 1987 between the United States and the then-Soviet Union.

"As an important bilateral treaty in arms control and disarmament, the treaty is of great significance for smoothing relationships between major powers, promoting international and regional

peace, and safeguarding global strategic balance and stability," Geng said while expressing regret for the withdrawal. The unilateral withdrawal of the United States will possibly trigger a series of negative outcomes, and China will closely follow the latest developments, he said.

In response to a question about China's stance on the negotiation of a new multilateral treaty on arms control, Geng said that China is opposed to the multilateralization of the treaty. Multilateralization of the treaty involves a series of political, military and legal issues that are complicated, and many countries are quite concerned, Geng said. "The top priority is to safeguard and implement the existing treaty well, rather than drafting a new one to replace the old one," he said.

<http://en.people.cn/n3/2019/0203/c90000-9543940.html>

### **China clean energy industry develops fast in 2018, Xinhua,**

*February 04, 2019*

China accelerated the development of clean energy last year, with the installed capacity of renewable energy exceeding 700 million kilowatts, the National Energy Administration said. China will continue to boost the growth of the oil-and-gas industry this year, increase efforts in oil and gas exploration and development, and build more pipelines and gas storage facilities, according to the administration.

China has adopted a slew of measures to encourage the development of clean energy, including building vast solar and wind farms, with aims to make non-fossil energy meeting 20 percent of its energy needs by 2030. To reach this goal, China is investing heavily in renewable energy, pledging to invest 2.5 trillion yuan (about 373 billion US dollars) in renewable power generation - solar, wind, hydro and nuclear - by 2020.

<http://www.globaltimes.cn/content/1138025.shtml>

### **China will build 4 nuclear aircraft carriers in drive to catch US Navy, experts say**

*Minnie Chan & Guo Rui*

*South China Morning Post, February 06, 2019*

Four of at least six aircraft battle groups China plans to have in the water by 2035 will be nuclear-powered, as the Asian giant tries to equal the US in naval strength, according to Chinese military experts. The specialists said that after decades of trying to close the gap, the People's Liberation Army (PLA) Navy's hardware might by then be closer to matching the world's leading superpower in aircraft carrier technology - but it would still lag in real combat experience.

All of China's new carriers were expected to be equipped with electromagnetic catapults similar to those used by the United States, the experts said. The US' electromagnetic aircraft launch system, known as EMALS, can launch more aircraft more rapidly than the older diesel systems.

China has one aircraft carrier in service - the Liaoning, commissioned in 2012 - and the Type 001A, the first carrier built in the country, which is still being tested.

Chinese navy veteran warns training, not hardware is key to military preparedness "China's nuclear-powered aircraft carriers with [EMALS-like systems] are expected to join the navy by 2035, bringing the total number of carriers to at least six - although only four will work at the front line," Wang Yunfei, a naval expert and retired PLA destroyer naval officer, said. "The country needs to keep developing until it is at the same level as the United States."

<https://www.scmp.com/news/china/military/article/2185081/china-will-build-4-nuclear-aircraft-carriers-drive-catch-us-navy>

### **Is China about to abandon its 'no first use' nuclear weapons policy?,**

*Minnie Chan, Kristin Huang, South China Morning Post, February 07, 2019*

The growing US-China naval arms race is putting pressure on Beijing to reconsider

its long-standing nuclear policy, analysts say. But one source said that unlike the US, China is incapable of launching a pre-emptive strike and so has little choice but to retain “no first use” policy.

China might come under pressure to reconsider its long-standing “no first use” nuclear policy as it engages in a maritime arms race with the United States, analysts have warned.

Nuclear competition is brewing between the two countries as China makes gains in weapons development and Washington tries to limit Beijing’s military build-up in the South China Sea.

The United States is still decades ahead in nuclear weapons development but a successful test late last year of China’s new submarine-launched ballistic missile, the JL-3, is cause for concern in Washington. The test signals that China is moving ahead with a new class of strategic submarines called SSBNs, vessels that could be equipped with nuclear-armed JL-3s and that would be more difficult to detect than conventional land-based nuclear weapons.

China might come under pressure to reconsider its long-standing “no first use” nuclear policy as it engages in a maritime arms race with the United States, analysts have warned. Nuclear competition is brewing between the two countries as China makes gains in weapons development and Washington tries to limit Beijing’s military build-up in the South China Sea.

The United States is still decades ahead in nuclear weapons development but a successful test late last year of China’s new submarine-launched ballistic missile, the JL-3, is cause for concern in Washington. The test signals that China is moving ahead with a new class of strategic submarines called SSBNs, vessels that could be equipped with nuclear-armed JL-3s and that would be more difficult to detect than conventional land-based nuclear weapons.

In a sign of that growing concern, US President Donald Trump said in October that his decision to withdraw from a

decades-old atomic accord with Russia was driven by a need to respond to China’s nuclear build-up. US Vice-President Mike Pence has also stressed that the US Navy would “continue to fly, sail and operate wherever international law allowed” in the South China Sea – remarks that Beijing took as aimed at China. According to Zhao Tong, a fellow in Carnegie’s Nuclear Policy Programme, based at the Carnegie-Tsinghua Centre for Global Policy, the US and its allies are stepping up their anti-submarine warfare in the South China Sea and the Indian Ocean.

<https://www.scmp.com/news/china/military/article/2184577/could-china-abandon-its-no-first-use-nuclear-weapons-policy>

**Closer NK-US ties ‘fit China’s intention’** *Yang Sheng, Global Times, February 10, 2019*

China does not need to worry about Pyongyang’s wisdom on decision making, Chinese experts told the Global Times on Sunday, just after US President Donald Trump announced Friday that his upcoming summit with North Korean leader Kim Jong-un will take place in the Vietnamese capital. Trump revealed his decision in an evening tweet. “My representatives have just left North Korea after a very productive meeting and an agreed upon time and date for the second Summit with Kim Jong-un,” Trump said. “It will take place in Hanoi, Vietnam, on February 27 & 28. I look forward to seeing Chairman Kim & advancing the cause of peace!”

Kim also wants to showcase Pyongyang’s strong determination on economic development, Wang noted. Currently, due to strategic needs on certain geopolitical issues related to China, ties between the US and Vietnam are strengthening, so Washington might want to deliver a message to Pyongyang that “If you become a rival to China in region, then you can receive more friendship from the US. The US also wants to hint to China that the US has leverage on the issue of the Korean Peninsula,” Zheng Jiyong, director of the

Center for Korean Studies at Fudan University in Shanghai, told the Global Times.

China has always firmly advocated that North Korea and the US must resolve problems through peaceful dialogue and negotiation rather than military measures. China does not need to be worried because North Korea is not Vietnam, Zheng said. "If North Korea and the US become closer, this path would fit exactly with China's political intentions," said Zheng. He noted that China just needs to keep contributing and assisting with the exchanges between North Korea and the US, as well as with South Korea, and it doesn't need to worry about North Korea's wisdom. Pyongyang has a clear understanding of where the bottom line is, he said.

<http://www.globaltimes.cn/content/1138396.shtml>

### **Liaoning sale to Pakistan totally false: experts, *Global Times* February 11, 2019**

Media reports on China's decision to sell its only at-service aircraft carrier, the Liaoning, to Pakistan "in order to compete with India" are unrealistic, military analysts told the Global Times. Pakistan-based news outlet The Nation cited Chinese and Russian media as reporting on Saturday that "the Chinese government has decided to sell its first and only aircraft carrier to Pakistan, "for a yet-undetermined price in order to upgrade the Pakistan Navy's capabilities."

Such a move will make the Pakistan Navy more competitive against rival India, which has an operational aircraft carrier, the report said, while alleging such a deal will take place after the Liaoning undergoes a "large-scale upgrade." However, the Chinese government has never disclosed any plan regarding such a deal, and the Global Times reporter also could not find the alleged Chinese media report.

An RT report on the topic, which was cited by The Nation, most likely can be traced to an earlier report by the US defense website navyrecognition.com on February 5, which

claims that an official media report disclosed such a deal. The US website also outlines a schedule for such a deal, saying that as the Liaoning, which was commissioned into the China's People's Liberation Army (PLA) Navy in September 2012, will serve for about 18 years, and while Pakistan's Gwadar and Karachi have already been described by Chinese Navy strategists as a "logistics base" and "PLA Navy base," respectively, this does mean that the carrier could be sold to Pakistan by 2020.

It is a groundless allegation and complete falsehood, Song Zhongping, a Chinese military expert and commentator, told the Global Times on Monday, referring to the reports. As China's first-ever aircraft carrier, the Liaoning acts as both training vessel and combat warship, that there is a zero possibility of reselling it, and China does not have spare carriers to sell to Pakistan, Song noted.

The Liaoning is the only Chinese aircraft carrier in active service, and the country's first domestically developed carrier, known as the Type-001 A, is still undergoing sea trials. Although it has been widely speculated that China will have at least five aircraft carriers, including two nuclear-powered ones by 2030-2035, China's Ministry of National Defense has not yet revealed a plan for future carriers.

Song added that "such reports have no credibility even judging from Pakistan's perspective, as the country's navy pursues an onshore defense strategy, which means it does not need a carrier. And its defense budget cannot afford an aircraft carrier or maintain one. Pakistan's main focus is to maintain its own strategic nuclear capabilities rather than to promote the improvement of conventional capabilities, especially the improvement of offshore capabilities. [Buying China's carrier] does not meet the actual needs of Pakistan, Song said.

<http://www.globaltimes.cn/content/1138440.shtml>

## Experts see Warsaw meeting as

'pointless' *China Daily, February 14, 2019*

WASHINGTON - The United States will co-host with Poland a meeting on peace and security in the Middle East in the Polish capital Warsaw on Feb 13-14, according to a joint statement by the two countries. Analysts argued that both countries have their own axes to grind. Washington seeks to rally international support at the meeting to isolate Teheran, while Warsaw craves closer ties with Washington and a higher position in world affairs.

With the absence of some major stakeholders and all-around skepticism, the meeting is unlikely to see substantive progress on a lot of issues. US Secretary of State Mike Pompeo said in January that the meeting "includes an important element of making sure that Iran is not a destabilizing influence".

Iranian Foreign Minister Mohammad Javad Zarif dismissed the planned meeting as an "anti-Iranian circus event". The objective of US government was to rally international support at the conference to isolate Iran diplomatically and economically, said Ahmad Majidiyar, a senior fellow and director of the IranObserved Project at the Middle East Institute, a Washington-based think tank.

[http://www.chinadaily.com.cn/cndy/2019-02/14/content\\_37436380.htm](http://www.chinadaily.com.cn/cndy/2019-02/14/content_37436380.htm)

## China expects successful DPRK-US meeting next week

*Zhou Jin, China Daily, February 15, 2019*

China expects a successful second summit between the Democratic People's Republic of Korea and the United States, Foreign Ministry spokesman Geng Shuang said on Wednesday.

"We expect the second meeting of the leaders of the DPRK and the US will be held as scheduled and achieve positive results to inject new impetus to the denuclearization and lasting peace on the peninsula," Geng said at a daily news conference.

Direct contact and dialogue between the DPRK and the US hold the key to resolving the Korean Peninsula nuclear issue, he said, adding that China always supports the two

sides tackling the issue through dialogue.

Republic of Korea President Moon Jae-in said in his phone discussions with US President Donald Trump Tuesday night that his country is ready to assume any role for the denuclearization of the Korean Peninsula, Xinhua reported

<http://global.chinadaily.com.cn/a/201902/20/WS5c6d3f33a3106c65c34ea6a7.html>

## D. South Asia

### The 2019 Nuclear Threat

**Assessment For South Asia**, *Michael Krepon, Arms Control Wonk, Feb 4, 2019*

"India's rapidly worsening air pollution is causing about 1.1 million people to die prematurely each year and is now surpassing China's as the deadliest in the world, a new study of global air pollution shows... Deaths caused by air pollution grew to 4.2 million in 2015 from 3.5 million in 1990. — Geeta Anand, New York Times, February 14, 2017.

"The continued growth and development of Pakistan and India's nuclear weapons programs increase the risk of a nuclear security incident in South Asia, and the new types of nuclear weapons will introduce new risks for escalation dynamics and security in the region."

The DNI foresees strained India-Pakistan relations, at least until India's national elections because the Modi government has other fish to fry and because of the Pakistan military's "narrow approach to counterterrorism cooperation — using some groups as policy tools and confronting only the militant groups that directly threaten Pakistan."

<https://www.armscontrolwonk.com/archive/1206746/the-2019-nuclear-threat-assessment-for-south-asia/>

### US wants Pakistan to cease behaviour undermining regional stability in South Asia: Pentagon

*Financial Express, February 06, 2019*

Militants operating out of Pakistan and Afghanistan continue to threaten Afghan

stability as well as stoke tensions between Pakistan and India, and the US looks to Islamabad to cease behaviour undermining regional stability, a top Pentagon Commander said on Tuesday.

During a Congressional hearing of the Senate Armed Services Committee, Commander of the US Central Command General Joseph Votel told the lawmakers that Pakistan has taken positive steps to assist Special US Representative of Afghanistan Zalmay Khalilzad in facilitating talks with the Taliban.

<https://www.financialexpress.com/world-news/us-wants-pakistan-to-cease-behaviour-undermining-regional-stability-in-south-asia-pentagon/1478074/>

### **Emerging China changing South Asia balance, says ex-NSA, ORF,** *February 14, 2019*

“Tensions between countries are far higher today than at any time in the last half century,” observed M.K. Narayanan, former National Security Advisor (NSA) and ex-Governor of West Bengal. Delivering the keynote address at the national conclave on ‘National Security Perspectives’ held jointly by Observer Research Foundation, the Madras Management Association (MMA) and Konrad Adenauer Stiftung (KAS) at Chennai, on 5 February 2019, Narayanan pointed to a growing leadership vacuum caused by US President Donald Trump’s ‘America first’ policy and rhetoric.

According to Narayanan, this, combined with a ‘Russian resurgence’, was beginning to disturb the global equilibrium of the post-Cold War era. The world outlook appeared bleak against a backdrop of renewed nuclear armament, climate-change challenges, a wave of extreme nationalism and uncertainty regarding international rules of conduct, he said.

<https://www.orfonline.org/research/emerging-china-changing-south-asia-balance-says-ex-nsa-48082/>

### **The Kashmir attack could prompt a crisis in South Asia. Here’s why.**

*Asfandyar Mir, Washington Post,*  
*February 15, 2019*

On Thursday, a suicide car bomber launched a major terrorist attack in Indian Kashmir. In the town of Pampore, a vehicle armed with a bomb rammed into a bus full of Indian paramilitary soldiers, killing 44 and injuring several others.

Although insurgent violence against military targets in Kashmir is not without precedent, here is what’s different: This attack is the deadliest single incident in decades involving Indian security forces.

The attack has India rattled – and pointing fingers at Pakistan. This is troubling, because India and Pakistan have fought multiple wars over Kashmir besides engaging in intermittent skirmishes along the border. Will the Pampore incident spark a new and dangerous phase in the enduring rivalry between nuclear-armed India and Pakistan? Here’s what you need to know:

[https://www.washingtonpost.com/news/monkey-cage/wp/2019/02/15/the-kashmir-attack-could-prompt-a-crisis-in-south-asia-heres-why/?utm\\_term=.2d4c718d8e78](https://www.washingtonpost.com/news/monkey-cage/wp/2019/02/15/the-kashmir-attack-could-prompt-a-crisis-in-south-asia-heres-why/?utm_term=.2d4c718d8e78)

### **Kashmir attack: Why the timing could drive tensions in South Asia,** *Nikhil Kumar, CNN, February 15, 2019*

Once again, geopolitical tensions are rising on the Indian subcontinent. And the timing, just ahead of India’s general elections, could drive the mercury even higher in the coming days and weeks.

The trigger: a deadly car bomb attack on a convoy of Indian paramilitaries in the section of Kashmir controlled by New Delhi. The blast ripped through the convoy, killing at least 40 people and injuring five more – the worst attack on Indian forces since the beginning of an insurgency in the region in the late 1980s, according to analysts.

The tragedy shook India, which says archrival Pakistan had a “direct hand” in

the incident. Claimed in its entirety by both, Kashmir has been a constant source of tension between the two nuclear armed neighbors, who've fought three wars since independence from British colonial rule in 1947. Past attacks in the Kashmir region – and beyond, including the terrorist raid on Mumbai in 2008 that India blamed on Pakistani gunmen – have periodically brought the two to the brink of renewed conflict.

<https://edition.cnn.com/2019/02/15/asia/kashmir-attack-india-pakistan-tensions-analysis-intl/index.html>

### *E. USA & Europe*

#### **Spain plans to close all nuclear plants by 2035** *Isla Binnie, John*

*Stonestreet Reuters, February 13, 2019*

Spain aims to close all seven of its nuclear plants between 2025 and 2035 as part of plans to generate all the country's electricity from renewable sources by 2050. Energy Minister Teresa Ribera announced the move on Tuesday, just as the Socialist government gears up to call an early national election in anticipation of losing a budget vote.

Overhauling Spain's energy system, which generated 40 percent of its mainland electricity from renewable sources in 2018, will require investment of 235 billion euros (\$266 billion) between 2021 and 2030, Prime Minister Pedro Sanchez said last month. Ribera said the government would present a draft plan to combat climate change, which had been due to be sent to the European Union for approval by the end of last year, to parliament on Feb. 22. Under a draft bill prepared last year, the government aims to ban sales of petrol, diesel and hybrid cars from 2040 and encourage the installation of at least 3,000 megawatts a year of renewable capacity such as wind farms and solar plants.

