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EDITORS

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Note from Head of CS3

Dear All,

We are happy to publish the 17th issue of the Sinometer: The China Strategic Monitor, a monthly newsletter by the Centre for Strategic Studies and Simulation (CS3), USI. The significance of China within the global and regional spheres is continually transforming, and this transition is evident in the domains of geopolitics and geo-economics. The growing interest in Chinese security, economy, and political relations has sparked numerous debates, establishing it as a central focus in global affairs. The purpose of this magazine is to provide a glimpse into significant events in China and their repercussions on the international stage.

The newsletter begins by analysing Tianzhou-6: Fuelling the Future of China's Space Program with a Successful Cargo Launch, then Analysing Chinese reaction to the US House Selection Committee recommendation on making India part of NATO plus, then we will look at Geopolitics rivalry to dominate in Artificial Intelligence. We will then analyse why India-ASEAN military drills interrupted by allegedly China maritime militia. Followed by China and the US Compete for Mining Cooperation in the Democratic Republic of the Congo and finally significance of China launching its largest seawater uranium extraction test platform.

This issue aims to give a holistic perspective of China in the backdrop of China's growth, challenges and a growing relationship with many countries. We hope that budding China Watchers find the newsletter useful. Happy reading!

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Tianzhou-6: Fuelling the Future of China's Space Program with a Successful Cargo Launch

By Manav Saini

China launched The Tianzhou-6 cargo spacecraft was launched into orbit by China's Long March-7 Y7 carrier rocket from the Wenchang Space Launch Site in Hainan Province. The launch occurred on Wednesday, May 31, 2023, at about 9:22 p.m. According to the China Manned Space Agency (CMSA), the Tianzhou-6 cargo spacecraft successfully achieved its predetermined orbit after a 10-minute flight.¹ The latest Tianzhou cargo spacecraft, Tianzhou-6 to Tianzhou-11, have been improved over their predecessors. The payload capacity has been boosted from 6.9 tonnes to 7.4 tonnes, making the new Tianzhou spacecraft one of the world's strongest cargo spacecrafts. Because of the increased cargo capacity, the frequency of cargo missions to the China Space Station will be lowered from four to three times every two years. This enhancement is intended to increase the efficiency of the space station project. The Tianzhou-6 cargo spaceship transported around 5.8 tonnes of supplies for taikonauts (Chinese astronauts). It also carried a number of payloads for scientific studies and technology validation. The spacecraft was filled with 98 payload and experiment materials weighing around 714 kilogrammes.²

The payloads and experiment materials will be used for 29 scientific and application experiments in four domains: space life science and biotechnology, microgravity fluid physics and combustion science, space material science, and space technology application. The cargo cabin and freight transport capability of the Tianzhou-6 spacecraft were upgraded.³ These enhancements aim to give more commodities to the taikonauts, allowing them to stay in space for extended periods of time. The components of the spaceship are entirely localised, ensuring thorough assurance measures. The Tianzhou-6 cargo spaceship is highly adaptable. Aside from transporting supplies and controlling the space station's attitude, it also conducts space scientific and technological experiments. It also unloads garbage from the China Space Station before controlled re-entry. The stowage capacity of the airtight cabin increased by 20%, from 18.1 cubic metres to 22.5 cubic metres. The airtight cabin's cargo capacity increased by 22% to 6.7 tonnes. Tianzhou-6 also transported 70 kilogrammes of fresh fruit, which was twice the weight of the previous Tianzhou-5 mission. This indicates progress in preserving fresh fruit in space. Tianzhou-6 delivered 1.75 tons of propellant, with 700 kilograms provided to the space station for refuelling purposes.⁴ The successful launch of Tianzhou-6 and its upgraded

¹ Deng Xiaoci, "China successfully launches flagship cargo mission supporting China Space Station's new operation phase," *Global Times*, May 10, 2023, <https://www.globaltimes.cn/page/202305/1290494.shtml>

² Ibid.

³ Ibid.

⁴ Ibid.

capabilities contribute to the ongoing development and operations of the China Space Station; this will help China in research and development in space.

