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# SYLLOGE ON CHINA

Focus: Nuclear, Space, Missiles and other Security Issues

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INDIAN PUGWASH SOCIETY



INSTITUTE FOR DEFENCE  
STUDIES & ANALYSES  
रक्षा अध्ययन एवं विश्लेषण संस्थान

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### **Xi signs order for issuing trial regulation on military supervision work**

China Daily, January 20, 2020

Xi Jinping, chairman of the Central Military Commission, has signed an order for releasing the trial regulation on military supervision work. The regulation will take effect on Feb 1, 2020, according to a statement released on Monday. The regulation was introduced to establish an authoritative and efficient military supervision system with complete coverage under a unified command. It is of great significance to further strengthening supervision over the exercise of power and advancing the anti-graft campaign in the military, the statement said. The 62-article regulation has specified works including the setup of supervisory commissions, their main duties and the supervision on the commissions and inspectors.

<https://www.chinadaily.com.cn/a/202001/20/WS5e25205ea310128217272381.html>

### **Three seaborne launches planned for Long March 11 rocket this year**

Zhao Lei

China Daily, January 20, 2020

China plans to conduct three seaborne launches using its Long March 11 solid-propellant carrier rocket this year, Jin Xin, the rocket's deputy project manager, said. He told a news conference at China Aerospace Science and Technology Corp in Beijing that the launches will take place in the East China Sea from self-propelled platforms. "We intend to use these missions to further improve our seaborne launch technologies and procedures," he said. "Compared with the first seaborne flight, the coming missions will feature better ships and streamlined tracking and support systems."

<https://global.chinadaily.com.cn/a/202001/20/WS5e2500d4a3101282172721f2.html>

### **China and Russia's push to develop hypersonic weapons raises fears of arms race with US**

Minnie Chan

South China Morning Post, January 19, 2020

China became the first country to announce the deployment of the missiles, but Russia recently announced it had developed a much more advanced version the Avangard. Defence analysts say the weapons are not a game changer for now but could give Moscow extra leverage in negotiations with the US. Recent breakthroughs in the development of hypersonic weapons have heightened fears about a new arms race between China, Russia and the US, with some defence observers calling for new international arms control agreements. The emergence of hypersonic weapons has raised concerns about the "invincible" arms, which cannot be intercepted by any existing defence

systems, being used to enhance nuclear powers' capabilities. A hypersonic weapon is usually defined as one that reaches speeds of at least Mach 5, five times the speed of sound.

The US has resumed hypersonic missile development under Donald Trump after his predecessor Barack Obama suspended the programme but is yet to announce the development of its own weapons. Russia and China currently enjoy an advantage in the development of hypersonic technology, based on the number of successful test flights they have conducted, while India and France are close behind, according to a recent report published by the Bulletin of the Atomic Scientists. "Hypersonics are not likely to substantially change the relationships between China, Russia and the US. The hype around hypersonics, however, will generate enough interest to prompt productive discussions and increased Track I and Track II diplomatic efforts both bilaterally and trilaterally," she said, referring to backchannel diplomacy through non-governmental contacts.

<https://www.scmp.com/news/china/military/article/3046667/china-and-russias-push-develop-hypersonic-weapons-raises-fears>

### **China makes major breakthrough in space propulsion technology**

Global Times, January 19, 2020

China has made a major breakthrough in the development of the Hall-effect thruster (HET), an important space propulsion technology. Researchers from the China Aerospace Science and Technology Corporation (CASC) have developed the country's first HET with an input power of 20 kilowatts that can produce a thrust of one newton, marking a leap for China's HETs from millinewton level to newton level. The applications of HETs include control of the orientation and position of orbiting satellites and use as a main propulsion engine for medium-size robotic space vehicles.

During a test, the thruster showed stable operation, with a specific impulse of 3068 seconds and working efficiency above 70 percent, reaching international advanced level. Such a high-power HET with features of strong thrust, long working life and high reliability will be able to provide highly efficient impetus for the positioning, orbital maneuvering and motion control of large GEO (geostational orbit) satellites, deep space probes and space shuttle vehicles.