Phasing out nuclear power, which accounts for a little over 20 percent of mainland Spain's electricity, was a campaign pledge for the governing Socialists, who took office last summer after toppling their conservative predecessors in a confidence

vote. Spain's nuclear plants, which started operating between 1983 and 1988, are owned by Iberdrola, Italian-owned Endesa, Naturgy and Portugal's EDP.

<https://www.reuters.com/article/us-spain-energy/spain-plans-to-close-all-nuclear-plants-by-2035-idUSKCN1Q212W>

#### **EU and IAEA set priorities for cooperation, World Nuclear News**

*February 14, 2019*

The European Union (EU) and the International Atomic Energy Agency (IAEA) have agreed at their seventh annual meeting of senior officials to further enhance cooperation and strengthen cooperation in training, research and development. The meeting, held earlier this week in Luxembourg, saw the organisations review their progress in a range of nuclear activities, particularly in cooperation on nuclear safety, security and safeguards. The role of nuclear energy in addressing climate change was also a topic of discussion, as were developments related to small modular reactors, in particular regulatory aspects.

The EU said it would continue to support the IAEA's peer review services to support continuous safety improvements. It also reiterated its support for the IAEA's role in verifying and monitoring the implementation of Iran's nuclear-related commitments under the Joint Comprehensive Plan of Action. IAEA Assistant Director General and Chief Coordinator Cornel Feruta said the meeting had taken stock of important developments in areas of common interest and steered the direction of cooperation for the year ahead. "The EU is one of our most relevant partners and its support for the IAEA's mandate and work is valued," Feruta said.

Gerassimos Thomas, deputy director general in the Directorate-General for Energy of the European Commission, said nuclear safety and security remained a "major priority" in the EU. "In 2018, the EU completed its first ever topical peer review on ageing management of nuclear

power plants and research reactors under the amended Nuclear Safety Directive," he said.

Officials commended "long-standing and fruitful cooperation" in both nuclear safety and regulatory areas. Joint efforts to address environmental remediation in Central Asia will continue following the successful donors' conference in 2018, they said. The next Senior Officials Meeting is expected to take place in Vienna in early 2020.

<http://www.world-nuclear-news.org/Articles/EU-and-IAEA-set-priorities-for-cooperation>

### **U.S. Suspends Nuclear Arms Control Treaty With Russia**, *David E. Sanger and William J. Broad, The New York Times, February 01, 2019*

The Trump administration said on Friday that it was suspending one of the last major nuclear arms control treaties with Russia, following five years of heated conversations over accusations by the United States that Moscow is violating the Reagan-era agreement.

The decision has the potential to incite a new arms race – not only with Russia, but also with China, which was never a signatory to the 1987 Intermediate-Range Nuclear Forces Treaty, widely known as the I.N.F.

It is unclear whether President Trump plans to replace the I.N.F. or to renew another major treaty, called New Start, which drove American and Russian nuclear arsenals to their lowest levels in nearly 60 years. That accord expires in 2021, just weeks after the next presidential inauguration.

<https://www.nytimes.com/2019/02/01/us/politics/trump-inf-nuclear-treaty.html>

### **US envoy Stephen Biegun 'reveals' North Korea nuclear pledge**, *BBC, February 01, 2019*

North Korea has pledged to destroy all its nuclear material enrichment facilities, according to the US special envoy for the country, Stephen Biegun. He said the promise had been made to US Secretary of

State Mike Pompeo when he visited North Korea in October. However Pyongyang has not confirmed making any such pledge.

Mr Biegun also said that North Korea must provide a complete list of its nuclear assets before any deal can be reached. Experts believe the North has more than one undeclared nuclear fuel enrichment site aside from the known facility at Yongbyon, north of Pyongyang, and question how the destruction of all facilities could be fully verified.

President Donald Trump had earlier claimed "tremendous progress" in talks between the countries. Speaking in the Oval Office on Thursday, the president said he would soon announce the date and location of a planned second summit with North Korea's Kim Jong-un.

<https://www.bbc.com/news/world-asia-47082860>

### **The Latest: Trump pulls the plug on arms treaty with Russia**, *AP News February 02, 2019*

President Donald Trump is pulling the plug on a nuclear arms treaty with Russia, accusing Moscow of violating the 1987 Intermediate-Range Nuclear Forces treaty with "impunity" by deploying banned missiles. Moscow denies it is in violation and has accused Washington of resisting its efforts to resolve the dispute.

The Trump decision reflects his administration's view that the arms treaty was an unacceptable obstacle to more forcefully confronting not only Russia but also China.

It's a U.S.-Russia treaty that's been a centrepiece of superpower arms control since the Cold War. And its demise has some analysts worried about a new arms race.

An American withdrawal has been expected for months, and an announcement is expected later Friday. It would follow years of unresolved dispute

over Russian compliance with the pact, known as the Intermediate-Range Nuclear Forces, or INF, treaty.

[https://apnews.com/dj54866f26094afeae3bd8c66d7af6cd?utm\\_campaign=SocialFlow&utm\\_medium=AP&utm\\_source=Twitter](https://apnews.com/dj54866f26094afeae3bd8c66d7af6cd?utm_campaign=SocialFlow&utm_medium=AP&utm_source=Twitter)

## Elizabeth Warren wants to ban the US from using nuclear weapons first,

*Kelsey Piper, Vox, February 11, 2019*

Two weeks ago, a major national security bill was introduced in both houses of Congress – and hardly anyone noticed. That bill, introduced by Sen. Elizabeth Warren and House Armed Services Committee Chair Adam Smith, was the No First Use Act, and it aims to transform US nuclear weapons policy.

The text of the bill is a single sentence: “It is the policy of the United States to not use nuclear weapons first.” But that single sentence might be a really big deal.

Proponents argue that it’s the first step toward a better nuclear posture that will reduce the risk of an accident killing hundreds of thousands or spiraling into a global catastrophe. Nuclear weapons remain one of the biggest threats to human life. But opponents argue that it could instead destabilize international nuclear policy, driving arms races in countries that currently count on the US to protect them.

<https://www.vox.com/2019/2/11/18216686/elizabeth-warren-ban-nuclear-weapons-no-first-use>

## US should update nuclear warheads over their delivery systems, says DoD official,

*Aaron Mehta, Defence News, February 12, 2019*

A top nuclear official at the U.S. Defense Department warned Tuesday that the future of the nuclear arsenal has to come from innovations in the warheads, rather than the Pentagon’s traditional focus on delivery systems.

Peter Fanta, deputy assistant secretary of defense for nuclear matters, said it’s time for the Defense and Energy departments to work together to develop manufacturing

and engineering expertise as well as capabilities to create flexible, updated nuclear warheads by the 2040s, or risk being unable to keep up with potential adversaries’ technological developments.

The problem, put simply: Current nuclear modernization plans are supposed to cover needs through 2092, but for those systems to be viable that long, there must be updates that allow for the integration of new technology. After all, potential adversaries are updating their defense capabilities with technologies such as artificial intelligence in ways that would have seemed the realm of science fiction just a decade ago, so trying to predict what they will have by 2040, let alone 2092, is impossible.

<https://www.defensenews.com/smr/nuclear-arsenal/2019/02/12/us-should-update-nuclear-warheads-over-their-delivery-systems-says-dod-official/>

## CEOs Ask Trump to Help Them Sell Nuclear Power Plants Abroad,

*Jennifer A Dlouhy, Ari Natter, and Jennifer Jacobs, Bloomberg, February 12, 2019*

U.S. nuclear energy developers on Tuesday met with President Donald Trump and asked for help winning contracts to build power plants in the Middle East and elsewhere overseas.

“There is competition around the globe, and we want to be part of it,” said Chris Crane, the chief executive officer of Exelon Corp., the largest U.S. operator of nuclear plants, following the meeting at the White House.

The push comes as developers seek U.S. government approval of next-generation advanced and small modular nuclear reactors – and the administration’s help in selling their products to the world. The International Atomic Energy Agency predicts that some 554 gigawatts of nuclear electric generating capacity will come online by 2030, a 42 percent increase over current levels.

<https://www.bloomberg.com/news/articles/2019-02-12/trump-said-to-meet-with-nuclear-developers-looking-globally>

**U.S. Senate proposal would block Saudi path to atomic weapon in nuclear deal,** *Timothy Gardner ,Reuters, February 13, 2019*

U.S. senators from both parties introduced a resolution on Tuesday requiring that any deal to share U.S. nuclear power technology with Saudi Arabia block the kingdom from making a nuclear weapon.

Under the measure, any U.S. civilian nuclear cooperation agreement, or 123 agreement, with Saudi Arabia would prevent enrichment of uranium or reprocessing of plutonium made in reactors - two routes to making nuclear weapons.

It is unclear whether a majority of the 100-member Senate would support the resolution of Democrats Jeff Merkley and Ed Markey and Republican Rand Paul. The resolution is also non-binding on the U.S. government.

<https://www.reuters.com/article/us-usa-nuclear-saudi/u-s-senate-proposal-would-block-saudi-path-to-atomic-weapon-in-nuclear-deal-idUSKCN1Q12UT>

### *F. Russia and Central Asia*

**The U.S. And Russia Are Stocking Up On Missiles And Nukes For A Different Kind of War,** *Geoff Brumfiel, NPR, February 01, 2019*

At a Russian base on the Baltic Sea, construction is underway to house a new generation of nuclear-capable missiles.

Tentlike structures have popped up to shelter the mobile missile system, known as Iskander, which is capable of firing weapons with both conventional and nuclear warheads. Recent satellite imagery of the territory, known as Kaliningrad, also shows that old buildings on the base are being demolished.

"It really looks like the base is getting a pretty comprehensive overhaul," says Jeffrey Lewis, a scholar at the Middlebury Institute of International Studies at Monterey who has been analyzing the satellite imagery

taken by San Francisco-based company Planet. "Right now, it's just a big construction site."

<https://www.npr.org/2019/02/01/690143095/the-u-s-and-russia-are-stocking-up-on-missiles-and-nukes-for-a-different-kind-of>

**Russian defense ministry says US started production of banned missiles two years ago,** *TASS News Agency, February 2, 2019*

The United States started preparations to production of missiles of intermediate and shorter range banned by the Intermediate-Range Nuclear Forces Treaty (INF Treaty) two years before it accused Russia of violating the agreement, Russia's Defense Ministry reported on Saturday.

"Two years before making public unfounded accusations against Russia of alleged INF Treaty violations, Washington not only took a decision, but also started preparations to production of missiles of intermediate and shorter range banned by the Treaty," the report said.

"Starting already June 2017, the program of expansion and upgrade of production facilities with the aims of developing intermediate and shorter range missiles banned by the Treaty was launched at Raytheon's plant in the city of Tucson, Arizona," the ministry said with reference to compulsive evidence it has obtained. "The plant is a major diversified enterprise of the US aerospace industry that produces almost all types of missile weapons," the report said.

<http://tass.com/defense/1042995>

**Russia suspending missile treaty after US move: Putin,** *Agence France-Presse, Deccan Herald, February 02 2019*

President Vladimir Putin on Saturday said Russia was suspending its participation in a key Cold War-era missile treaty in a mirror response to the US move the day before. "Our American partners have announced they are suspending their participation in the deal, and we are also

suspending our participation,” he said of the Intermediate-Range Nuclear Forces Treaty. Putin said during a televised meeting with foreign and defence ministers Sergei Lavrov and Sergei Shoigu that Russia would no longer initiate talks with the US on disarmament.

<https://www.deccanherald.com/international/putin-says-russia-suspending-716301.html>

**Russia starts developing land-based hypersonic missile with intermediate range, says Putin, TASS News Agency, February 2, 2019**

President Vladimir Putin has announced the start of works to develop new weapons in Russia due to similar actions of the US, particularly to begin developing a land-based hypersonic missile with intermediate range. “It (US) has announced research and development works, and we will do the same,” he said at a meeting with Defense Minister Sergei Shoigu and Foreign Minister Sergey Lavrov on Saturday.

“I agree with the Defense Ministry’s proposals to start the work on ‘landing’ Kalibr missiles and developing a new area to create a land-based hypersonic missile with intermediate range,” Putin noted. According to Shoigu, apart from R&D works on production of missiles of intermediate and shorter range, Russia has witnessed real breaches of the provisions of the Intermediate-Range Nuclear Forces Treaty (INF Treaty) by the US for some time already. “In other words, the United States has started production of those missiles,” he said.

<http://tass.com/defense/1042977>

**Russia will exit INF nuclear missile treaty in six months, Nathan Hodge and Sheena McKenzie, CNN, February 6, 2019**

Russia says it will mirror the United States’ withdrawal from the Intermediate-Range Nuclear Forces (INF) treaty between the countries, formally exiting the agreement in six months.

Foreign Minister Sergey Lavrov announced the move in a report from state news agency RIA-Novosti on Wednesday.

It comes after the Trump administration last week said it would be pulling out of the nuclear missile treaty, accusing Russia of violating its terms since 2014. Moscow rejects the accusations.

The US-Russia treaty, which was signed in December 1987 by US President Ronald Reagan and his Soviet counterpart Mikhail Gorbachev, bans ground-launched missiles with a range of between 500 and 5,500 kilometers, and has been a centerpiece of European security since the Cold War.

<https://edition.cnn.com/2019/02/06/europe/russia-exit-inf-treaty-intl/index.html>

**South Africa Ready to Discuss Nuclear Energy Cooperation With Russia - Foreign Minister, Urdu Point News February 10, 2019**

South Africa will discuss nuclear energy cooperation with Russia during the next high-level bilateral meeting, Lindiwe Sisulu, the South African minister of international relations and cooperation, told Sputnik on Sunday. Pretoria said in July that it was committed to expanding its use of nuclear energy was not ready to sign a deal with Russia’s Rosatom nuclear corporation on building reactors with 10,000 megawatt capacity and would wait until it could afford the projects.

“I think our president [Cyril Ramaphosa] was opting for a mixed use for nuclear energy and I think they [with Russian President Vladimir Putin at the last meeting] were in complete agreement about that, but it was the timing that was a bit too soon for us to be able to absorb that. I am not sure when we will be going to Russia, but I am certain when we go to Russia the matter will be on the table,” Sisulu said, while answering the question on when South Africa is going to sign an agreement on nuclear cooperation with Russia. At the 10th BRICS Summit in Johannesburg, held in July of 2018, South

African President Cyril Ramaphosa stated that the country's economy faced too many financial constraints in order to proceed with a nuclear program.

A month later, South Africa's Energy Minister Jeff Radebe said that a new Cabinet had shelved the plans of former President Jacob Zuma to increase the use of nuclear energy in the country, opting for the use of coal, gas and wind power instead.

<https://www.urdupoint.com/en/world/rpt-south-africa-ready-to-discuss-nuclear-e-549632.html>

### **Cooperation agreement for Rosatom and Russian Academy, *World Nuclear News, February 11, 2019***

Russian state atomic energy corporation Rosatom and the Russian State Academy of Sciences are to cooperate on joint scientific, technical and innovative activities in areas including nuclear energy, nuclear medicine and other areas under an agreement signed in Moscow on 7 February.

The cooperation agreement was signed by Rosatom Director General Alexei Likhachov and President of the Russian Academy of Sciences Alexander Sergeev during a joint meeting to mark Russian Science Day. Under its terms, the partners will cooperate in organising research and development activities aimed at providing technological advantages in various sectors of the domestic industry, as well as creating and developing interdisciplinary scientific and technological centres and organisations. They will also jointly develop strategic planning documents, improve the technical and scientific regulatory and legal framework, and carry out expert evaluations of scientific and technical projects and scientific consultations.

<http://www.world-nuclear-news.org/Articles/Cooperation-agreement-for-Rosatom-and-Russian-Acad>

### **NATO's rhetoric about no new nuclear missiles in Europe to counter Russia is unclear, *Brooks***

*Tigner, Jane's Defence Review, Feb 14, 2019*

NATO has insisted it has no plans to deploy new nuclear missiles in Europe in response

to Russia's nuclear-capable 9M729 ground-launched cruise missile, developed in violation of the Intermediate-Range Nuclear Forces (INF) Treaty.

However, careful reading of fresh statements by allied officials and diplomats, both public and private, strongly suggests that the alliance is not excluding that possibility from its range of options, regardless of the timeframe of their implementation.

"NATO does not have any intention of deploying new nuclear weapons in Europe," NATO Secretary General Jens Stoltenberg told reporters on 13 February after an INF discussion by allied defence ministers who met in Brussels.

<https://www.janes.com/article/86397/nato-s-rhetoric-about-no-new-nuclear-missiles-in-europe-to-counter-russia-is-unclear>

### **Resume talks on nuclear arms treaty with Russia, Gorbachev urges US, *National Herald February 14, 2019***

Former Soviet leader Mikhail S Gorbachev called on Washington and Moscow to resume nuclear arms talks, warning of dangers of not doing so after President Donald Trump confirmed the USA plan to leave a key Cold War-era treaty.

Gorbachev (President of the USSR in 1990-1991) in an article on Wednesday for Russian newspaper Vedomosti said this after the US decision to withdraw from the Intermediate-Range Nuclear Forces Treaty, he had co-signed in 1987 with then US President Ronald Reagan.