Analysing Chinese Reaction to the US House Selection Committee Recommendation on Making India Part of NATO Plus

By Manav Saini

The House Select Committee on the Strategic Competition between the United States and the Chinese Communist Party (CCP), under the leadership of Chairman Mike Gallagher and Ranking Member Raja Krishnamoorthi, has overwhelmingly approved a policy proposal aimed at bolstering Taiwan's deterrence capabilities. One of the key aspects of this proposal is to strengthen NATO Plus by including India. There are currently five members of NATO Plus, which are Australia, New Zealand, Japan, Israel, and South Korea, cooperating in defence and security. The Chinese-sponsored news website Global Times, allegedly the Chinese mouthpiece, reacted to this development. Global Times added that if India leans towards NATO and decides to join NATO Plus, it could negatively impact India's strategic autonomy, international standing, and relations with neighbouring countries.⁵

The article points out that India's official stance on NATO Plus membership is unknown, and while India may want to leverage the US and NATO framework to increase its influence and strategic leverage with China, it is cautious about being pushed into direct confrontation with China. The experts quoted in the article caution that India needs to maintain strategic autonomy and avoid taking sides to preserve its growing global status and leadership aspirations. They mention that joining NATO could have repercussions on India's relations with regional organisations like the Shanghai Cooperation Organisation (SCO), as well as its relationships with China and Russia.⁶

The article by Global Times suggests India not join NATO Plus and bandwagon with NATO against Russia and China. The article shows Chinese uneasiness about NATO's expansion as it could potentially increase India's influence in the region, which may harm China's influence. Additionally, Global Times mentions the US can push India into direct confrontation with China. However, it is worth noting that India is currently in direct confrontation with China since Galwan Valley Clashes. Moreover, the US did not push India in the Galwan Valley clashes. China's aggression on the LAC was the reason for the direct confrontation between India and China. SCO is already dominated by China. Therefore, there are limited ways to

⁵ Wang Qi, "US woos India to join 'NATO Plus' ahead of Modi-Biden meeting, harms New Delhi's strategic autonomy," *Global Times*, June 1, 2023,

<https://www.globaltimes.cn/page/202306/1291789.shtml> (accessed on June 4, 2023).

⁶ Ibid.

increase India's influence and decrease China's influence in SCO. In conclusion, Global Times' reaction indicates that China does not want India to join NATO Plus as they may have strategic implications for China's influence in the Indo-Pacific. India's relations with Russia may suffer if India joins NATO Plus. However, before making a decision, India needs to decide if relations with Russia and strategic autonomy are more important or if countering China's influence in Indo-Pacific by aligning with the Western bloc is more important.⁷

Geopolitics Rivalry to Dominate in the World in Artificial Intelligence

By Manav Saini

The creator of TikTok, ByteDance, is currently testing its own chatbot named "Grace." It's an experimental AI chatbot that is being tested internally and is still in its early phases. The chatbot was created using the collaborative platform called Feishu, often known as Lark internationally. Only a few people are currently working on the testing phase. ByteDance is making a second attempt to develop a chatbot in an effort to emulate the popularity of OpenAI's ChatGPT, a well-liked language model that was launched last year. It's crucial to remember that ChatGPT isn't formally accessible in China. ByteDance said in May 2023 that they looked into Tako, a chatbot that would aid users in searching for content on TikTok.⁸ In the Philippines, this feature was tested with a small group of users. Since its inception in 2012, ByteDance has been a staunch advocate for AI. They use AI algorithms in their well-known apps like TikTok and Douyin to suggest material to users based on their likes and actions. By generating filters and extra effects for users of short videos, ByteDance also uses AI to optimise videos. Other Chinese internet businesses like Baidu and Alibaba have also created services similar to ChatGPT. Alibaba's chatbot is known as Tongyi Qianwen, whereas Baidu's is called Ernie Bot. Additionally, businesses like SenseTime and iFlyTek have jumped on the trend of creating chatbots that are powered by AI.⁹ The United States and the European Union (EU) met at the Trade and Technology Council (TTC) summit on September 29, 2021. The meeting sought to address worries about artificial intelligence (AI) systems that violate human rights, specifically using China's social credit system as an illustration of a system that violates rights. The US and the EU expressed concern about social scoring systems being implemented by authoritarian governments because they

⁷ Wang Qi, "US woos India to join 'NATO Plus' ahead of Modi-Biden meeting, harms New Delhi's strategic autonomy," *Global Times*, June 1, 2023,

<https://www.globaltimes.cn/page/202306/1291789.shtml> (accessed on June 4, 2023).