<http://www.globaltimes.cn/content/1177263.shtml>

### **World's first large, three-engine drone takes to sky**

Liu Xuanzun

Global Times, January 19 2020

Independently developed by China, the world's first large, three-engine utility drone recently made its first flight, with experts saying on Sunday that the drone is very reliable and versatile thanks to the extra engine, and can be used in transport and attack missions. Developed by Chengdu-based Tengden Technology Co, the drone took off and landed on Thursday morning at an airfield in Southwest China, marking its successful maiden flight, Chengdu Daily reported on Friday. The drone is a three-engine variant of Tengden's twin-engine TB Twin-tailed Scorpion, as this design is a world first for drones, Chengdu Daily said, without introducing the designation of the new variant.

The drone has a width of 20 meters and a length of 11 meters. It is equipped with three piston engines, with one under each wing and one on its tail, enabling it to have a maximum takeoff weight of 3.2 tons and an endurance of 35 hours, according to the report. The drone has a flight ceiling of 9,500 meters, a max climb rate of 10 meters a second and a top speed of more than 300 kilometers an hour, the report said, noting that it is very adaptable and can be deployed in airfields in plateau areas. Because the drone uses piston engines, which are low cost but have long lifespans, it is also very cost efficient. The extra engine makes this new drone more powerful, capable of carrying more payload and taking off at shorter ranges, a military expert who asked not to be named told the Global Times on Sunday.

This enables the drone to be used for a wider range of purposes, such as logistics and transport, in addition to traditional drone purposes including patrols, reconnaissance and attack, the expert said. The drone can also be used in areas such as disaster relief, forest firefighting, geographic mapping, meteorological observation and aerial communications relay, chinanews.com reported. If one or two engines malfunction, the remaining engine should still be enough to allow the drone to fly safely, making it very reliable, the expert said. The drone will be "put into market in all fronts" in 2021, chinanews.com reported.

<https://www.globaltimes.cn/content/1177309.shtml>

### **Chinese military releases outlines to strengthen primary-level units**

China Daily, January 19, 2020

The Central Military Commission (CMC) has released a set of revised outlines on strengthening the military at the primary level. The outlines, approved by Xi Jinping, chairman of the CMC, will take effect on Feb 1. The move aims to build primary-level military units that listen to and follow the Party, is capable of fighting and winning and maintain good discipline and excellent conduct. The CMC called for earnest efforts to study and implement the outlines.

[http://eng.mod.gov.cn/news/2020-01/19/content\\_4858841.htm](http://eng.mod.gov.cn/news/2020-01/19/content_4858841.htm)

## **Military to continue mission in 2020**

Zhang Yangfei

China Daily, January 17, 2020

The Chinese military will resolutely safeguard national sovereignty, security and development interests and continue to deepen exchanges with foreign militaries this year, a national defense official said at the 2020 New Year Reception held in Beijing on Friday. The reception was hosted by China's Ministry of National Defense to celebrate the approaching Chinese New Year, which will arrive next Saturday. Nearly 260 military attaches to China and their spouses from more than 80 countries attended the event. In the past year, the PLA has been a builder of world peace, contributed to world development and maintained the international order to achieve common security. It has held high the banners of peace, development and cooperation to push forward the construction of a community of shared future for mankind, he said.

He added attaches to China have served as bridges and made active efforts in strengthening bilateral military ties in 2019. Ci said in the new year the Chinese military will resolutely safeguard national sovereignty, security and development interests, and comprehensively promote international military cooperation. "We will continue to deepen exchanges and cooperation with foreign militaries and actively respond to risks and challenges to maintain peaceful development," he said.

<https://www.chinadaily.com.cn/a/202001/17/WS5e21be9ea310128217271ccf.html>

## **China reveals space plan for 2020**

China Daily, January 17, 2020

China will smash its record for space launches in 2020. The country is going to send more than 60 spacecraft into orbit via over 40 launches this year, according to a plan released Friday in Beijing. "This year will continue to see intensive launches," said Shang Zhi, director of the Space Department of the China Aerospace Science and Technology Corporation (CASC), at a press conference, where a blue book setting out China's space achievements and future missions was released. According to Shang, there are three major missions, mainly focusing on the completion of the BeiDou-3 Navigation Satellite System, the lunar exploration and the network of Gaofen observation satellites. Two geostationary orbit BeiDou satellites will be sent into space in the first half of 2020. The Chang'e-5 lunar probe, which is expected to bring moon samples back to Earth, and China's first Mars probe are also planned to be launched this year.