"I regret that the tough domestic situation, which has been in place in the US over the recent years, has in fact resulted in disruption of dialogue between our two countries on all topics, including the nuclear weapons. It is time to get over the difficulties between the (US) political parties and start a serious conversation."

<https://www.nationalheraldindia.com/international/resume-talks-on-nuclear-arms-treaty-with-russia-gorbachev-urges-us>

## G. East Asia

### Japan

#### Japan reluctantly supports US exit from arms pact with Russia, *Mainichi*

*Japan February 4, 2019*

The Japanese government on Monday endorsed the U.S. decision to withdraw from a key Cold War-era arms control treaty with Russia, but stressed the move is “undesirable.” “We understand the U.S. awareness of problems that led it to announce it will halt its obligations under the treaty,” Chief Cabinet Secretary Yoshihide Suga said in a news conference.

“As the treaty has played a historic role in arms control and reduction, it is undesirable that the treaty be ended,” Suga, the top government spokesman, added.

He also said Japan believes it necessary to consider missile development and deployment by countries other than the United States and Russia, apparently referring to China. “The issue of missiles under the treaty is directly linked to security in East Asia. (Japan) will communicate with relevant countries, including Russia and China, while cooperating with the United States,” Suga said. Japan was the target of U.S. atomic bombs at the end of World War II but now stands under that country’s nuclear umbrella.

<https://mainichi.jp/english/articles/20190204/p2g/00m/0fp/058000c>

#### New commander says rapid response is key for US-Japan alliance, *Mainichi*

*Japan February 5, 2019*

The United States and Japan need to maintain a strong security alliance to quickly respond to any threat in the Asia-Pacific region, the new commander of U.S. forces in Japan said Tuesday.

“Because of the clear threats to peace and security in this region, we must maintain the highest levels of readiness to respond at a moment’s notice to any threat, any crisis or any humanitarian disaster,” Lt. Gen Kevin

Schneider said in a ceremony held at Yokota Air Base in the suburbs of Tokyo. Schneider succeeded Lt. Gen. Jerry Martinez, who during his tenure faced challenges such as North Korea’s nuclear and missile development and the maritime assertiveness of China. He manages about 54,000 U.S. troops stationed in Japan and coordinates with the country’s Self-Defense Forces, as the two countries are expected to deepen their security cooperation under Tokyo’s new 10-year defense policy guidelines.

The new commander called the U.S.-Japan alliance “the cornerstone of stability and security in the Indo-Pacific,” adding that “it will continue to serve that role in the future.” Schneider also said Japan is “a special place,” looking back on his childhood in Yokosuka, south of Tokyo, where his father was stationed, and his young days at Misawa Air Base in the country’s northeastern prefecture of Aomori, which “shaped” his career and “opened doors” for him as a fighter pilot positioned there.

Before assuming command, Schneider served as the chief of staff of the U.S. Indo-Pacific Command. He is a command pilot, with more than 3,800 flight hours and 530 combat hours flown during operations such as “Enduring Freedom,” the U.S.-led counterterrorism mission in Afghanistan after the Sept. 11, 2001 terrorist attacks. Among the more than 500 attendees at the ceremony was Adm. Philip Davidson, the head of the U.S. Indo-Pacific Command, who worked closely with Schneider as his immediate boss over the past nine months. He praised his former subordinate’s “leadership skills” and “incredible ability” to solve problems.

<https://mainichi.jp/english/articles/20190205/p2g/00m/0fp/067000c>

#### Fukushima Pref. dispels nuke anxiety to promote exports to HK, *Mainichi*

*Japan February 5, 2019*

Fukushima Gov. Masao Uchibori travelled to Hong Kong last month to pitch in

person for the territory to lift its ban on food imports from his northeastern Japan prefecture imposed after the 2011 nuclear disaster. "Revitalization in Fukushima is in progress. I am coming to promote the safety and quality of Fukushima food to correct any misinformation," he said in a speech at a seminar in late January. Uchibori, the first Fukushima governor to visit Hong Kong since the disaster, also promoted the prefecture's signature products such as peaches and Japanese sake. Hong Kong is the largest importer of Japanese agricultural and fishery products, and took as much as 82 percent of such exports from the prefecture in 2010, according to the prefectural government.

But the nuclear disaster the following year virtually reduced shipments of Fukushima products to Hong Kong to zero. "Hong Kong was an important export market for Fukushima," Uchibori said in an interview with NNA, adding his prefecture is trying to have the import ban lifted. More than 80 countries and regions slapped bans and restrictions on imports of Fukushima food products after the meltdowns at the Fukushima Daiichi nuclear plant, but 30 had lifted restrictions as of January 2018. China, Hong Kong, South Korea and Taiwan – once major importers of Fukushima food products – are among the countries and regions which have still kept the bans, according to Japan's Reconstruction Agency.

Uchibori made the trip to Hong Kong prompted in part by Hong Kong's action last year to ease curbs on imports of vegetables, fruits, milk and other products from Chiba, Gunma, Ibaraki and Tochigi prefectures, all nearby Fukushima. Hong Kong is the world's largest importer of Japanese peaches, and Fukushima is Japan's second biggest peach producer after Yamanashi Prefecture in central Japan. Uchibori told the seminar that Fukushima has resumed peach shipments to Asian countries such as Malaysia and Thailand. He added that his prefecture also exported rice and pears to Malaysia and Vietnam in 2017, respectively.

Cheng Kam Ying, a participant in her early 30s in the Fukushima seminar at a Hong

Kong hotel, expressed her confidence in Fukushima products. "My feeling of hesitation disappeared," she said, adding she would buy Fukushima food once the ban is lifted. Hui Chung Sze, another participant in her 40s, ate sushi made of Fukushima rice during the seminar to promote Fukushima products and their safety.

<https://mainichi.jp/english/articles/20190205/p2g/00m/0dm/069000c>

### **Japan says broader arms treaty needed, concerned by China's reluctance, *Mainichi Japan February 6, 2019***

Japanese Foreign Minister Taro Kono said Tuesday a multilateral arms control treaty will be needed after the United States' decision to withdraw from a Cold War-era pact with Russia.

Kono acknowledged, however, the outlook for such an accord is "extremely uncertain" as China, which already has a large stockpile of ballistic and cruise missiles, is opposed to the idea of joining a framework to limit medium-range missiles. "Japan will actively call on countries that possess or are developing such missiles to support the multilateralization (of the treaty)," Kono told reporters, referring to the 1987 Intermediate-Range Nuclear Forces Treaty.

The United States said Saturday it had notified Russia of its intention to pull out of the INF treaty, accusing Moscow of violating the ban on the possession and development of land-based missiles with ranges of between 500 and 5,500 kilometers. Russian President Vladimir Putin said Moscow had suspended its treaty obligations and would start developing a new hypersonic intermediate-range missile. "China already possesses missiles (of the range covered in the pact) and we believe the multilateralization of the treaty is necessary for disarmament not only in Asia but also in the world," Kono said.

U.S. President Donald Trump has expressed hope that the United States can

negotiate a broader accord that would involve other nuclear powers such as China. The INF treaty was symbolic of the Cold War era when Europe was within reach of the former Soviet Union's ground-launched missiles. The United States said it will withdraw from the pact in six months unless Russia returns to full and verifiable compliance. Russia denies violation of the INF and accuses the United States of breaching the accord by the installation of Aegis defense systems in Eastern Europe.

<https://mainichi.jp/english/articles/20190206/p2g/00m/0na/007000c>

### **Gov't to ask internet auction sites to prevent nuclear material transactions, *Mainichi Japan February 6, 2019***

The nation's nuclear regulator will ask operators of major internet auction sites to prevent the transaction of nuclear fuel materials after it was found that a small amount of what is suspected to be uranium was sold on such a site. The secretariat of the Nuclear Regulation Authority (NRA) revealed the plan on Feb. 6 at a regular meeting of the authority. The operators to receive the requests are Yahoo Japan Corp., Rakuten Inc., Amazon Japan G.K. and Mercari Inc. The Japan Direct Marketing Association will also be notified, according to NRA secretariat officials.

At the meeting, the regulators also reported how the questionable transactions of the radioactive materials were tracked. They first confirmed such materials were being offered on the Yahoo auction site. The authority tried to reach the seller via the operator and asked if they obtained necessary legal permission for selling the materials. As there was no response to the inquiry, the authority reported the problem to the Metropolitan Police Department (MPD).

The MPD has identified the male seller and multiple buyers, and confiscated the materials. Investigators are treating the case as a possible violation of the Act on the Regulation of Nuclear Source Material,

Nuclear Fuel Material and Reactors. The law bans the selling and buying of certain radioactive materials by unlicensed persons.

<https://mainichi.jp/english/articles/20190206/p2a/00m/0na/027000c>

### **New agency eyed to continue work to rebuild from 3/11 disaster**

*Noriyoshi Ohtsuki, The Asahi Shimbun, February 12, 2019*

The government decided to establish an organization to replace the Reconstruction Agency, which will fail to complete many rebuilding projects in the disaster-hit Tohoku region before its deadline of March 2021. As predetermined by the government, the agency will be abolished around the 10th anniversary of the Great East Japan Earthquake, tsunami and nuclear disaster.

With extra revenue from a special tax introduced in 2014, the budget for Tohoku reconstruction has totaled 32 trillion yen (\$289 billion). The agency had spent 27.4 trillion yen by the end of fiscal 2017. However, the agency since last year has been looking into the feasibility of completing restoration projects in progress across the region.

As expected, it found that restoration projects in Fukushima Prefecture, home of the crippled Fukushima No. 1 nuclear power plant operated by Tokyo Electric Power Co., will take longer than 10 years to complete. The agency believed that projects in coastal areas devastated by the tsunami that struck on March 11, 2011, were running smoothly. But it discovered that land embankment projects and operations to support the more vulnerable victims of the disaster would not be finished by March 2021. The central government and the ruling parties agreed that a new organization was needed to continue government involvement in rebuilding the Tohoku region after April 2021.

The new organization will take over the abolished agency's budget, which would

otherwise essentially become unusable except for some funds carried over for unfinished projects.

Since there is no need for new large-scale public works projects in the region, the new organization will be an affiliated agency under the Cabinet Office, like the Financial Services Agency or the Consumer Affairs Agency, rather than an independent agency. The new organization will be headed by a Cabinet minister.

<http://www.asahi.com/ajw/articles/AJ201902120044.html>

### **Kyushu Electric to decommission a 2nd reactor at its Genkai plant,**

*Yuji Yamashita and Naoyuki Takahashi, The Asahi Shimbun, Feb 13, 2019*

Kyushu Electric Power Co. has decided to decommission a second reactor at its Genkai nuclear plant in Saga Prefecture rather than implement a costly upgrade to meet stricter safety standards.

The company balked at the huge investment needed to construct a facility to prevent terrorist attacks, one of the new safety requirements for all nuclear plants, in light of the reactor's low power output and impending end of its operational life, according to several utility sources.

The Genkai No. 2 reactor will become the 21st reactor to be decommissioned after the 2011 triple meltdown at the Fukushima No. 1 nuclear power plant. Kyushu Electric sources noted that another factor in the decision concerned the difficulties the company encountered in acquiring the land needed to construct an anti-terrorist facility for the No. 2 reactor.

The No. 2 reactor had already shut down for a regular maintenance inspection when the Fukushima nuclear disaster unfolded, and never went back online. Given that the reactor's 40-year operational life will be reached in March 2021, utility officials pondered whether to keep it running or decommission it. Company officials determined that anticipated economic

returns could not justify the huge outlay required for the tougher safety standards.

The tab to meet the new safety standards was estimated at 200 billion yen (\$1.8 billion). The No. 2 reactor only has an output of about 560,000 kilowatts, which is less than half the output of the No. 3 and No. 4 reactors that have resumed operations at the Genkai plant. Kyushu Electric decided in 2015 to decommission the Genkai No. 1 reactor, which had the same output as the No. 2 reactor, and has already started work.

Only four reactors that were reaching the end of their operational lives have so far been allowed an extension. In each case, the reactors had an output in excess of 800,000 kilowatts.

<http://www.asahi.com/ajw/articles/AJ201902130036.html>

### **Final mission: Keep anti-nuke message at site of Tsukiji market**

*Naomi Nishimura., The Asahi Shimbun, February 13, 2019*

Busy construction workers and fast-walking passers-by pay little notice to a metal plate that symbolizes one of the darker periods in the postwar history of the now-closed Tsukiji fish market in Tokyo. The continuing dismantling work and the future of the iconic former market has gained much of the public's attention. The plate, measuring 42 centimeters tall and 52 cm wide, will remain on a fence surrounding the site at least until the project is complete.

The plate, marking the fallout of nuclear bomb tests carried out in the 1950s, carries a message that many people hope will remain in one form or another at the site.

"We have set up this plate out of the wish that there will be no suffering again from nuclear weapons," the plate says in part. A Tokyo metropolitan government official said "nothing has been decided on what objects will be installed" afterward at the Tsukiji site. The plate is witness to the "A-

bomb tuna” that arrived 65 years ago at the Tsukiji market in the capital’s Chuo Ward.

“Nearly 460 tons of contaminated fish were found from more than 850 fishing boats across Japan ... and fish consumption dropped sharply,” another part of the plate’s inscription reads. The radioactive “A-bomb” fish were actually exposed to radiation from hydrogen-bomb tests.

The text on the plate refers to the Daigo Fukuryu Maru (Lucky Dragon No. 5), a fishing vessel caught in the fallout of a U.S. H-bomb test near the Bikini Atoll in March 1954. Some of the tuna and other fish caught by the Daigo Fukuryu Maru ended up at the Tsukiji market.

“There was a real panic” when the haul tested positive for radiation, said Takuji Adachi, 92, who was a metropolitan government official at the time in charge of hygiene on the market grounds.

Radiation was also found in other tuna hauls that arrived later from different parts of the country.

Oishi said setting a path for the stone monument’s relocation is his final mission in life. “The Fukuryu Maru later symbolized calls for eliminating nuclear weapons,” he said. “Tsukiji must also have the role of being a witness to the nuclear exposure incident.”

<http://www.asahi.com/ajw/articles/AJ201902130004.html>

### **Study: No leaking radiation from Alaska island nuclear site, *Mainichi Japan* February 13, 2019**

The latest round of testing on Alaska’s remote Amchitka Island found no radioactive material has leaked from locations where the federal government conducted underground nuclear tests there decades ago, a federal official said Tuesday. Environmental samples tested in 2016 show no subsurface migration of radioactive material, said Jason Nguyen with the U.S. Department of Energy. Samples tested in 2011 also showed no “excessive risk” was found, he said. The department funds

sample testing conducted on the island every five years.

“Our preliminary results for 2016 are showing that that conclusion still holds,” Nguyen said as he moderated a panel discussion Tuesday at an environmental forum in Anchorage. A final report on that study is expected later this year. Nguyen, the department’s site manager for Amchitka work, also said a 2014 earthquake with a magnitude 7.9 damaged the caps of three drilling mud pits on the now-uninhabited island. But he said none of the diesel-fuel filled mud was exposed. The damage has not yet been repaired.

<https://mainichi.jp/english/articles/20190213/p2g/00m/0in/059000c>

### **TEPCO sat by idly on reports of fires, glitches at nuclear plants**

*Yusuke Ogawa, The Asahi Shimbun,, February 14, 2019*

Tokyo Electric Power Co. ignored reports on fires and other problems from its nuclear power plants and didn’t even bother to share the information in-house or consider precautionary measures, the nuclear watchdog revealed. The Nuclear Regulation Authority decided Feb. 13 it will investigate the failure by TEPCO’s headquarters to tackle the problems reported by its three facilities: the Kashiwazaki-Kariwa nuclear plant in Niigata Prefecture and the Fukushima No. 1 and No. 2 nuclear plants, both in Fukushima Prefecture.

A TEPCO official said that the company put off tackling the problems because the deadline for dealing with such matters “was not clearly stated.” TEPCO’s safety regulations stipulate that blazes, glitches in air-conditioning and other problems at nuclear plants must be dealt with by the main office of the operator. As such, the utility is obliged to find the root of the problem and take precautionary measures to ensure safety at the plant in question and any other facilities it operates.

NRA safety inspectors visited the Fukushima No. 2 nuclear plant from

November through December last year. They found that the division at company headquarters in charge of dealing with safety issues and sharing that information neglected reports of four problems that had occurred at the plant.

They included fires that broke out at waste disposal buildings at the No. 1 and No. 2 reactors and glitches in the air-conditioning system at the No. 2 reactor. Officials also determined that there had been numerous instances of a failure to act over the past three years. They cited 17 cases at the Kashiwazaki-Kariwa nuclear plant; five cases at the Fukushima No. 1 nuclear plant and seven problems at the headquarters itself. The NRA said it will closely examine TEPCO's handling of these matters next month to determine the gravity of the violations of safety regulations.

<http://www.asahi.com/ajw/articles/AJ201902140054.html>

### **1st contact made with melted nuclear fuel at Fukushima plant,**

*Chikako Kawahara, The Asahi Shimbun,, February 14, 2019*

A probe touched melted nuclear fuel debris in a destroyed reactor at the Fukushima No. 1 nuclear plant, a long-awaited milestone in the battle toward decommissioning, Tokyo Electric Power Co. said Feb. 13. The rod-like probe, fitted with 3-centimeter-long claws, lifted pieces of the nuclear fuel debris during the eight-hour operation at the bottom of the No. 2 reactor at the plant, the utility said.