⁸ Coco Feng, "TikTok owner ByteDance is testing ChatGPT-like chatbot as rush to provide challenge to OpenAI gathers steam," *SCMP*, <https://www.scmp.com/tech/article/3223559/tiktok-owner-bytedance-testing-chatgpt-chatbot-rush-provide-challenge-openai-gathers-steam>

⁹ Ibid.

pose a threat to fundamental liberties and the rule of law. According to an article, the TTC constitutes the first step in establishing an alliance based on a human rights-focused strategy for AI development in democracies.¹⁰

India-ASEAN military drills interrupted by allegedly China maritime militia

By Manav Saini

An incident occurred in the South China Sea during the ASEAN-India Maritime Exercise (AIME 2023). The exercise, which included many Southeast Asian nations and India, intended to improve collaboration and coordination among participating countries in maritime security operations. During the exercise, Chinese ships belonging to a Chinese maritime militia were spotted around 100 nautical miles away from the training zone. The presence of these ships, which were not part of China's navy, caused worry among the participating countries. It has been reported that China used this maritime militia to frighten or disrupt the naval drill. The activities of the Chinese militia boats were watched by Indian authorities, as well as Singapore and other participating countries. At least five militia boats were followed, as was a Chinese research vessel following them in the same direction. The Chinese vessels and Southeast Asian naval warships crossed paths but did not engage in any direct conflict. The event highlighted the tensions and worries surrounding the South China Sea, where China has territorial disputes with a number of regional countries. China claims a significant chunk of the South China Sea, including regions claimed by other countries. An arbitral tribunal in The Hague ruled in 2016 that China's claims were unlawful, but Beijing rejected the verdict. The presence of Chinese marine militia, as well as their behaviour during the AIME 2023 exercise, adds to the continuing regional tensions.¹¹

The incident emphasises the importance of maritime safety and the necessity for region-wide awareness and collaboration to avoid mishaps or miscalculations.

¹⁰ Benjamin Cedric Larsen, "The geopolitics of AI and the rise of digital sovereignty," *Brookings*, December, 8, 2022, <https://www.brookings.edu/research/the-geopolitics-of-ai-and-the-rise-of-digital-sovereignty/>

¹¹ "South China Sea: Asean-India drills stalked by Chinese maritime militia, sources say", *SCMP*, May 9, 2023, <https://www.scmp.com/news/asia/south-asia/article/3219866/south-china-sea-asean-india-drills-stalked-chinese-maritime-militia-sources-say>

China and the US Compete for Mining Cooperation in the Democratic Republic of the Congo

By Manav Saini

In the ongoing battle for access to key metals like cobalt, lithium, copper, and coltan in the Democratic Republic of the Congo (DRC), China and the United States are intensifying their efforts to secure mining cooperation. The DRC possesses vast reserves of these metals, making it a critical player in the development of green technologies such as electric vehicle (EV) batteries. While China has been a dominant investor in the DRC, the US is seeking to reduce Chinese influence and increase its own engagement. Historically, China has had a strong presence in the DRC, controlling a significant portion of the global EV battery market and the DRC's mining sector. The US, however, has recently shifted its focus to clean energy and is actively catching up. Under the leadership of President Joe Biden, the US is making strategic moves to compete with China for access to these crucial metals.¹²

President Félix Tshisekedi of the DRC has been pushing for an overhaul of mining contracts that he believes were poorly negotiated under his predecessor. During his visit to China, Tshisekedi sought to attract more Chinese investment to his resource-rich country and requested China's assistance in combating M23 rebels in the eastern part of the DRC. During their meeting in May 2023, Presidents Xi Jinping and Félix Tshisekedi agreed to regularly assess mining cooperation in the long-term interests of both countries. They also upgraded their bilateral relations to a comprehensive strategic cooperative partnership, the highest level of bilateral relations for China. The leaders discussed the reassessment of mining deals, including the Sicominex joint venture, a minerals-for-infrastructure contract signed between the DRC and Chinese companies in 2008. The DRC believes it was not adequately compensated for the minerals it contributed to the project. Negotiations for a new mining agreement for the Sicominex project are ongoing, and both countries expressed their commitment to solving any cooperation problems through friendly consultations. China pledged to encourage Chinese enterprises to invest in the DRC's new energy battery value chain development projects and support upgrades to its industrial chain. However, the DRC will need to improve its business environment and protect the rights of Chinese companies operating in the country.¹³

The US, on the other hand, is actively engaging with the DRC to secure its position in the clean energy revolution. It has provided financial support, signed agreements, and offered technical assistance to help the DRC develop its EV battery value chain.