In addition, three new types of carrier rockets, which are the Long March-5B, Long March-7A and Long March-8, will make their maiden flights in 2020. As a new generation of carrier rocket, the Long March-5B has the largest carrying capacity to low-Earth orbit. It will carry the core capsule and experiment capsules of China's space station. The Long March 7A represents the new generation of China's medium-sized high-orbit rocket. The Long March-8 rocket will increase China's lift capacity for launches to sun-synchronous orbits and meet the growing needs of commercial launches. The Long March-5 rockets will be launched three times in 2020, carrying a new generation of manned spacecraft, a Mars probe and a Chang'e-5 probe into space. The CASC will also send a number of satellites for China's civil space infrastructure system and plan a series of commercial launches this year, according to the blue book. China completed 34 space launches in 2019, ranking first in the world.

<https://global.chinadaily.com.cn/a/202001/17/WS5e21c45aa310128217271cd2.html>

### **Spokesperson: China optimizes military recruiting to enhance soldiers' quality**

China Military Online, January 17, 2020

China will change its military conscription and retirement frequency from once a year to twice a year, starting from 2020, which is of great significance for recruiting more high-quality soldiers, spokesperson for China's Ministry of National Defense Senior Colonel Ren Guoqiang said. He made the remarks in a written statement when answering the question: "What is the reason for the change of military recruiting time?"

Ren said the change is another major reform following the adjustment of military recruiting time in 2013. Under the premise of meeting annual military recruiting goal, the Chinese military wants to increase the frequency of military recruiting and reduce the quantity of single military recruiting, thus allowing a smooth flow of troops and always maintaining the military's high vigilance. Ren stressed that the change is of great significance for improving the enlistees' quality and training and enhancing the military's combat capability. After the implementation of the new practice, the focus of China's conscription will remain on recruiting college students and various types of social talents, said Ren in the statement.

[http://english.chinamil.com.cn/view/2020-01/17/content\\_9719310.htm](http://english.chinamil.com.cn/view/2020-01/17/content_9719310.htm)

### **Chinese, Philippine Coast Guards deepen maritime law enforcement cooperation**

China Military Online, January 17, 2020

The third meeting of the Joint Coast Guard Committee (JCGC) on Maritime Cooperation between the China Coast Guard (CCG) and the Philippine Coast Guard (PCG) was held from January 14 to 16 in Manila to deepen maritime cooperation between the two sides. Major General Wang Zhongcai, director-general of CCG, and Vice Admiral Joel Sarsiban Garcia, 28th Commandant of PCG, co-chaired the meeting. The meeting discussed and identified the next cooperation projects and new cooperation fields, in a bid to enhance mutual trust and ensure win-win outcomes in maritime operations. Both sides agreed to give due attention to the safety and protection of fishermen.

Both sides also emphasized the commitments to deepening cooperation between China-Philippine coast guards, jointly addressing maritime emergencies, humanitarian and environmental protection concerns, and building the South China Sea into a sea of peace, stability and prosperity. It is agreed by both sides that the fourth meeting of the JCGC on Maritime Cooperation will be held in China within the year.

[http://english.chinamil.com.cn/view/2020-01/17/content\\_9719810.htm](http://english.chinamil.com.cn/view/2020-01/17/content_9719810.htm)

### **Chinese Rocket Force exercise ensures nuclear counterattack capability**

Liu Xuanzun

Global Times, January 16, 2020

The Chinese People's Liberation Army (PLA) Rocket Force has conducted a nuclear attack survival exercise where troops in an underground missile facility had to endure extreme conditions and make sure they could still launch nuclear counterattacks. During the undated exercise, a Rocket Force brigade mobilized into the launch bunker at an undisclosed location and completely sealed themselves off from the outside world, as the troops readied for combat, China Central Television (CCTV) reported on Wednesday. The bunker was then struck by a mock hostile nuclear attack as the troops inside, fully dressed in protection suits, carried out contingency plans and operated missiles for upcoming counterattacks, according to the report.