Data obtained through the investigation, such as the hardness, temperature and radioactivity of the debris, will be used to develop equipment and containers for the eventual removal of the melted fuel. The probe, which was recovered after the investigation, also took pictures of the inside of the containment vessel. No debris was taken outside the reactor, according to TEPCO.

The retrieval process will start in earnest at one of the reactors in 2021, according to the plan drawn up jointly by the central

government and TEPCO. It was the first physical contact with melted fuel at the plant since the Great East Japan Earthquake and tsunami on March 11, 2011, caused the meltdowns of three reactors there.

It took TEPCO years just to locate the melted fuel debris because of the high radiation levels in the reactor buildings. The utility said workers manually inserted the probe through a crack created early in the disaster on the side of the No. 2 reactor's containment vessel.

The probe, which resembles a prize-grabbing crane machine at a game arcade, was also equipped with a dosimeter and a camera. It can extend 15 meters and can lift pieces up to 8 centimeters in diameter and weighing 2 kilograms. Workers remotely operated the probe from the operating room in a building close to the No. 2 reactor building, and lowered it to the bottom of the reactor's containment vessel. The previous investigation of the No. 2 reactor in 2017 located melted fuel debris on the scaffold. But a robot deployed for a further investigation broke down on its way to the debris.

<http://www.asahi.com/ajw/articles/AJ201902140041.html>

### **Scientists warn Hokkaido about 'imminent' megaquake**

*Eisuke Sasaki, The Asahi Shimbun, February 15, 2019*

Changes around the Kuril Trench are similar to those observed before the 2011 Great East Japan Earthquake, and a government panel is warning that another tsunami-spawning megaquake could devastate eastern Hokkaido.

Scientists failed to warn against the magnitude-9.0 earthquake and tsunami that struck on March 11, 2011, and killed around 18,000 people on the coast of the northeastern Tohoku region. With indications that the next "big one" is imminent, they are determined not to make the same mistake.

That sentiment was expressed when Ritsuko Matsuura, who heads the analysis

division of the public-interest entity Association for the Development of Earthquake Prediction, addressed a gathering of seismologists in August.

Now, with similar changes in earthquake data from the Kuril Trench running northeast of Hokkaido to the south of the Kamchatka Peninsula in Russia, Matsuura and other scientists are taking no chances.

<http://www.asahi.com/ajw/articles/AJ201902150001.html>

## H. Korea

**Sources: North Korea replaces key negotiator with U.S., Yoshihiro Makino, *The Asahi Shimbun*, February 01, 2019**

North Korea has replaced a key negotiator for U.S. relations with a veteran diplomat who was involved in the failed six-party talks on dismantling Pyongyang's nuclear weapons program, sources said. Kim Hyok Chol, a former ambassador to Spain, Ethiopia, Sudan and other countries, has taken over the role of Vice Foreign Minister Choe Son Hui, according to the sources knowledgeable about U.S.-North Korea relations. The move comes as arrangements are being made for a second summit between North Korean leader Kim Jong Un and U.S. President Donald Trump.

According to South Korean government sources, Kim Hyok Chol currently belongs to North Korea's State Affairs Commission and has long been considered an experienced diplomat in the country's foreign ministry.

Kim Yong Chol, a former military intelligence chief and one of Kim Jong Un's closest aides, visited the United States in January along with Kim Hyok Chol. During a meeting, Kim Yong Chol informed U.S. Secretary of State Mike Pompeo that Kim Hyok Chol would be the new negotiator with Stephen Biegun, the U.S. special representative to North Korea, the sources said. Kim Hyok Chol was a negotiator in the six-party talks involving the two Koreas, China, Japan, Russia and the United States on denuclearizing the Korean Peninsula.

On one occasion during the talks, Kim pointed out to U.S. government officials: "The United States is going to make a nuclear agreement with India, which is not a member of the Nuclear Nonproliferation Treaty (NPT). ... It doesn't make sense that the United States is demanding that we return to the NPT."

North Korea's official Korean Central News Agency said on Jan. 24 that Kim Yong Chol and Kim Hyok Chol reported the results of their talks in the United States to Kim Jong Un. But Choe was not in attendance, despite having held talks with Biegun on Jan. 20 and 21 in Stockholm, after the two Kims' trip to the United States. Officials in Japan, the United States and South Korea do not believe that Choe has been fired, the sources said. One source said she will work under Kim Yo Jong, who is Kim Jong Un's younger sister and vice director of the Propaganda and Agitation Department of the ruling Workers' Party. In February 2018, Kim Yo Jong visited South Korea for talks with President Moon Jae-in. She also accompanied her brother to the U.S.-North Korea summit in Singapore in June 2018.

<http://www.asahi.com/ajw/articles/AJ201902010071.html>

**US envoy Stephen Biegun 'reveals' North Korea nuclear pledge, *BBC*, February 01, 2019**

North Korea has pledged to destroy all its nuclear material enrichment facilities, according to the US special envoy for the country, Stephen Biegun. He said the promise had been made to US Secretary of State Mike Pompeo when he visited North Korea in October.

However Pyongyang has not confirmed making any such pledge. Mr Biegun also said that North Korea must provide a complete list of its nuclear assets before any deal can be reached.

Experts believe the North has more than one undeclared nuclear fuel enrichment site aside from the known facility at Yongbyon, north of Pyongyang, and

question how the destruction of all facilities could be fully verified. President Donald Trump had earlier claimed “tremendous progress” in talks between the countries. Speaking in the Oval Office on Thursday, the president said he would soon announce the date and location of a planned second summit with North Korea’s Kim Jong-un

<https://www.bbc.com/news/world-asia-47082860>

### **Second Korean APR1400 unit cleared for start-up, WNN, February 01, 2019**

Construction of the first pair of APR1400 reactors - Shin Kori 3 and 4 - was authorised in 2006, although the actual construction licence was not issued until April 2008. First concrete for Shin Kori 3 was poured in October 2008, with that for unit 4 following in August 2009. Unit 3 was originally scheduled to enter commercial operation at the end of 2013, with unit 4 due to start in September 2014. However, their operation was delayed by the need to test safety-related control cabling and its subsequent replacement.

Unit 3 eventually reached first criticality in December 2015, was connected to the grid in January 2016 and entered commercial operation in December that year. KHNP completed cold hydrostatic testing and hot functional testing of Shin Kori 4 in November 2015 and April 2016, respectively. The company announced in August 2017 that it expected to load fuel into the unit last January, with commercial operation beginning in September. The delay, the company said at that time, reflects slight improvements in the unit’s design resulting from commissioning work carried out so far. Additional seismic assessment work has also been carried out in response to the Gyeongju earthquake in September 2016 and the Pohang earthquake in November 2017.

At a meeting today, the NSSC approved the start up of Shin Kori 4 after considering the results of an inspection carried out by the Korea Institute of Nuclear Safety. Construction of two further 1350 MWe APR1400 pressurised water reactors at Shin Kori - units 5 and 6 - began in April 2017

and September 2018, respectively. Unit 5 is scheduled to begin commercial operation in March 2022, with unit 6 following one year later. Two further APR1400 units are under construction in South Korea as units 1 and 2 of the Shin Hanul site. Four APR1400s are under construction at Barakah in the United Arab Emirates. All four are scheduled to be in operation by 2020.

<http://www.world-nuclear-news.org/Articles/Second-Korean-APR1400-unit-cleared-for-start-up?feed=feed>

### **Next month critical in NK denuclearization: official,**

*Choi He-suk, Korea Herald, February 01, 2019*

The month of February will be critical to the denuclearization of North Korea, a high-level South Korean official familiar with the matter said Thursday. Speaking on the condition of anonymity the official said North Korea’s attitude toward related issues appears to have changed from the past and that concerned parties must strive to keep momentum alive. “At this point, the outcome of the second US-North Korea summit is an important diplomatic goal for South Korea, and inter-Korean relations, and denuclearization will be dealt with at the summit,” the official said, adding that Seoul would communicate with the US in the run-up to the summit to ensure that South Korea’s position is taken into account in handling North Korea’s denuclearization.

Asked if he considers it likely that North Korea will offer to shut down the Yongbyon nuclear facility, he said such an offer would be an important milestone, though it remains to be seen whether such a step would lead to a corresponding measure from the US. Pyongyang has been demanding that the US take steps corresponding to its denuclearization measures, but the US maintains that the North’s steps have been insufficient and that sanctions will remain until complete denuclearization is achieved.

[http://www.koreaherald.com/view.php?ud=20190201000482&ACE\\_SEARCH=1](http://www.koreaherald.com/view.php?ud=20190201000482&ACE_SEARCH=1)

**North Korea protecting nuclear missiles, U.N. monitors say, ahead of summit talks,** *Michelle Nichols, David Brunnstrom, Reuters, February 05, 2019*

North Korea is working to ensure its nuclear and ballistic missile capabilities cannot be destroyed by military strikes, U.N. monitors said ahead of a meeting between U.S. and North Korean officials to prepare a second denuclearisation summit.

The U.S. special envoy for North Korea, Stephen Biegun, will meet his North Korean counterpart on Wednesday in Pyongyang to prepare for a summit later this month between President Donald Trump and North Korean leader Kim Jong Un, the U.S. State Department said on Monday. Biegun has said he hoped the meeting with new North Korean counterpart Kim Hyok Chol would map out “a set of concrete deliverables” for the summit between Trump and Kim Jong Un.

U.N. sanctions monitors said in a confidential report, submitted to a 15-member U.N. Security Council sanctions committee and seen by Reuters on Monday, that they had “found evidence of a consistent trend on the part of the DPRK to disperse its assembly, storage and testing locations”, using the abbreviation for North Korea’s official name, the Democratic People’s Republic of Korea. The North Korean mission to the United Nations did not immediately respond to a request for comment on the report, which was submitted to Security Council members on Friday.

North Korea has complained the United States has done little to reciprocate its freezing of nuclear and missile testing and dismantling of some nuclear facilities. It has also repeatedly urged a lifting of punishing U.S.-led sanctions, a formal end to the war, and security guarantees. The U.N. report said sanctions were proving ineffective.

“The country continues to defy Security Council resolutions through a massive increase in illegal ship-to-ship transfers of petroleum products and coal,” the sanctions

monitors found. “These violations render the latest U.N. sanctions ineffective.” The monitors said they had evidence of one unprecedented prohibited petroleum product transfer of more than 57,600 barrels, worth more than \$5.7 million. North Korea has said it will never unilaterally give up its nuclear weapons unless the United States first removes any threat to it. North Korea has long demanded U.S. troops be withdrawn as a condition for peace.

<https://in.reuters.com/article/northkorea-sanctions-un/north-korea-protecting-nuclear-missiles-u-n-monitors-say-ahead-of-summit-talks-idINKCN1PU03M>

**UN experts: North Korea nukes intact, dispersing missiles,** *Daily Herald, February 05, 2019*

UNITED NATIONS — U.N. experts say North Korea’s nuclear and ballistic missile programs “remain intact” and it is dispersing its missile assembly and testing to prevent “decapitation” strikes. The experts’ report to the U.N. Security Council, seen Tuesday by The Associated Press, says North Korea also continues to defy U.N. sanctions, including through “a massive increase” in illegal ship-to-ship transfers of petroleum products and coal.

The experts said it’s also violating an arms embargo, a ban on luxury goods and financial sanctions. They said they investigated “cyberattacks against multiple member states to evade financial sanctions.” The report was sent to council members as U.S. President Donald Trump is preparing for a second summit with North Korean leader Kim Jong Un, aimed at pursuing the goal of a nuclear-free Korean Peninsula.

<https://www.dailyherald.com/article/20190205/news/302059884>

**Cheong Wa Dae welcomes 2nd summit between US, N. Korea** *Yonhap, Korea Herald, February 06, 2019*

South Korea’s presidential office on Wednesday welcomed the announcement

by Washington confirming the second summit between the United States and North Korea.

Cheong Wa Dae spokesman Kim Eui-kyeom said South Korea hopes the US and North Korea can make substantial and concrete steps forward in Vietnam. Earlier, US President Donald Trump announced in his State of the Union address that he will meet North Korean leader Kim Jong-un from Feb. 27-28 in Vietnam for their second summit talks.

[http://www.koreaherald.com/view.php?ud=20190206000026&ACE\\_SEARCH=1](http://www.koreaherald.com/view.php?ud=20190206000026&ACE_SEARCH=1)

### **S. Korea's Moon to focus on mediator role ahead of US-NK**

**summit**, *Yonhap, Korea Herald, February 06, 2019*

South Korean President Moon Jae-in is expected to focus on his role as a mediator between North Korea and the United States ahead of any potential breakthrough in the Korean Peninsula peace process that may be achieved at the upcoming summit.

US President Donald Trump announced in his State of the Union address in Washington on Tuesday (local time) that he will meet North Korean leader Kim Jong-un from Feb. 27-28 in Vietnam for their second summit talks.

[http://www.koreaherald.com/view.php?ud=20190206000215&ACE\\_SEARCH=1](http://www.koreaherald.com/view.php?ud=20190206000215&ACE_SEARCH=1)

### **Speculation rises on Kaesong complex reopening ahead of US-N. Korea summit**

*Yonhap, Korea Herald, February 06, 2019*

Speculation is rising over whether the shuttered industrial complex in the North Korean border town of Kaesong may resume operations following a second summit between the United States and North Korea that is expected to be held later this month in Vietnam.

It's been nearly three years since the Kaesong Industrial Complex, hailed as a successful cross-border economic cooperation project

between the two Koreas, ceased operations. On Feb. 10, 2016, the South Korean government, led by then President Park Geun-hye, announced the closing of the complex in retaliation for the North Korea's nuclear and missile provocations. South Korean business people operating plants there were ordered to leave on short notice. The South-North Korea relationship has made substantial progress in the past year, with South Korean President Moon Jae-in and North Korean leader Kim Jong-un holding three summits in 2018 alone. In their third summit, in Pyongyang in September 2018, the two leaders agreed to normalize operations of major inter-Korean projects, like the Kaesong complex and tourism to Mt. Kumgang.

The US-led sanctions on North Korea have been also been a headache for the South Korean businesspeople who own factories in the complex. They applied for a visit to the complex, but without consultations with Washington and sanctions still being enforced, the business owners have effectively been barred from going to the North. "What's important is whether the US and North Korea can set up talks (on the operation of the complex) under the agenda of North Korea's denuclearization.

[http://www.koreaherald.com/view.php?ud=20190206000223&ACE\\_SEARCH=1](http://www.koreaherald.com/view.php?ud=20190206000223&ACE_SEARCH=1)

### **Pompeo sees 'every opportunity' for NK denuclearization**

*Yonhap, Korea Herald, February 07, 2019*

US Secretary of State Mike Pompeo said Wednesday that there is "every opportunity" that North Korea will dismantle its nuclear weapons program as promised. In an interview with Fox News, Pompeo said the US is going into a second summit with North Korea late this month with hope that the regime will fulfill its denuclearization pledge.

"We are very hopeful that Chairman Kim will fulfill his commitment, the one that he made back in June in Singapore, to denuclearize his country," the top US diplomat said, referring to the first summit between US President Donald Trump and

North Korean leader Kim Jong-un. Pompeo indicated that the tough economic sanctions imposed on North Korea have caused it to seek a different course. "Chairman Kim has told his own people that they need to turn course, they need to advance their economic conditions inside of their country. Those are his words, not mine," he said.

Asked if he believes it's still possible that North Korea will denuclearize, he gave an emphatic yes. "Oh, of course. Of course, I do," he said. "I think there is every opportunity that Chairman Kim will move on to fulfill the commitments that he made, and then we'll, in turn, fulfill the commitments we made towards stability on the peninsula and a better future, a brighter future, for the North Korean people."

[http://www.koreaherald.com/view.php?ud=20190207000114&ACE\\_SEARCH=1](http://www.koreaherald.com/view.php?ud=20190207000114&ACE_SEARCH=1)

### **[Going Renewable (1)] Korea steps in right direction for renewable energy, but challenges await,**

*Shin Ji-hye, Korea Herald, February 07, 2019*

One year on since the Moon administration vowed to put more emphasis on renewable energy, it still has to address controversy over energy prices and its decision to do away with nuclear power, as well as conflicts with residents near renewable energy facilities. In December 2017, the government announced "Renewable Energy 3020," aiming to increase renewable energy's share of generation capacity to 20 percent from the current 7 percent by 2030, in response to concerns about life-threatening air pollution and demand for cleaner and safer energy. It has allocated funds amounting to 18 trillion won (\$16 billion) toward the project.

Residents and environmental groups are protesting, claiming that the new facilities threaten the natural ecosystem and their farming and fishing businesses. Most recently, the government's plan to build floating solar power plants in Cheonan, South Chungcheong Province, was scrapped due to opposition by local residents. Due partly to Korea's abundance of mountains — not a perfect geographical

feature for generating renewable energy — the expansion of solar and wind power energy will lead to a rise in electricity costs.

According to the energy plans set in 2017, the expansion of renewable energy to 20 percent would drive energy prices up by 10.9 percent by 2030. But experts doubt the figure and estimate a higher rise. "Replacing (some of the) relatively cheaper nuclear energy with more expensive renewable energy will inevitably result in electricity price increase. The government will need to gain public consent to achieve the goal," said Yoo Seung-hoon, a professor at Seoul National University of Science and Technology's energy policy department.