¹² Daniel van Dalen, "Is the US subverting China's influence in the DRC?," *Think China*, March 01, 2023, <https://www.thinkchina.sg/us-subverting-chinas-influence-drc>

¹³ Ibid.; Jevans Nyabiage, "China and Congo agree to regular checks on mining deals," *SCMP*, May 27, 2023, <https://www.scmp.com/news/china/diplomacy/article/3222042/china-and-congo-agree-regular-checks-mining-deals?module=storypackage&pgtype=sport>

The US aims to become the preferred partner for EV battery exports, reducing its dependence on China.¹⁴

While China remains a dominant actor in the DRC's mining sector, recent developments indicate a growing shift toward the US. The DRC has an opportunity to leverage its position and negotiate more favourable terms from both China and the US. By balancing economic and diplomatic benefits from both countries, the DRC can advance its own development goals while attracting investment and support from two major global powers.

In conclusion, the competition between China and the US for mining cooperation in the DRC reflects the growing significance of clean energy and the demand for key metals. As the DRC seeks to maximise its benefits from both countries, it plays a crucial role in shaping the dynamics of this geopolitical rivalry in the clean energy race.

Significance of China Launching its Largest Seawater Uranium Extraction Test Platform

By Manav Saini

China National Nuclear Corporation (CNNC) has recently launched China's largest seawater uranium extraction test platform in Hainan Province. With a substantial area of about 670 square meters, this platform marks a significant milestone in China's pursuit of alternative uranium sources to meet its energy needs.¹⁵

Uranium is a vital raw material for nuclear power and is often referred to as the "food" of the nuclear industry. Currently, all nuclear fuel used worldwide is obtained through land-based uranium mining. However, the available land-based uranium resources are projected to last only about 100 years at the current consumption rate. In contrast, seawater holds a vast amount of uranium resources. It is estimated that seawater contains approximately 4.5 billion tons of uranium, making it nearly 1,000 times more abundant than land reserves. Recognising the escalating demand for natural uranium resources and the challenges associated with their extraction, China has prioritised the exploration and development of seawater uranium as a strategic imperative.¹⁶

To accelerate the engineering application of seawater uranium extraction technology, CNNC initiated an alliance for technological innovation in November 2019. This alliance collaborates with 14 domestic research institutes, aiming to achieve

¹⁴ Ibid.

¹⁵ "China's largest seawater uranium extraction test platform put into operation," *Global Times*, May 18, 2023, <https://www.globaltimes.cn/page/202305/1290953.shtml>

¹⁶ Ibid.

international leadership in the field by 2035. By 2050, the objective is to establish a large-scale seawater uranium extraction plant, enabling the engineering development and utilisation of seawater uranium resources.¹⁷

In May August 2022, Indian researchers and scientist from the Indian Institute of Science Education and Research (IISER), Pune, also extracted uranium from seawater to power their nuclear plants. Seawater samples were collected from the Arabian Sea at Juhu Beach in Mumbai for the purpose of uranium extraction. The researchers utilised an absorbent material, and the outcomes were remarkable, as it exhibited an unprecedented uranium uptake capacity of 28.2 mg per gram within a span of just 25 days.¹⁸

One of the key challenges in seawater uranium extraction is the low concentration of uranium in seawater. Experts emphasise that the choice of adsorption materials plays a crucial role in the success of seawater uranium extraction technology. Factors such as marine pollution, climate conditions, and ocean currents significantly impact the adsorption capacity of these materials. Consequently, the economic viability of seawater uranium extraction is contingent upon selecting suitable adsorption materials and managing the cost of marine engineering. The development of seawater uranium extraction holds immense promise as the ultimate guarantee to secure uranium resources.¹⁹ By tapping into the vast uranium resources present in seawater, China aims to ensure a long-term and sustainable supply for its nuclear power industry. This strategic shift reduces reliance on land-based uranium mining and addresses the growing energy demands of the nation.

In summary, the launch of China's largest seawater uranium extraction test platform signifies a significant step forward in the exploration and development of alternative uranium sources. By capitalising on the abundant uranium resources present in seawater, China aims to meet its energy requirements while reducing its dependence on land reserves. Through collaborative efforts and field tests, China is actively working towards achieving international leadership in seawater uranium extraction by 2035 and realising large-scale engineering development by 2050.

¹⁷ "China's largest seawater uranium extraction test platform put into operation," *Global Times*, May 18, 2023, <https://www.globaltimes.cn/page/202305/1290953.shtml>

¹⁸ Siby Tripathi, "Indian scientists extract record uranium from seawater that could power nuclear plants," *India Today*, August 11, 2023, <https://www.indiatoday.in/science/story/indian-researchers-extract-record-uranium-from-seawater-that-powers-nuclear-plants-1986196-2022-08-10>

¹⁹ "China's largest seawater uranium extraction test platform put into operation," *Global Times*, May 18, 2023, <https://www.globaltimes.cn/page/202305/1290953.shtml>

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