They also simulated a situation where missile fuel leaked after a hostile strike and a troubleshooting team was immediately deployed to repair. Tactics including a fast missile condition check, rapid logistics, bunker defense and hasty launch were also practiced, CCTV reported. While China is one of a few countries in the world that operate nuclear weapons, it has promised no first use, a military expert who asked not to be named told the Global Times on Thursday. It was crucial the force survive an initial hostile strike to launch a counterattack, the expert noted. Such exercises ensure that capability and contribute to China's nuclear deterrence, the expert said.

China has a series of defense facilities located deep under mountains dubbed the "Underground Steel Great Wall," which "guarantee the security of the country's strategic arsenal" against potential attacks, including those from hypersonic weapons, Qian Qihu, a key architect of the fortifications who won China's highest science and technology award of 2018, told the Global Times in a previous interview. At the National Day military parade on October 1 last year, China displayed the DF-5B silo-based nuclear-armed intercontinental ballistic missile. The parade also showcased the DF-31AG and DF-41 road-mobile ICBM, DF-26 nuclear/conventional intermediate-range ballistic missiles (IRBM) and JL-2 submarine-launched ballistic missile (SLBM). No nuke is expected to be ever used again, but China needs to protect itself by retaining its nuclear deterrent, developing and practicing with the weapons, analysts said.

<http://www.globaltimes.cn/content/1177156.shtml>

### **China and South American region eye cooperation in science and technology**

Maria Jose Haro Sly

Global Times, January 16, 2020

When a project develops new technologies, lasts more than 30 years, and is realized with two completely different countries located on the antipodes of the globe, a "community of shared future" is created. That is the case with CBERS, the China-Brazil Earth Resources Satellite program that recently put its sixth remote sensing satellite in orbit. Despite the different developmental paths - Brazil is swinging on its own political and economic pendulums while China is going straight forward in the economic and technological race - both countries got around the difficulties to reach the technological goals.

This is win-win cooperation with strong investments. The project started with 70 percent Chinese funds and the rest provided by Brazil. Now the two countries have a 50:50 share in the project. The CBERS program has been budgeted at \$150 million for the development, construction and launch of the first two satellites. Each satellite costs about \$50 million. Until CBERS-4 was launched, the pool of financial and technological resources between Brazil and China was around \$300 million. One of the big outcomes is the building capacity and human resources in this area. Pereira, Brazilian manager of the CBERS program, told the Global Times, "The space partnership with China is quite wide, including the joint development of satellites, the exchange of researchers and students, and the research partnerships in the areas of space science and ionosphere."

The space sector in Brazil has benefited from CBERS, generating a series of private companies destined to create solutions for satellites. The aerospace sector in Brazil has created more than 22,000 high quality jobs and more than \$6.5 billion in high value added exports for Brazil. Costa Vaz of Orbital Engineering, a company producing solar generators for satellites, said, "China is



the first trade partner of Brazil, and the CBERS is the most successful example of South-South high technology cooperation. The most important outcome of the program was the development of the capacity to assemble and integrate big satellites, as well as pulling the national innovation complex in a high tech industry as the space that few countries can manage. Nonetheless, the program will need some adjustments like redefining the mission and moving forward to the new age of micro and nano satellites."

<http://www.globaltimes.cn/content/1177087.shtml>

### **China's first LEO 5G broadband satellite moves into orbit**

Zhang Hongpei

Global Times, January 15, 2020

China's first low-Earth orbit (LEO) 5G broadband satellite was successfully delivered to its pre-selected orbit via the Kuaizhou-1A launch vehicle on Thursday from the Jiuquan Satellite Launch Center, Northwest China's Gansu Province. The satellite, developed by domestic commercial aerospace company Galaxy Space, is the first in China with data transmission capacity of 10 gigabits per second. It's also the world's first LEO broadband satellite in the Q/V band, an extremely high-frequency band, according to the company.