The cost to purchase a nuclear power energy was 61 won per kilowatt-hour while the cost for the same amount of renewable energy was more than 100 won last year, according to the Korea Electric Power Corp. The cost to Kepco of purchasing energy rose 8.4 percent in the first half of last year compared to the same period in the previous year as the use of nuclear energy — as part of the nation's anti-nuclear move — was reduced and, instead, the use of relatively more expensive bituminous coal and liquefied natural gas increased.

In order to drive costs down and boost the expansion of renewable energy, the nation's energy system structure should be reshuffled so as to open the energy market to private companies, some experts says. The government also has to deal with anti-nuclear challenges that have recently become a political hot potato. The renewable energy 3020 plan aims to increase the portion of renewable energy to 20 percent while reducing the portion of nuclear energy to 23.9 percent from the current 30 percent. The government aims to completely do away with nuclear power energy in the nation by 2082.

The anti-nuclear move has met with strong opposition from the nuclear power industry and opposition parties. Last week, the nation's main opposition Liberty Korea Party and the nuclear industry

collected more than 300,000 signatures to oppose the anti-nuclear policies, calling for a response from Cheong Wa Dae, in the wake of the government's decision to stop the construction of two Shin Hanul nuclear power plants in Uljin County, North Gyeongsang Province. The Liberty Korea Party and Bareun Party said they are in position to move to ultimately stop the nuclear phaseout.

[http://www.koreaherald.com/view.php?ud=20190207000497&ACE\\_SEARCH=1](http://www.koreaherald.com/view.php?ud=20190207000497&ACE_SEARCH=1)

### **Confusion reigns ahead of North Korea-U.S. nuclear talks** *Yoshihiro Makino, The Asahi Shimbun, February 08, 2019*

SEOUL — It appears that North Korea is not ready for its upcoming second summit on denuclearization, as it remains unclear which officials will be assisting leader Kim Jong Un and the specifics of the talks. By last autumn, North Korea changed the division in charge of nuclear issues from its foreign ministry to the State Affairs Commission under Kim Jong Un, according to sources knowledgeable about U.S.-North Korea relations.

As a result, it is not known which of North Korea's negotiators will be involved when the North Korean leader meets with U.S. President Donald Trump in talks on denuclearizing the Korean Peninsula set for Feb. 27 and 28 in Vietnam. The sources cited information from North Korean diplomat Choe Kang Il, a deputy director-general for North American affairs at North Korea's Foreign Ministry. In October 2018, when Secretary of State Mike Pompeo visited North Korea, the United States had hoped to negotiate with foreign minister Ri Yong Ho, not Kim Yong Chol. The U.S. side thus expected a role to be played by North Korea's Foreign Ministry, which was not the case.

<http://www.asahi.com/ajw/articles/AJ201902080040.html>

### **US nuclear envoy to brief allies on results of Pyongyang visit** *Park Hanna, Korea Herald, February 09, 2019*

The US envoy for North Korea will meet his South Korean counterpart in Seoul on

Saturday for a briefing on the results of his visit to the communist state for preparations for a second summit between Washington and Pyongyang slated for late this month.

US Special Representative for North Korea Stephen Biegun plans to hold talks with Lee Do-hoon, Seoul's top nuclear envoy, in the morning after paying a brief courtesy call on Foreign Minister Kang Kyung-wha. Biegun flew back to Seoul on Friday night after wrapping up a three-day visit aimed at fine-tuning details, including the agenda and logistics, for the summit between US President Donald Trump and North Korean leader Kim Jong-un set to take place in the Vietnamese capital of Hanoi from Feb. 27-28.

In Pyongyang, he met his North Korean counterpart Kim Hyok-chol, a former ambassador to Spain, with an aim to make progress toward the "complete denuclearization" of the Korean peninsula that their leaders agreed to in their first historic summit in Singapore in July. Under the vision of "final, fully" verified denuclearization, Washington has been pressuring Pyongyang to take concrete, substantive steps for its nuclear disarmament, including a declaration of its nuclear and missile programs.

The North has demanded the United States' corresponding measures for its denuclearization steps that may include partial sanctions relief, the establishment of a bilateral liaison office and a declaration of a formal end to the 1950-53 Korean War. Also on Saturday, Biegun is set to hold a trilateral luncheon meeting with Lee and Kenji Kanasugi, the Japanese foreign ministry's director general of Asia and Oceania affairs.

[http://www.koreaherald.com/view.php?ud=20190211000655&ACE\\_SEARCH=1](http://www.koreaherald.com/view.php?ud=20190211000655&ACE_SEARCH=1)

### **South Korea signs deal to pay more for U.S. troops after Trump demand,** *Hyonhee Shin, Josh Smith, Reuters, February 10, 2019*

Officials signed a short-term agreement on Sunday to boost South Korea's

contribution toward the upkeep of U.S. troops on the peninsula, after a previous deal lapsed amid U.S. President Donald Trump's call for the South to pay more. About 28,500 U.S. troops are stationed in South Korea, where the United States has maintained a military presence since the 1950-53 Korean War.

The new deal must still be approved by South Korea's parliament, but it would boost its contribution to 1.03 trillion won (\$890 million) from 960 billion won in 2018. "It has been a very long process, but ultimately a very successful process," South Korean Foreign Minister Kang Kyung-wha said at a meeting before another official from the foreign ministry initialled the agreement. While acknowledging lingering domestic criticism of the new deal and the need for parliamentary approval, Kang said the response had "been positive so far".

<https://in.reuters.com/article/usa-southkorea-troops/south-korea-signs-deal-to-pay-more-for-u-s-troops-after-trump-demand-idINKCN1PZ03U>

### **Trump-Kim summit to focus on NKorea nuke complex, US rewards,** *Hyung Jin Kim, AP News, February 11, 2019*

When President Donald Trump and North Korean leader Kim Jong Un first met in Singapore last year, there was pomp, there was circumstance, but there wasn't much substance. Before they meet again in Vietnam on Feb. 27-28, there's growing pressure that they forge a deal that puts them closer to ending the North Korean nuclear weapons threat. Kim may be willing to dismantle his main nuclear complex. The U.S. may be willing to cough up concessions, maybe remove some sanctions. The question, however, is whether what's on offer will be enough for the other side.

<https://www.apnews.com/96c452858e154029977db474411ad334>

### **Investor Jim Rogers to visit North Korea next month** *Park Hanna, Korea Herald, February 12, 2019*

Jim Rogers, a renowned investor and chairman of Rogers Holdings, plans to visit

North Korea next month at the invitation of Chairman Kim Jong-un, according to sources Tuesday. The Singapore-based investor, who once said he would "put all of my money" in North Korea if he could, received the US government's approval for the trip with his wife.

[http://www.koreaherald.com/view.php?ud=20190212000710&ACE\\_SEARCH=1](http://www.koreaherald.com/view.php?ud=20190212000710&ACE_SEARCH=1)

### **Trump says S. Korea should pay US more for defense,** *Yonhap, Korea Herald, February 13, 2019*

US President Donald Trump on Tuesday called for a further increase in South Korea's share of the cost of stationing American troops on the peninsula. Trump's remarks came only days after the allies signed a preliminary agreement renewing their cost-sharing deal for the 28,500-strong US Forces Korea.

"As you know, South Korea — we defend them and lose a tremendous amount of money," the US president said at a Cabinet meeting, repeating a signature refrain.

Billions of dollars a year defending them. They agreed, at my request. And working with Secretary (of State) Pompeo and (National Security Adviser) John Bolton, they agreed to pay, yesterday, \$500 million more toward their defense," he claimed. "Five-hundred million, with a couple of phone calls. I said, 'Why didn't you do this before?' They said, 'Nobody asked.' So — it's got to go up. It's got to go up."

The cited numbers don't align with the formal announcement that South Korea agreed to increase its contribution by 8.2 percent to some 1.04 trillion won (\$920 million) under a one-year deal. The previous five-year Special Measures Agreement expired at the end of last year amid an impasse over US demands for as much as a twofold increase in Seoul's contribution.

Last year, Seoul paid 960 billion won (\$853 million) toward the wages of South Korean civilian workers at US bases and other

costs. "They were paying about \$500 million for \$5 billion worth of protection," Trump claimed. "And we have to do better than that. So they've agreed to pay \$500 million more. And over the years, it will start going up, and they will be terrific. And they've been very good."

Trump said the US has a "great relationship" with South Korea and with President Moon Jae-in. "And we're doing great things. And North Korea is coming along," he added, apparently referring to denuclearization negotiations with Pyongyang.

[http://www.koreaherald.com/view.php?ud=20190213000105&ACE\\_SEARCH=1](http://www.koreaherald.com/view.php?ud=20190213000105&ACE_SEARCH=1)

### **US ambassador: N. Korea sanctions to linger until denuclearization**

*Yonhap, Korea Herald, February 14, 2019*

US Ambassador to South Korea Harry Harris stressed Thursday that sanctions will remain in place until North Korea denuclearizes, as Washington and Pyongyang are preparing for their second summit slated for late this month.

Speaking at a security forum in Seoul, Harris also dangled the prospect of a "brighter, more secure and more prosperous future" for the impoverished communist nation in case it fulfills its denuclearization commitment stated in the Singapore summit last year between its leader Kim Jong-un and President Donald Trump.

"Our goal remains the same: to achieve our shared objective of a final, fully verified denuclearization of the DPRK as committed (to) by Chairman Kim in Singapore," Harris said during the forum hosted by the local nonprofit think tank Chey Institute for Advanced Studies. The DPRK is the acronym for the North's official name, the Democratic People's Republic of Korea.

"The United States and our South Korean ally are in complete agreement that sanctions will remain until DPRK denuclearizes," he added.

[http://www.koreaherald.com/view.php?ud=20190214000361&ACE\\_SEARCH=1](http://www.koreaherald.com/view.php?ud=20190214000361&ACE_SEARCH=1)

### **North Korea exploring sanctions-proof energy technologies, Eric**

*Talmadge, AP News, February 15, 2019*

Power-strapped North Korea is exploring two ambitious alternative energy sources – tidal power and coal-based synthetic fuels – that could greatly improve living standards and reduce its reliance on oil imports and vulnerability to sanctions. Finding a lasting energy source that isn't vulnerable to sanctions has long been a top priority for North Korean officials. Leader Kim Jong Un used his New Year's address last month to call on the country to "radically increase the production of electricity" and singled out the coal-mining industry as a "primary front in developing the self-supporting economy." For the longer-term, he stressed the importance of atomic, wind and tidal power.

Since further development of atomic energy is unlikely anytime soon, the power-scarce country is developing technology to "gasify" coal into substitute motor fuels. It also is looking into using huge sea barriers with electricity-generating turbines to harness the power of the ocean's tides. Coal and hydropower are North Korea's main energy resources. The North imports nearly all of its oil and petroleum products from China. Solar panels are visible just about everywhere, from urban balconies to rural farm buildings and military installations. Wind remains a very minor energy source.

But coal is something North Korea has in abundance. It's used to supply thermal power plants and factories, to heat homes and to make fertilizer and even a kind of cloth, called Vinylon. Slow-running, smoke-belching trucks that use a gasification process with firewood are common in the North Korean countryside. Coal isn't generally seen as a good oil-product substitute because converting it to a liquid form is inefficient and expensive – coal gasification was last used on a large scale in Nazi Germany to keep its cars and trucks moving.

Given North Korea's limited options, it's a technology that appears to be paying off.

<https://www.apnews.com/9e241ef4f4ad42bd90b6eb870438efc1>

## I. Taiwan

### **Nuclear power to be abolished in 2025, Ted Chen, Taipei Times, Feb 1 2019**

The Ministry of Economic Affairs yesterday published a revised national energy strategy that calls for the abolition of nuclear power by 2025 and reductions in the use of fossil fuels. Although Taiwanese in November last year voted against the government's 2025 deadline to abolish nuclear power, the energy source would still be completely removed from the nation's energy mix after that year due to inevitable constraints, Minister of Economic Affairs Shen Jong-chin told a news conference in Taipei. Resistance from local governments, difficulty in procuring replacement parts for aging reactors, finding storage space for spent fuel rods and the inability to complete the stay-of-decommissioning application process have all but ruled out the use of nuclear power beyond 2025, Shen said.

Other remedies, such as reactivating decommissioned nuclear plants, are also unlikely due to the lengthy budget approval process at the legislature, Shen said, adding that General Electric Co is no longer able to provide technical support for reactors that were installed decades ago. As for referendum No. 7, which called for the reduction of thermal power by at least 1 percent per year on average, Shen said that the goal is achievable this year and next year.

achieving the goal would not increase the risk of energy shortages and 15 percent reserved power generation capacity could be maintained, he said. However, energy shortages could happen in 2021 due to an anticipated rise in consumption, Shen said. Major expansions by Taiwan Semiconductor Manufacturing Co Powerchip Technology Corp and Winbond Electronics Corp as well as the continued adoption of electric vehicles and the return of Taiwanese

manufacturing companies, would raise consumption by an additional 2 billion kilowatt-hours, he said.

"In light of rising demand, it is becoming increasingly difficult to cut the use of fossil fuels at a pace of 1 percent a year based on 2017 levels," Shen said. He urged the public to support the government's drive toward renewable energy sources. However, the government would fulfill the referendum's requirement barring capacity expansions at coal-fired power plants and abide by local governments' tightened environmental regulations and limits on coal use, Deputy Minister of Economic Affairs Tseng Wen-sheng said. Fossil-fuel power generation uses coal and natural gas, Tseng said, adding that the government would continue to lower dependence on dirtier coal plants in favor of cleaner-burning gas plants. Coal-fired power would trend down, but it would take more time to determine its proportion in the nation's energy mix, Tseng added.

<http://www.taipetitimes.com/News/front/archives/2019/02/01/2003709035>

### **Taipower rules out activation of Fourth Nuclear Power Plant in face of shortages, Taipei Times February 02, 2019**

State-run Taiwan Power Co (Taipower) yesterday ruled out activating the Fourth Nuclear Power Plant, dismissing the misconception that doing so would take only three years. It would take at least six to seven years to start commercial operations at the plant in New Taipei City's Gongliao District the company said in a statement. The plant has been mothballed since July 2015 amid opposition from environmental advocates over the potential dangers of nuclear power.

Citing a legislative resolution passed last year, Taipower said it is required to remove all fuel rods from the plant by the end of next year. Taipower also pointed out some major problems if the plant were to be activated. General Electric Co would

not be able to replace the aging components of the advanced boiling water reactor, which was installed at the plant more than 20 years ago, as the company has ceased production of many of them, Taipower said. The process to restore the plant would also be time-consuming, as it would involve reallocating budgets in the legislature, renewing an application to the Atomic Energy Council to end the suspension, and conducting follow-up tests and examinations, it said.

The statement came a day after the Ministry of Economic Affairs published a revised national energy policy, which states that the Jinshan Nuclear Power Plant in the city's Shihmen District would be decommissioned as scheduled, the service life of the second and third nuclear power plants would not be extended, and the fourth plant would not be restarted. On Thursday, Minister of Economic Affairs Shen Jong-chin told a news conference that "there will be no extension or restarting of nuclear power plants in Taiwan, due to subjective and objective conditions, as well as strong public objection." However, in line with the results of a referendum on Nov. 24 last year, thermal power generation would be reduced by 1 percent this year and next year, Shen said.

He warned that Taiwan could see electricity shortages from 2021 due to increasing demand, but did not elaborate on why the government's energy mix remains unchanged, while assuring the public that a 15 percent power generation reserve requirement would be met. According to previous projections by the ministry, the electricity supply by 2025 is to be composed of 20 percent green energy, 50 percent natural gas-powered generation and 30 percent coal-fired power. The policy is an indication that the administration of President Tsai Ing-wen plans to stick to its goal of making Taiwan a "nuclear-free homeland by 2025," despite repeated calls to restart the Fourth Nuclear Power Plant and the results of the Nov. 24 referendums.

<http://www.taipeitimes.com/News/biz/archives/2019/02/02/2003709080>

### **Nuclear power supporters plan three new plebiscites**, *Taipei Times* *February 12, 2019*

Nuclear power proponents yesterday said they would launch new referendum proposals to extend the operation of nuclear power plants and relocate nuclear waste stored on Orchid Island (Lanyu, - ), after the government said it would decommission the reactors on schedule. A majority of voters on Nov. 24 last year voted in favor of abolishing Article 95-1 of the Electricity Act (mil) – which states that all nuclear power generation facilities must halt operations by 2025 – in a referendum held alongside the local elections.

However, the Ministry of Economic Affairs on Jan. 31 said it has no plans to extend the 40-year permits of the operational nuclear reactors or resume the construction of the mothballed Fourth Nuclear Power Plant, sparking criticism. The Jinshan Nuclear Power Plant in New Taipei City's Shihmen District (w) has started decommissioning, but the municipality is opposed to a nuclear waste storage for the plant proposed by Taiwan Power Co. Meanwhile, the permits for four reactors at the Guosheng Nuclear Power Plant in the city's Wanli District (,) and the Ma-anshan Nuclear Power Plant in Ma-anshan (q\), Pingtung County, are to expire between 2021 and 2025, according to the Atomic Energy Council. The council has said that applications to extend reactors' operations must be filed five years before permits expire, but that is merely a rule set by the council, which it can adjust at will, said Nuclear Myth Busters founder Huang Shih-hsiu (XO), who launched last year's referendum about the Electricity Act. To push the government to respect the electorate's support for nuclear power, Huang and other supporters would launch three new referendum proposals to extend the three operational plants' licenses, resume construction of the Fourth Nuclear Power Plant and relocate barrels of low-radioactivity nuclear waste stored on Orchid Island, he said.

The second proposal last year garnered more than 200,000 signatures and would be forwarded to the Central Election Commission for review next month, he said. Critics have said that Huang does not care about Orchid Island's residents, but he would prove them wrong by launching a referendum proposal to push the government to move nuclear waste back to the plants, he said, adding that nuclear waste can be safe if it is properly stored in a secluded location. The proponents would have more discussions with Orchid Island's Tao people about how they should launch the nuclear waste proposal and announce an initial plan later this week, said Liao Yen-peng a nuclear power supporter and Chinese Society of Medical Physics member. Separately yesterday, opponents of nuclear power called on the government to decommission the plants according to schedule, saying that their locations near fault lines continue to pose a danger to local residents.

<http://www.taipeitimes.com/News/taiwan/archives/2019/02/12/2003709601>

### **Minister leaves leeway on nuclear policy after talks, Ted Chen, Taipei Times, February 13, 2019**

Minister of Economic Affairs Shen Jong-chin (li%m) yesterday left some leeway on the government's policy to phase out nuclear power by 2025 following a meeting with seven of the nation's biggest trade groups. Industry representatives have voiced concerns about possible energy shortages and businesses' ability to absorb anticipated energy price hikes that could arise from the government's planned energy mix, which would rely heavily on natural gas to meet half of total consumption with another 20 percent to be furnished by the nascent renewable energy industry, while the share of coal-fired power generation would be reduced on an annual basis.

The government would take all factors into consideration, Shen said in response to General Chamber of Commerce chairman Lai Cheng-i's suggestion that the government keep nuclear power generation in

reserve. The ministry last month said that legal and technical hurdles, and resistance from local governments, have all but made it impossible to activate the Fourth Nuclear Power Plant in New Taipei City's Gongliao District or delay the scheduled decommissioning of other nuclear power plants. "It is not that the government has ruled out nuclear power, but the obstacles are insurmountable," Shen later said in a statement.

Lai also voiced concerns about possible geopolitical events that could disrupt Taiwan's natural gas supply. Chinese National Association of Industry and Commerce chairman Lin Por-fong expressed disappointment over the government's inability to carry out last year's referendum results to scrap the 2025 deadline to phase out nuclear power. The government's energy strategy would support local industries while maintaining a reserve power generation margin of 10 percent, Shen said, adding that energy prices would rise at a manageable rate in the absence of nuclear energy. The government would expand pumped-storage hydroelectricity capacity to address the intermittent and unreliable nature of alternative energy sources, and build infrastructure to ensure that gas-fired power plants have stable fuel supplies, Shen said.

In related news, Taichung Mayor Lu Shiow-yen yesterday declined a request by the central government to delay the retirement of an old coal-fired unit at the Taichung Power Plant, and instead decided to keep up to two of its 10 units offline during months with peak air pollution. The old unit must be permanently retired to achieve the city's emissions reduction goals, Lu said, adding that the capacity shortfall can be made up by making adjustments at other coal-fired power plants in New Taipei City and Kaohsiung.

<http://www.taipeitimes.com/News/biz/archives/2019/02/13/2003709625>

## *J. Israel and West Asia*

### **Europe sets up transactions channel with Iran** *Tehran Times, February 01, 2019*

The channel, set up by Germany, France, and the UK, is called INSTEX – short for “Instrument in Support of Trade E x c h a n g e s . ” “We’re making clear that we didn’t just talk about keeping the nuclear deal with Iran alive, but now we’re creating a possibility to conduct business transactions,” German Foreign Minister Heiko Maas told reporters Thursday after a meeting with European counterparts in Bucharest, Romania. “This is a precondition for us to meet the obligations we entered into in order to demand from Iran that it doesn’t begin military uranium enrichment,” Maas said. The payment channel allows for European countries to continue trade with Iran but could put them on a collision course with Washington

<https://www.tehrantimes.com/news/432515/Europe-sets-up-transactions-channel-with-Iran>

### **Iran seeks speedy implementation of commitments as EU sets up payment channel with Iran**

*Tehran Times, February 01, 2019*

“Iran calls for full implementation of the European Union’s commitments in the shortest period of time,” Foreign Ministry spokesman Bahram Qassemi said. On Thursday, France, Germany and Britain officially announced the creation of INSTEX SAS (Instrument for Supporting Trade Exchanges), a special purpose vehicle aimed at facilitating legitimate trade between European economic operators and Iran.

Qassemi urged the EU to take immediate action to implement INSTEX in line with Iran’s economic benefits from the 2015 nuclear deal, officially called the Joint Comprehensive Plan of Action.

“The European Union’s act in establishing the mechanisms was very late. It is essential for the European Union to make sure that

this action will make up for a part of the U.S. illegal actions,” he insisted.

Despite EU’s political position to save the nuclear deal since the U.S. exited the accord and also its insistence on the need that Iranians take economic benefits from the agreement, “unfortunately so far we have not seen any tangible and concrete move” by the bloc to meet Iran’s economic benefits, Qassemi explained. The Foreign Ministry spokesman said that Iran is ready to continue “constructive interaction” with Europe based on respecting mutual interests.

<https://www.tehrantimes.com/news/432535/Iran-seeks-speedy-implementation-of-commitments-as-EU-sets-up>

### **Israel’s Nuclear Weapons Are Far More Dangerous to The World Than The End of INF,** *Adam Garrie, Eurasia Future, February 02, 2019*

The fact of the matter is that just as the 20th century arms race between the United States and Soviet Union did not result in the dropping of any nuclear weapons, the effective end of the Intermediate-Range Nuclear Forces Treaty (INF Treaty) signed in 1988 by Mikhail Gorbachev and Ronald Reagan, will almost certainly not result in anyone losing their lives in a nuclear attack. Instead, the decision by the US which has been reciprocated by Moscow to abrogate the terms of the treaty which banned medium range nuclear missiles is more about allowing a 21st century arms race to carry on from where the old one left off in the late 1980s.

As such, the doctrine of mutually assured destruction which prevented the 20th century’s Cold War from going nuclear, still applies today in respect of the main three military superpowers (USA, Russia, China). Likewise, the concept of mutually assured destruction is also the factor keeping India and Pakistan from using their nuclear weapons to settle their disputes. Finally, even before the current peace process in Korea, it was largely

assumed (as was inline with official DPRK policy) that the DPRK's nuclear arsenal was more of a deterrent than anything that could have been used as an aggressive weapon, whilst French and British weapons are thought be little more than auxiliary American weapons on European soil.

Therefore, there is one remaining nuclear elephant in the room and this is of course Israel. Israel's illegal stockpile of nuclear weapons is thought to be around 80 nuclear warheads. This is over five times more than the amount of warheads in the DPRK. By contrast, according to US intelligence, the United Nations, China, Russia and the European Union, Iran has zero nuclear warheads and with the exception of the US and Israel, every other major state as well as the United Nations agrees that Iran is not building any nuclear weapons.

<https://eurasiafuture.com/2019/02/02/israels-nuclear-weapons-are-far-more-dangerous-to-the-world-than-the-end-of-inf/>

### **Iran says it has put 'guided warheads' on missiles that can reach Israel, *Times of Israel* February 04, 2019**

Iran has equipped its most advanced, longest-range missiles, which can hit Israel and US bases in the Gulf, with new precision guided warheads, state media reported Sunday.

According to the unsourced report in the Fars news agency, the new home-made guided warheads have now been attached to the Khoramshahr, a missile with a range of 2,000 kilometers (1,250 miles.) "The new generation of missiles with guided warheads has been named Khoramshahr 2 and they can be controlled until hitting the target and are able to carry warheads weighing nearly 2 tons," the report said.

<https://www.timesofisrael.com/iran-puts-guided-warheads-on-missiles-that-can-reach-israel-report/>

### **Saudi Arabia's missile program**

*Tehran Times, February 06, 2019*

The history of the Saudi missile program dates back to the 1980s when Saudi Air Force

commander Prince Khalid Bin Sultan traveled to China to buy medium-range missiles capable of carrying nuclear warheads. Since the fuel for these missiles was liquid, their ability was limited. At the time, Saudi Arabia was worried about missile threats from Saddam Hussein and also hoping to gain an edge over Iran. The United States did not oppose the purchase, since the CIA concluded that the missiles did not have the ability to carry nuclear warheads. In fact, the purchase of these missiles was carried out under the authority of George Bush's administration.

Saudi Arabia's current missile efforts are part of the ambitious security program of Crown Prince Mohammed bin Salman (MbS). Last year, MbS and former Foreign Minister Adel al-Jubeir both warned that the kingdom would seek nuclear weapons if Iran did the same. "It is difficult to tell" whether Saudi Arabia was preparing to go nuclear with its alleged new missiles, researchers Fabian Hinz and David Schmerler told Newsweek, because the exact model of the missiles is unknown. Hinz added, "if you want to have nuclear weapons, in general, you also want to have the means to domestically build the delivery systems."

In recent years, Saudi Arabia has been more open about its missile program. For instance, in 2010, Saudi Arabia opened a central office of missile defense in Riyadh. It wants to demonstrate its deterrent capabilities. It also wants to send a signal to Iran in particular of the consequences if Iran doesn't limit its own missile program.

The rocket attacks on Riyadh by Yemen's Houthis have also pushed Saudi Arabia to expand its missile program. The Saudis are worried that Iran could build a missile factory in Syria to equip Hezbollah in Lebanon and the Houthis in Yemen with advanced missiles.

The other major reason behind the Saudi ballistic missile program is Riyadh's distrust of Washington. The widespread U.S. criticism of Saudi Arabia after the

assassination of journalist Jamal Khashoggi showed that Trump, who wants to maintain his close relationship with MbS, could not control the political environment in Washington. At the same time, Trump warned Saudi Arabia that the king would last two weeks without U.S. support.

Given the growing fragility of U.S.-Saudi relations, Riyadh has decided to develop its nuclear and missile program even without American support.

<https://www.tehrantimes.com/news/432743/Saudi-Arabia-s-missile-program>

**US vows it will be 'relentless' in working to deter Iran missile program, *Times of Israel* February 08, 2019**

The United States on Thursday vowed to remain "relentless" in pressuring Iran to deter its missile program after the Islamic Republic unveiled a new ballistic weapon days after testing a cruise missile.

Iran's Revolutionary Guards last week unveiled a new ballistic missile with a range of 1,000 kilometers (620 miles), their official news agency Sepah News reported.

The move was the latest show of military might by the country as it celebrates the 40th anniversary of the Islamic Revolution at a time of heightened tensions with the United States.

<https://www.timesofisrael.com/us-vows-to-remain-relentless-to-deter-iran-missile-program/>

**Mossad, Mi6 Smuggled Iranian Nuclear Scientist To The UK - Report, *Hagay Hacoen, Jerusalem Post*, Feb 10, 2019**

Mossad, British secret services and the CIA extracted an Iranian nuclear scientist out of Tehran and provided him with a safe haven in the US, the Daily Mail reported on Sunday.

The Iranian scientist is thought to have been smuggled into the UK on an inflatable boat alongside other Iranian migrants who crossed over to Lydd at the beginning of 2019.

The plan is said to have been drawn up in October when the Mossad helped the 47-year-old technician escape to Turkey, and from that location he joined the flux of Iranian immigrants attempting to reach the UK.

The BBC reported that the influx of Iranian migrants into the UK has increased recently due to a decision by the Serbian government to accept Iranian tourists without asking for a visa. This was meant to increase tourism and trade between the Islamic Republic and Serbia but also enabled some Iranians to escape into Europe.

<https://www.jpost.com/Israel-News/Mossad-MI6-smuggled-Iranian-nuclear-scientist-to-the-UK-Report-580237>

**Nuclear deal exemplifies success of diplomacy: diplomat *Tehran***

*Times, February 13, 2019*

The ambassador made the remarks during a ceremony held in the Iranian embassy in The Hague to mark the 40th anniversary of the Islamic Revolution. "The intensive and long-term negotiations between the European and American sides with the Islamic Republic of Iran in order to end an unnecessary crisis in the issue of peaceful nuclear activity, which led to the JCPOA, is a good example of the triumph of diplomacy, multilateralism and Iran's dedication to its commitments," the embassy website quoted Jahangiri as saying.

Pointing to the U.S. withdrawal from the deal in May 2018, he said that the International Atomic Energy Agency (IAEA) has reported for 13 times each time certifying Iran's commitment to its obligations whilst on the contrary the U.S. failed in this "historic test" by violating its obligations. The ambassador also expressed Iran's unhappiness with the European Union to fulfill its commitments since the U.S. abandoned the deal. "Unfortunately, other parties, including Europe, have not yet been able to fulfill their obligations as a result of which the

balance in the agreement has been disrupted.”

After months of delay on January 31, France, Germany and Britain finally announced the creation of INSTEX, a special purpose vehicle aimed at facilitating legitimate trade between European economic operators and Iran. Ambassador Jahangiri said, “We hope that what the European Union recently unveiled as INSTEX could help both sides to enjoy economic benefits of the JCPOA.”

The European Union foreign policy chief Federica Mogherini, French Foreign Minister Jean-Yves Le Drian, German Foreign Minister Heiko Maas and British Foreign Secretary Jeremy Hunt has said INSTEX will support legitimate European trade with Iran. It added that INSTEX will function under the highest international standards with regards to anti-money laundering, combating the financing of terrorism (AML/CFT) and EU and UN sanctions compliance.

<https://www.tehrantimes.com/news/432919/Nuclear-deal-exemplifies-success-of-diplomacy-diplomat>

**IDF believes Iran pulling forces in Syria away from Israel border due to strikes,** *Judah Ari Gross, The Times of Israel, February 13, 2019*

Israel’s campaign of airstrikes in Syria has driven Iran to change tack in the country, moving the bulk of its troops and bases away from the Israeli border and toward what it sees as a safer location closer to Iraq, according to Military Intelligence assessments released Wednesday.

At the same time, the report said Iran appears to be adopting a more aggressive stance toward Israel, as evident by its launch of a missile into the northern Golan Heights last month, in response to a reported strike by the Israel Defense Forces. While most troops are being moved away, some pro-Iranian forces remain on the border with Israel and have established observation posts from which they can monitor Israeli military activities.

The intelligence report said Iran’s inclination to retaliate against Israeli airstrikes appears to be buoyed by the Syrian military’s recent acquisition of advanced Russian S-300 air defense batteries.

<https://www.timesofisrael.com/idf-believes-iran-pulling-forces-in-syria-away-from-israel-border-due-to-strikes/>

**Iran Could Get Nuclear Weapon Within Two Years, Intel Assessments Find,** *Anna Ahronheim, Tovah Lazaroff, Jerusalem Post, February 13, 2019*

Iran is capable of producing a nuclear weapon within two years, if it steps up work on its nuclear program and violates the 2015 deal with the West, according to a recent Israeli intelligence assessment.

The assessment was released as the controversial US-led summit against Iran opened in Warsaw, where Israel is expected to pressure the European Union against trying to prop up the Joint Comprehensive Plan of Action following the American withdrawal last May.

In the Polish capital, Prime Minister Benjamin Netanyahu spoke openly about the possibility of war with Iran, and the possibility of a new alliance of Arab states with Israel, in the event of such hostilities.

<https://www.jpost.com/Middle-East/Iran-News/Iran-could-get-nuclear-weapon-within-two-years-intel-assessments-find-580553>

**AG gearing up to indict PM on quid pro quo deal with Yedioth’s Mozes – report** *Jacob Magid, The Times of Israel, February 14, 2019*

Bahrain Foreign Minister Khalid bin Ahmed Al Khalifa tells The Times of Israel that his country will “eventually” establish ties with Israel. US Vice President Mike Pence says countries at the Warsaw talks have agreed that Iran is the “greatest threat” in the Middle East. US Vice President Mike Pence demands that

European Union allies leave the Iran nuclear deal and warns of further US sanctions on Tehran.

<https://www.timesofisrael.com/liveblog-february-14-2019/>

### **K. Global/Misc**

#### **Five-nation pact signers uphold treaty, Mo Jingxi, China Daily, February 01 2019**

Countries to work toward inherent goals of nuclear nonproliferation agreement Diplomats from the five major nuclear-weapon states wrapped up a two-day conference in Beijing on Thursday, vowing to jointly uphold the Treaty on the Non-Proliferation of Nuclear Weapons amid challenges to international security. Stressing that the treaty is the cornerstone of global nuclear nonproliferation, China, France, Russia, the United Kingdom and the United States promised to comprehensively implement the treaty and promote its universality to gradually realize the goal of a world free of nuclear weapons, according to a Foreign Ministry news release.

The five countries agreed to strive for greater progress in nuclear disarmament, make all-out efforts to resolve the nuclear non-proliferation issue through political and diplomatic measures, and enhance international cooperation in the peaceful use of nuclear power, it said. "The relations and responsibilities of major countries are attracting much attention as unstable and uncertain factors in international security are increasing," said the head of the Chinese delegation, Assistant Foreign Minister Zhang Jun.