The satellite will be able to cover an area of 300,000 square kilometers, roughly 50 times the size of Shanghai, the company said. Lei Jun, CEO and chairman of China's technology giant Xiaomi, praised the launch on his WeChat account on Thursday. Shunwei Capital, the venture capital firm established by Lei, has invested in four start-ups in the private commercial space sector, including Galaxy Space. "The commercial space sector, featuring innovation, high technology and civil-military fusion, is the path that nation must take to shift from a big space country to a strong one," said Lei.

<http://www.globaltimes.cn/content/1177150.shtml>

### **China regrets Britain, France, Germany's decision to trigger Iran deal dispute mechanism**

Global Times, January 15, 2020

China regrets that the UK, France and Germany - known as E3 - have launched the dispute resolution mechanism of the Joint Comprehensive Plan of Action (JCPOA), believing that this will not help solve the problem or ease current tensions, the Chinese Foreign Ministry said Wednesday. "China believes that there is a reason for Iran to reduce the implementation of the comprehensive agreement," Ministry of Foreign Affairs spokesperson Geng Shuang said during a routine press

conference in response to a query on China's thoughts on the three countries' pulling the diplomatic trigger on JCPOA. Geng noted that the fundamental reason for Iran's nuclear tensions lie in US' disregard of international law, unilateral withdrawal from the comprehensive agreement and its extreme pressure on Iran, as well as its obstruction of other parties to fulfill the agreement.

China will continue to maintain close communication with relevant parties, actively promote peace talks, foster a political and diplomatic settlement of the Iranian nuclear issue, and make unremitting efforts to safeguard the comprehensive agreement, ease tensions in the Iranian nuclear issue and the Middle East, Geng added. The UK, France and Germany on Tuesday formally accused Iran of withdrawing from the 2015 agreement that limited its nuclear program, taking the first step toward reimposing UN sanctions. Iran announced on January 5 that it would no longer commit to any limits on the restrictions contained in JCPOA, a deal to freeze Iran's nuclear program in return for a progressive lifting of international sanctions, after the US assassinated Iranian general Qassem Soleimani in Baghdad in a drone attack, CNN reported on January 6.

<http://www.globaltimes.cn/content/1176987.shtml>

### **China to stop building Type 056 corvettes as navy shifts focus to larger vessels**

Liu Zhen

South China Morning Post, January 14, 2020

The PLA Navy has started ordering bigger warships as it starts to prepare for missions further away from its shoreline. The last Type 056, the *Aba*, has been completed, according to local media reports in its namesake prefecture. China will reportedly stop building its Type 056 corvettes after the navy shifted its focus to ordering bigger warships for high sea missions.

The last of the 1,300-tonne guided-missile corvettes, the *Aba*, was completed in December, according to a recent report by the local media in the vessel's namesake, *Aba* prefecture in Sichuan. The vessel will join the navy's south sea fleet, *Aba* Television's official social media account reported last week, although did not say when it would join the fleet.

The first Type 056 was only launched in 2012; it immediately became one of the most widely produced warships with at least 60 being built over the past eight years. China's most advanced destroyer the *Nanchang* formally enters service The lightweight model has been widely adopted thanks to its powerful armaments, which include a 176mm gun, two 30mm cannons, anti-ship and air-defence missile launchers and two torpedo tubes. It can also load a medium-lift helicopter on board and has great flexibility in near-shore operations. Two Type 056 corvettes, the *Huizhou* and the *Qinzhou*, have been deployed in the PLA's Hong Kong garrison since 2013. There is also an anti-submarine variant, the Type 056A, and a coastguard variant armed with water cannon.

Despite the relatively new design and wide use, production of the Type 056 will be stopped, partly because the navy has had enough coastal defence vessels and will move onto blue-water operations, according to a Global Times report. “Shipyards could shift their focus to building larger warships,” it said. On Sunday, the navy commissioned its first Type 055 guided-missile destroyer, the Nanchang, one of the most advanced ships of its type. China steps up warship building programme

<https://www.scmp.com/news/china/military/article/3046056/chinese-shipyards-call-time-corvettes-switch-larger-vessels>