The five powers reached consensus at the in-depth discussions that will help to boost the international community's confidence in enhancing global security, he said. The five countries, which are permanent members of the United Nations Security Council, also agreed to treat each other's strategic intentions with objectivity, promote communication on nuclear policies and strategies, and prevent nuclear risks caused by misunderstandings and misjudgments, it

said. The treaty, which took effect in 1970, aims to eventually achieve total nuclear disarmament while promoting the peaceful use of nuclear energy. The five nuclear-weapon states have maintained regular communication concerning nuclear strategy and security since 2009. Their latest meeting was held in 2016 in Washington. China is currently the rotating coordinator of the treaty's cooperation mechanism.

China will remain committed to building consensus and managing differences among the five major nuclear-weapon states in terms of strategic security, replacing a zero-sum game stance with win-win cooperation, and contributing to world peace and stability, Zhang said. Foreign Ministry spokesman Geng Shuang said at a regular news conference on Wednesday that the fact that the five major nuclear-weapon states are sitting down for face-to-face talks and in-depth discussions on urgent strategic security issues sends an important and positive signal to the world despite the current global situation with increasing uncertainties.

<http://global.chinadaily.com.cn/a/201902/01/WS5c53a01ba3106c65c34e7b1f.html>

### **L. Op Eds**

#### **Analysis: How Does The New US-Russia Nuke Arms Race Impact Israel? Yonah Jeremy Bob, Jerusalem Post, February 03, 2019**

The race is on. With the US and Russia formally pulling out of the 1987 Intermediate-Range Nuclear Forces (INF) treaty, we may now witness a brand-new nuclear arms race.

First, it is critical to understand what the INF was, and why it has unwound.

The INF was a US-Soviet arms control treaty that eliminated an entire category of nuclear weapons in the final years of the Cold War. Following years of Russian violating the treaty, the US said it would no longer fall behind in developing the

next generation of nuclear weapons. Despite Russian violations, expert opinion in the US has been mixed.

Even as most acknowledge some Russian violations, Vladimir Putin had still kept many of the INF's provisions, and some observers were concerned that a US pullout would lead to a broader nuclear arms race. Another reason the US wanted out of the treaty was China's emergence as a greater threat whose development of advanced new weapons is not bound by the INF.

<https://www.jpost.com/International/Analysis-How-does-the-new-US-Russia-nuke-arms-race-impact-Israel-579568>

### **America's National Defense Strategy and the Paradox of**

**Technology** *Chad C. Serena and Colin P. Clarke, RAND, February 04, 2019*

The current national defense strategy emphasizes the role technology will likely play in the United States' ability to compete effectively in future conflicts, especially those against near-peer and peer adversaries. Developing more defensible and robust equipment, information networks and cyber capabilities will likely be critical to most, if not all, future warfighting tasks. This could include using artificial intelligence for target acquisition or network defense and attack, robots and autonomous vehicles for logistics missions, or constellations of satellites for positioning and navigation. A strategy emphasizing these capabilities not only makes sense but is requisite if the United States is to maintain its military prominence. However, if it is devoid of compensatory improvements in the training of basic and time-tested nontechnical or analog skills and tasks, such a strategy could worsen the U.S. military's overreliance on technology.

Since the end of the Cold War, and particularly since 9/11, the U.S. military has deemphasized critical nontechnical tactics, techniques, and procedures while adopting new warfighting equipment and networks designed to exploit advancements in technology and the growth of cyberspace. Despite their obvious value in conflicts

involving technologically capable adversaries, skills such as map reading and land navigation by compass; techniques for exploiting cover, concealment and dispersion; procedures for minimizing electronic emissions; and capabilities like visual aircraft identification have not received the same attention as they did during the Cold War. Many of these tasks have been deemed obsolete—due to advancements in technologies like global positioning systems—or considered to be of comparatively less value given the near nonexistence of threats from adversarial air forces.

<https://www.rand.org/blog/2019/02/americas-national-defense-strategy-and-the-paradox.html>

### **Interview: 'Middle East, South Asia going through big change',** *Qasim A. Moini, Dawn, February 05 2019*

VALI Reza Nasr is one of the most important voices in international relations today. Currently dean of the Johns Hopkins School of Advanced International Studies in the US, he has advised the US State Department as well as the Obama administration. The Iranian-American scholar has also written seminal books on Jamaat-i-Islami and Maulana Abul Al'a Maududi, as well as important works on Shia Islam and the new global Muslim middle class. Prof Nasr was recently in Karachi for the Adab Festival Pakistan and talked to Dawn about a range of regional and global issues.

<https://www.dawn.com/news/1461862>

### **Whistleblowers Raise Grave Concerns with Trump Administration's Efforts to Transfer, Sensitive Nuclear Technology to Saudi Arabia, Interim Staff Report, Committee on Oversight and Reform, U.S.**

*House of Representatives, February 2019*

This interim staff report was prepared for Rep. Elijah E. Cummings, the Chairman

of the Committee on Oversight and Reform, after multiple whistleblowers came forward to warn about efforts inside the White House to rush the transfer of highly sensitive U.S. nuclear technology to Saudi Arabia in potential violation of the Atomic Energy Act and without review by Congress as required by law – efforts that may be ongoing to this day. The Trump Administration’s interactions with Saudi Arabia have been shrouded in secrecy, raising significant questions about the nature of the relationship. In 2017, President Trump’s son-in-law, Jared Kushner, orchestrated a visit to Saudi Arabia as the President’s first overseas trip. Mr. Kushner also met on his own with then-Deputy Crown Prince Mohammed bin Salman, who subsequently ousted his cousin, Mohammed bin Nayef, launched a crackdown against dozens of Saudi royal family members, and reportedly bragged that Mr. Kushner was “in his pocket.” In October 2018, the brutal murder of Washington Post columnist Jamal Khashoggi was met with equivocation by President Trump and other top Administration officials. This month, the White House ignored a 120-day deadline for a report on Mr. Khashoggi’s killing requested on a bipartisan basis by the Senate Committee on Foreign Relations. Within the United States, strong private commercial interests have been pressing aggressively for the transfer of highly sensitive nuclear technology to Saudi Arabia – a potential risk to U.S. national security absent adequate safeguards. These commercial entities stand to reap billions of dollars through contracts associated with constructing and operating nuclear facilities in Saudi Arabia – and apparently have been in close and repeated contact with President Trump and his Administration to the present day. However, experts worry that transferring sensitive U.S. nuclear technology could allow Saudi Arabia to produce nuclear weapons that contribute to the proliferation of nuclear arms throughout an already unstable Middle East. Saudi Crown Prince Mohammed bin Salman conceded this point in 2018, proclaiming: “Without a doubt, if Iran developed a nuclear bomb, we will follow suit as soon as possible.” When

Congress passed the Atomic Energy Act, it imposed stringent controls on the export of U.S. technology to a foreign country that could be used to create nuclear weapons. Under Section 123 of the Act, the U.S. may not transfer nuclear technology to a foreign country without the approval of Congress, in order to ensure that the agreement reached with the foreign government meets nine specific nonproliferation requirements.

<https://oversight.house.gov/sites/democrats.oversight.house.gov/files/Trump%20Saudi%20Nuclear%20Report%20-%202019-2019.pdf>

### How to Make Roads Safer for Autonomous Vehicles *Laura Fraade-Blanar, RAND, February 06, 2019*

No matter how much developers test AVs, the world will still present unforeseen circumstances for vehicles to navigate. Researchers and policymakers want to mitigate these risks by making roadways more accommodating of mistakes.

**The big picture:** Road safety policy can help offset these challenges and better plan for AV deployment, particularly the Safe System (PDF) approach that originated as part of Sweden’s 1997 Vision Zero initiative. Countries that have implemented similar policies have seen declines in traffic fatalities, and others could follow their models.

**Background:** Real-world road accidents from 2018 illustrate the surprising variety of “unknown unknowns” vehicles encounter: a 20-fatality limo crash in New York caused by poor road design and vehicle maintenance; a speeding car launched off a raised median into a second-story office in California; and an Oregon roadway made slippery by a truck spill of 7,500 pounds of slime eels.

**Details:** The Safe System approach focuses on three intersecting tenets: Road safety is a shared responsibility; transportation initiatives are based on both experience and anticipated problems; and AV systems, like human drivers, are fallible.

**How it works:** Roadways and vehicle design can be modified to be more forgiving of mistakes and AV system shortcomings.

- Enhanced lane divisions to prevent head-on collisions
- Traffic-calming devices like roundabouts
- Rumble strips to keep drivers in their lanes
- Lower speed limits and alerts when those limits are exceeded
- Structures to minimize lethality of crashes inside the vehicle (strengthened roof and chassis) and outside (safer designs for guardrails)

**The bottom line:** A roadway designed to accommodate human error, whether the human is behind a steering wheel or behind a computer, could better protect motorists (PDF), and the AVs that may soon populate it.

<https://www.rand.org/blog/2019/02/how-to-make-roads-safer-for-autonomous-vehicles.html>

## Managing Risk: Nuclear Weapons In The New Geopolitics, *Brookings*

*Interview, February 2019*

Since the end of the Cold War, more attention has been given to nuclear non-proliferation issues at large than to traditional issues of deterrence, strategic stability, and arms control. Given the state of current events and the re-emergence of great power competition, we are now starting to see a rebalance, with a renewed focus on questions of stability and arms control. In August 2017, Brookings Vice President and Director of Foreign Policy Bruce Jones convened eight Brookings scholars and affiliates—Madelyn Creedon, Robert Einhorn, Bonnie Jenkins, Suzanne Maloney, Michael O’Hanlon, Jung

Pak, Frank Rose, and Strobe Talbott—to discuss the shifting balance and prioritization of strategic stability and nonproliferation. The edited transcript below reflects their assessments of the new

nuclear world order; the current state of arms control with Russia and China; the impacts of emerging technologies; the status of the non-proliferation regime, including a look at North Korea and Iran; and U.S. nuclear policy moving forward. The Appendix explains key agreements and treaties that have shaped the arms control and non-proliferation regime to date.

The discussion found that:

- The classic model of arms control (based on bilateral U.S.-Russia agreements like New START and the IntermediateRange Nuclear Forces Treaty) has come under immense strain given the current security climate, the return of great power competition, and the advent of new technologies. Despite that strain, the role of arms control continues to be paramount in reducing the risk of nuclear war, which should remain the priority of U.S. nuclear policy.
- The security environment for a successful non-proliferation regime is deteriorating. The major challenges are Russia using the threat of its nuclear weapons to achieve a broader geopolitical strategy, China’s resurgence as a great power, the United States’ unilateral withdrawal from the Iran nuclear deal, and a North Korea unlikely to accept complete denuclearization in the near to medium term.
- Despite that deterioration, Russia, China, and the United States have continued to find areas of cooperation in order to maintain the integrity of the non-proliferation regime, such as with Iran and North Korea. However, even those areas are now under strain.
- Nuclear proliferation to U.S. allies remains unlikely but if allies begin to seriously question U.S. security assurances at the same time that external threats mount, some countries may reconsider what was once a non-

starter. Moving forward, executive policy and language needs to affirm U.S. extended deterrence commitments to our allies and partners.

- The context surrounding U.S. nuclear weapons has shifted drastically in the last decade, amplified by the resurgence of great power competition with China and Russia, escalated proliferation by North Korea, and development of new technologies. The U.S. nuclear modernization debate necessitates a recognition of major shifts in recent years to reflect clearly the changes of the geopolitical situation.
- Policymakers must rethink how best to restore stability by considering new technologies in non-nuclear strategic domains (cyber, space, bio, etc.) and methods for discussions, not just bilaterally with Russia but multilaterally with China and others. The United States needs to begin strategic stability dialogues with both Moscow and Beijing.
- The Trump administration should extend New START for five years, as allowed by the terms of the treaty, in a demonstration of confidence-building for U.S.-Russia relations and U.S. support for arms control and non-proliferation commitments.
- In an effort to strengthen nuclear weapons policies that will re-establish global stability and reduce the risk of nuclear war by including emerging technologies and utilizing innovative approaches, the United States must consciously engage the next generation. This effort should be concentrated in schools, but will require collaboration with national labs and government to ensure successful pathways of entry for generational overlap and replacement.

[https://www.brookings.edu/wp-content/uploads/2019/02/FP\\_20190211\\_nonproliferation\\_interview.pdf](https://www.brookings.edu/wp-content/uploads/2019/02/FP_20190211_nonproliferation_interview.pdf)

### **How Europe can contain the new nuclear arms race**, *Sigmar Gabriel, Korea Herald, February 07, 2019*

One of the pillars of nuclear arms control became history on Feb. 2, with the expiry of the 60-day deadline that the United States had given Russia to save the 1987 Intermediate-Range Nuclear Forces Treaty. Russia blithely let the deadline pass. But so did the European Union, abetted by Germany. Europe is now entering a potentially dangerous period and must play a much more active role in the nuclear arms debate.

The INF Treaty prohibits the stationing of medium-range nuclear missiles in Europe. Its near-certain demise dims prospects for extending the US-Russian New Strategic Arms Reduction Treaty when it expires in 2021. And without a contractual nuclear arms framework between Russia and the US, the international Treaty on the Non-Proliferation of Nuclear Weapons cannot survive. Nonproliferation depends on the two nuclear superpowers' willingness to subject themselves to arms control and verification. If the US and Russia instead engage in a nuclear arms buildup, smaller powers will follow suit, because they believe that doing so makes them invulnerable. North Korea and Iran are just the first examples of this.

An extension of the INF Treaty to prevent a new nuclear arms race in Europe would have been worth fighting hard for. As the first – and, so far, only – true disarmament agreement, it gave the continent previously unheard-of security from nuclear confrontation. But instead of high-level summits and shuttle diplomacy to rescue the treaty, all we got were whistle-stop efforts. The chances of saving the INF Treaty are now negligible. Both the US and Russia want to free themselves from all nuclear arms limitations – not to face off against each other, but because they now regard China as their true nuclear adversary.

Germany and Europe are of secondary importance to the two nuclear superpowers. From the perspective of the

US and Russia, a new nuclear arms buildup in Europe would represent only collateral damage. But for Europe, it may bring dreams of a common European Foreign and Security Policy to a sudden end.

If NATO were to launch serious discussions about the renewed stationing of medium-range nuclear missiles in Europe, Eastern European members – skeptical that Western Europeans (especially the Germans and French) – would be willing to die for their freedom, would almost certainly follow the lead of the US. Meanwhile, Germany and other parts of Western Europe would likely experience massive political turmoil.

Faced with this scenario, Europe must now try to apply some kind of brake to current development and gain time for negotiations, without annoying US President Donald Trump and making him likelier to leave the alliance. The debate must begin within the EU, which is not formally a negotiating partner on the nuclear arms issue and currently is standing on the sidelines. With Trump clearly unwilling to inform NATO members, let alone the EU, about his next steps, Europe must assert itself.

As a first step, it should take greater responsibility for Eastern Europe's military security by deploying more European – and more German – conventional troops in these countries. This must be accompanied from the start by talks between Europe and Russia on conventional and nuclear weapons. The first step is arms control, an instrument intended for difficult times. Confidence-building measures, such as mutual inspection of military capabilities and development, can help to rebuild trust, which is a prerequisite for subsequent arms reduction and disarmament.

An audit of the Russian SSC-8 (9M729) cruise missile system, which the US claims violates the INF treaty, is of course a top priority. Although the US and Russia acknowledged inspections under the agreement only until 2001, revitalizing the treaty's Special Verification Commission would offer a way forward here.

[http://www.koreaherald.com/view.php?ud=20190206000229&ACE\\_SEARCH=1](http://www.koreaherald.com/view.php?ud=20190206000229&ACE_SEARCH=1)

### **Nuclear first strike still option,** *Tyler Cowen, Korea Herald, February 07, 2019*

Democrats in the US House and Senate introduced legislation last week to prevent the country from using nuclear weapons unless first attacked by nuclear weapons from another country.

Ideally, the bill will induce a long-needed reconsideration of US nuclear weapons policy – and lead to the conclusion that the No First Use Act would hobble US national interests and make the world a more dangerous place.

First, let us assume that the bill, one of whose sponsors is presidential candidate Sen. Elizabeth Warren, actually would have binding force in some of the emergency cases where this might be an issue to begin with. Otherwise, it is an empty declaration.

What might be some possible occasions on which the US would entertain a nuclear first strike? Say a president received intelligence reports that the North Koreans were planning either a nuclear attack themselves, or to sell some of their weapons to hostile terrorist groups. Assume also that a direct ground invasion was infeasible (likely) and that bunker-buster bombs would not suffice to take out the regime (also likely). In that situation, the US might well entertain the notion of a limited nuclear strike on North Korea, if only to forestall an even greater catastrophe.

This is not to say that such a strike is actually a good idea, and if the US actually carried out the strike, the alternative scenario would never materialize. Still, the possibility of such a strike – even if it is irrational or too destructive – might deter the North Koreans from going down this path to begin with.

Or, if you prefer, take a hypothetical from history. Say Nazi Germany still was fighting World War II when the Manhattan Project succeeded in building a few nuclear bombs. If the Germans were

on the verge of getting their own nuclear weapon, would you have wanted America to have the freedom to take out the Nazi bomb?

It is hard to see why the US should voluntarily surrender this capability. And if the fear is a truly rogue American president, that seems to be exactly the case where the law would be ignored and a unilateral attack would proceed anyway.

Maybe you think the bill will limit the risk of a miscalculation. But the most likely scenario for miscalculation is one in which the US has concluded (mistakenly) that another nation has already launched nuclear weapons. The bill would not prevent this scenario.

<http://www.koreaherald.com/view.php?ud=20190206000219>

**India will continue boosting its nuclear and missile capabilities to counter China – and Beijing will keep responding** *Vinay Kaura, South China Morning Post, February 08, 2019*

Vinay Kaura says that while traditionally focused on Pakistan, India's defence objectives now clearly also include deterring China – and Beijing's actions show that it has noticed. China has not diluted its persistent opposition to India's entry into the Nuclear Suppliers Group (NSG). Beijing has asked Delhi to sign the nuclear Non-Proliferation Treaty (NPT) before it gains entry into the 48-member group, as there is no precedent for the inclusion of non-NPT countries.

Beijing is staunchly opposed to Delhi acquiring legitimate and equal footing in the global nuclear regime. It has sought to group India and Pakistan together, arguing that the two South Asian nuclear rivals are non-signatories to the NPT. China's advocacy of a "criteria-based approach" would ensure that either both are included in the group, or neither are.

The nuclear weapons issue is not always at the centre of the Sino-Indian relationship,

but is nevertheless important: the nuclear forces and policies of India and China have a direct bearing on the threat perceptions of the other. India's nuclear programme has been a direct response to China's strategic threat. Delhi has been keen to acquire an assured second-strike capability against China to fulfil the requirements of deterrence. India's concerns over the China-Pakistan nuclear nexus are also long-standing, and not without reason. From conception to delivery, Pakistan's clandestine nuclear weapons programme has been dependent on supplies from China.

In recent years, China has become increasingly apprehensive about the growing strategic partnership between Delhi and Washington, particularly on the military front. At the time of the 2008 Indo-US nuclear deal, China's policymakers vehemently criticised both sides for undermining global standards on non-proliferation and demanded a similar deal for Pakistan, regardless of its commitments to the NSG. Some in China's strategic circles believe Beijing could use its support of Delhi's entry as a carrot to move India away from its strategic embrace of the US. China has already broadened the scope of its covert help for Pakistan's missile programme. Beijing's growing interest and investment via the China-Pakistan Economic Corridor has added a new dimension to this challenge. As China pursues major infrastructure projects in Pakistan, and a large number of Chinese nationals live there, Beijing's stakes in a potential Indo-Pakistani nuclear exchange are also set to rise significantly.

<https://www.scmp.com/comment/insight-opinion/asia/article/2185271/india-will-continue-boosting-its-nuclear-and-missile>

**The Weapons Making Nuclear War More Likely** *JAMES M. ACTON, BBC NEWS FEBRUARY 08, 2019*

James M. Acton February 08, 2019 BBC News The threat of nuclear war fills people with fear. Yet the increasingly blurred line between nuclear and conventional

weapons is heightening the danger. Nuclear and non-nuclear weapons have never been entirely separate from each other. The B-29 bomber, for example, was designed and built to deliver conventional bombs. But on 6 August 1945 one of these aircraft, Enola Gay, dropped a nuclear weapon on the Japanese city of Hiroshima. Seventy-four years later, nine countries now possess thousands of nuclear weapons, which are becoming increasingly entangled with non-nuclear weapons.

The global stockpile of nuclear weapons is down from an all-time high of about 64,000 in 1986 - but some contemporary weapons are about 300 times more powerful than the bomb dropped on Hiroshima. Apart from the UK, all nuclear-armed states possess dual-use weapons that can be used to deliver nuclear or conventional warheads. These include missiles of ever-longer ranges. Russia, for example, has recently deployed a new ground-launched cruise missile, the 9M729. The US believes this missile is dual-use and has been tested to distances “well over” 500km (310 miles)

<https://carnegieendowment.org/2019/02/08/weapons-making-nuclear-war-more-likely-pub-78343>

### How Horizon Scanning Can Give the Military a Technological Edge

*Sarah Grand-Clement, RAND, February 08, 2019*

Keeping abreast of new developments and innovation plays a vital role in ensuring a military’s capabilities are not outdated or overtaken by those of another country, as new science and technology (S&T) developments have the potential to transform the character of warfare and conflict. There is a fast pace of change in research and development (R&D), with a greater number of actors, such as China, now investing in R&D and increased investment by the civilian sector.

The importance of S&T developments is recognised by the UK Ministry of Defence (MOD), and is highlighted in the MOD S&T defence strategy published in 2017.

Specifically, this publication examines how S&T developments can help support innovation. Innovation is also a central pillar of the 2015 Strategic Defence and Security Review, as a means to help the UK sustain operational advantage.

Military budgets are finite, however, meaning they do not always cover the range of technologies, weapons and equipment – or capabilities – that the military may want to purchase. A decision then needs to be made to prioritise how resources should be allocated, with the risk that any investment in the wrong area may cost the military – in terms of both money and time.

<https://www.rand.org/blog/2019/02/how-horizon-scanning-can-give-the-military-a-technological.html>

### Nuclear thoughts in Pakistan,

*Raosan Taj Raisani, The Express Tribune, February 09, 2019*

Pakistan and India and their nuclear postures have always been a cause for concern for international players. In fact, most analyses of the contemporary times in strategic stability involve finding ways to address this problem. Many Western and local intellectuals have offered different understandings to study this problem. These understandings form the basis of comprehension of nuclear strategic stability in the subcontinent. The issues are devoid of indigenous critical conjectures.

Western political scientists have offered their reasoning based on understanding the problem in terms of implications for global nuclear order. These include an emphasis on India and Pakistan’s outlier status from the Nuclear Non-Proliferation Treaty (NPT), their reluctance in signing the Comprehensive Test Ban treaty (CTBT) and their scepticism of the Fissile Material Cut-off Treaty (FMCT). They also highlight the inherent difficulty of establishing a confident escalation-control mechanism. These underpinnings are based on their outward thinking about the generalities. The issue is, however, deeply laced with local specifications.

Pakistani and Indian analysts define these concepts through the rationale of their national interest and strategic options. Both countries maintain the doctrinal issue at 'minimum credible deterrence' albeit with varying levels of definitions for minimality and credibility. India tries to dominate by highlighting its commitments to NPT without being a member and lampoons Pakistan for its unsafe and extensive use. Pakistan rejects this argument and builds up its position by trying to pin India down as the promoter of the nuclear arms race in the subcontinent. These arguments are all regurgitating of positions that the US, the European elites and the USSR had uttered in the Cold War.

<https://tribune.com.pk/story/1906512/6-nuclear-thoughts-pakistan/>

### **Why Bangladesh overtook Pakistan,**

*Pervez Hoodbhoy, Dawn, February 09, 2019*

Bangladesh is not some Scandinavian heaven. It is poor and overpopulated, undereducated and corrupt, frequented by natural catastrophes, experiences occasional terrorism, and the farcical nature of its democracy was exposed in the December 2018 elections. But the earlier caricature of a country on life support disappeared years ago. Today, some economists say it shall be the next Asian tiger. Its growth rate last year (7.8 per cent) put it at par with India (8.0pc) and well above Pakistan (5.8pc). The debt per capita for Bangladesh (\$434) is less than half that for Pakistan (\$974), and its foreign exchange reserves (\$32 billion) are four times Pakistan's (\$8bn).

Much of this growth owes to exports which zoomed from zero in 1971 to \$35.8bn in 2018 (Pakistan's is \$24.8bn). Bangladesh produces no cotton but, to the chagrin of Pakistan's pampered textile industry, it has eaten savagely into its market share. The IMF calculates Bangladesh's economy growing from \$180bn presently to \$322bn by 2021. This means that the average Bangladeshi today is almost as wealthy as the average Pakistani and, if the rupee depreciates further, will be technically wealthier by 2020.

<https://www.dawn.com/news/1462757>

### **How Pakistan can get Kashmir**

*Kamran Yosuf, The express Tribune, February 11, 2019*

Every year on the 5th of February, Pakistan observes Kashmir Solidarity Day. This has been the practice since 1990 when the late Jamaat-e-Islami leader Qazi Hussain Ahmed first mooted the idea.

The day is marked by a national holiday. Statements eulogising the sacrifices of Kashmiris in the face of brutal use of force by the Indian forces are issued, rallies are staged across the country and resolutions are adopted showing support to the people of Kashmir for their right to self-determination.

This year, the PTI government led by Prime Minister Imran Khan went a step further to extend support to the Kashmiris. Foreign Minister Shah Mehmood Qureshi travelled to London and attended several events, including one at the British Parliament, for the Kashmir cause.

<https://tribune.com.pk/story/1907779/6-pakistan-can-get-kashmir/>

### **Five Ways to Save INF's Legacy**

*Ulrich Kühn, Carnegie Endowment, February 13, 2019*

Not only in Washington and Moscow, many analysts and experts argue these days that the impending demise of the Intermediate-range Nuclear Forces (INF) Treaty forecasts the end of arms control in general and a new round of nuclear competition - with the big difference that the new arms race will be less about numbers and more about quality, and that it will involve China as well. But it does not have to be that way. There are at least five underexplored arms control options that could save the legacy of INF.

Option 1. Walk in the Woods Could be termed the 'German Grand Coalition' proposal as it comes from two leading German politicians, both respected foreign and security policy experts in the two major parties currently ruling Germany. Roderich Kiesewetter (CDU) and Rolf

Mützenich (SPD) suggested to move Russia's treaty-busting missiles beyond the Ural Mountains - that is to the Asian side of Russia. While somewhat resembling a proposal that some of the older ones will remember as the 1982 Nitze-Kvitsinsky "Walk in the Woods" formula, the Kiesewetter-Mützenich proposal, stressing the need to strictly verify Russian compliance with such arrangement, comes as a quid pro quo. In exchange for Russia's geographical restraint, the two policymakers suggest America allows for inspections of its disputed Aegis Ashore missile defense installation in Deveselu, Romania. The drawbacks to this proposal seem obvious: U.S. officials have time and again rejected the idea of bringing Aegis Ashore into the equation; in turn, Moscow will be anything but hell-bent on alienating China by moving its new INF systems into the Asian theater.

Option 2. Concessions in the European Theatre Perhaps a slightly more viable proposal which does not involve the contentious missile defense issue comes from the Washington-based Arms Control Association. Accordingly, NATO, as a bloc, would declare not to deploy any new INF-range ground-launched missiles in Europe as well as additional (permanently deployed) new nuclear capabilities in Europe so long as Russia is removing the SSC-8 missile from Western Russia and pledging not to deploy any other INF-prohibited systems in the European theater. Most likely not legally binding, such an understanding would somewhat mirror similar pledges NATO and Russia made in the conventional realm in the 1997 NATO-Russia Founding Act and at the sidelines of the 1999 OSCE Istanbul Summit. Again, the downside of this proposal is Russia's close relationship with China and the question of how to verify the absence of such weapons systems.

Option 3. Nuclear Pause Agreement Back in 2017, a former high-ranking U.S. military suggested a framework that very much focuses on crisis stability by making sure that mating INF-range systems with nuclear warheads could not take place in a matter of hours. Under such a framework, nuclear

warheads for sub-strategic (below 5,500 km) groundlaunched and air-launched systems alike (including missile defense interceptors and drones) would be stored at least a day separation by ground transportation away (and a couple of hours by aircraft). Obviously, the question of verification would be extremely sensitive and would have to make sure that the strategic forces of the United States and Russia remain outside the framework. Another problem comes with the exclusive focus on nuclear warheads. While militaries on both sides are aware of the increasing conventional firepower of both the United States and Russia, only a few seem to understand the 3/13/2019 Five Ways to Save INF's Legacy - Carnegie Endowment for International Peace <https://carnegieendowment.org/2019/02/13/five-ways-to-save-inf-s-legacy-pub-78476> 2/3 Share this selection Tweet Facebook implications for strategic stability. In the end, further fielding conventional-tipped delivery vehicles could as much have a negative impact on stability, particularly in Europe.

Option 4. INF à trois While quite prominent in the media due to Trump's direct reference, including China in an 'INF à trois' arrangement seems not a very promising option, at least from the outset. Over 90 percent of China's missiles - essential for defending Chinese homeland and adjacent waters - fall in the ranges banned by INF. Washington would have to offer a lot to convince Beijing of the merits of joining such an endeavor. Perhaps the only way to get China on board would be to broaden the scope of a trilateral arrangement and to allow for unprecedented flexibility. In concrete terms that would mean to include sea- and air-based systems, i.e., those systems where America still enjoys superiority vi-à-vis Beijing, to add missile defense interceptors and drones as well as anti-access/area denial (A2/AD) systems. The latter systems are particularly relevant in regional theaters, for instance in Eastern Europe and in the South China Sea. Finally adding strategic systems, a trilateral U.S.-Russian-Chinese framework could have

equal ceilings for strategic (beyond 5,500 km) and sub-strategic (below 5,500 km) systems, with verification and the freedom to mix.

Option 5. Cruise Missiles Ban Finally, the most ambitious – and also least realistic – option would be a global ban on cruise missiles, thus directly addressing a weapons category deemed most destabilizing due to its flight characteristics. Aside from the fact that modern militaries rely heavily on standoff weapons for various purposes, the fact that the number of states with standoff capabilities is continuously growing would make such an enterprise extremely hard to achieve. As all five options demonstrate, the end of INF does not have to be the end of arms control. There are still six months left to explore a number of diplomatic opportunities. And even if the treaty ends, there are ways to build on INF's legacy. The options are there – it is up to bold and responsible politicians to turn forward-looking proposals into viable policies. This article was originally published in Valdai Club.

<https://carnegieendowment.org/2019/02/13/five-ways-to-save-inf-s-legacy-pub-78476>

### **The End of the INF Treaty** Ulrich Kühn, *Carnegie Endowment*, February 14, 2019

The end of the INF Treaty, which US President Trump announced on 2 February 2019, is extremely problematic for Europe. Once again, the continent is on the threshold of a debate about rearmament. To prevent the redeployment of American medium-range missiles, it's worth taking a look at the Far East – because rearmament also threatens America's allies in Asia. And they have little reason to want new American missiles.

In order to understand this new development, we should first take a closer look at Washington's interests and motives. Both in Europe and in Asia, the current American administration faces an aggressive struggle against major revanchist powers. In both cases, according to the latest US strategy documents, the US is in danger of being left behind militarily. From an American point of view, the threat level in

Europe has changed significantly since the Russian invasion of Crimea: Russia is ignoring international rules and will not hesitate to use direct force. In case of doubt – as many American security experts fear – Russia could also seek an open conflict with NATO, as Moscow has significantly more nuclear weapons in Europe than the US does. The fact that Russia is now also producing banned INF missiles with ranges of between 500 and 5,500 km, and thus threatening America's allies, only serves to support those who ascribe sinister motives to the Kremlin and call for America to provide deterrents.

<https://carnegieendowment.org/2019/02/14/end-of-inf-treaty-pub-78434>

### **Billions Dead: That's What Could Happen if India and Pakistan Wage a Nuclear War**, Zachary Keck *National Interest*, February 15, 2019

Armed with what they believe is reasonable intelligence about the locations of Pakistan's strategic forces, highly accurate missiles and MIRVs to target them, and a missile defense that has a shot at cleaning up any Pakistani missiles that survived the first strike, Indian leaders might be tempted to launch a counterforce first strike.

With the world's attention firmly fixated on North Korea, the greatest possibility of nuclear war is in fact on the other side of Asia.

At the heart of this conflict, of course, is the territorial dispute over the northern Indian state of Jammu and Kashmir, the latter part of which Pakistan lays claim to. Also key to the nuclear dimension of the conflict is the fact that India's conventional capabilities are vastly superior to Pakistan's. Consequently, Islamabad has adopted a nuclear doctrine of using tactical nuclear weapons against Indian forces to offset the latter's conventional superiority.

With nuclear weapons introduced, Delhi's no-first-use doctrine no longer applies. Indian leaders, knowing they'd face

incredible domestic pressure to respond, would also have no guarantee that Pakistani leaders didn't intend to follow the tactical use of nuclear weapons with strategic strikes against Indian cities. Armed with what they believe is reasonable intelligence about the locations of Pakistan's strategic forces, highly accurate missiles and MIRVs to target them, and a missile defense that has a shot at cleaning up any Pakistani missiles that survived the first strike, Indian leaders might be tempted to launch a counterforce first strike.

*[https://nationalinterest.org/blog/buzz/billions-dead-thats-what-could-happen-if-india-and-pakistan-wage-nuclear-war-44682?utm\\_source=AM%20Nukes%20Roundup&utm\\_campaign=5c615d1b08-EMAIL\\_CAMPAIGN\\_2018\\_07\\_25\\_12\\_19\\_COPY\\_01&utm\\_medium=email&utm\\_term=0\\_547ee518ec-5c615d1b08-391827465](https://nationalinterest.org/blog/buzz/billions-dead-thats-what-could-happen-if-india-and-pakistan-wage-nuclear-war-44682?utm_source=AM%20Nukes%20Roundup&utm_campaign=5c615d1b08-EMAIL_CAMPAIGN_2018_07_25_12_19_COPY_01&utm_medium=email&utm_term=0_547ee518ec-5c615d1b08-391827465)*

## 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).

### Disclaimer:

**Data included in this newsletter is only for educational purpose and wider dissemination. All liabilities and rights belong to respective writers & authors.**

### Prepared by :

**Ms Deepika Sharma  
Ms Diya Deep Singh  
Ms Raj Rajeshwari Singh**

### Indian Pugwash Society

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