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Innovation Without Borders: The PRC's Use of Offshore Bases

By Cheryl Yu



Overseas sites of the National Offshore Entrepreneurial Base for Overseas Professionals Wuhan.
(Source: [Haizhi Exchange](#))

Executive Summary:

- The People's Republic of China (PRC) has set up a number of offshore innovation bases to acquire technologies in support of its ambitions for technological dominance and national rejuvenation.
- "Offshore innovation bases" in the PRC, mostly located in special high-tech development zones, collaborate with leading US universities, research and development centers, and united front organizations to attract overseas talents and experts to contribute to the country's innovation and development.
- One center in Beijing describes its aim as using its international collaborations to foster indigenous innovation "by exceeding the performance and cost-effectiveness of its competitors and breaking the United States's monopoly" in targeted fields.

On November 7, the People's Republic of China (PRC) Ministry of Commerce published a notice titled "Several Measures to Support Suzhou Industrial Park in Deepening the Comprehensive Experiment of Open Innovation (支持苏州工业园区深化开放创新综合试验的若干措施)." This document is intended in part to support the industrial park in building a number of "offshore innovation centers (离岸创新中心)" and, in doing so, to cement its role as a regional hub for science and technology innovation ([PRC Ministry of Commerce](#), November 21).

This is not the first time Beijing has promoted the idea of "offshore innovation" to attract foreign resources and talent for its benefit. Since 2015, the PRC has been experimenting with "overseas talent offshore innovation and entrepreneurship bases (国家海外人才离岸创新创业基地)," which can also be translated as "offshore innovation bases" or simply "offshore bases," of which there are 30 as of May 2024 ([China Education News Network](#), May 13). These offshore innovation bases are part of the Haizhi Plan (海智计划), which targets overseas experts in technical fields to enhance the PRC's development and help achieve national strategic objectives. [1] They emphasize the principle "focus not on location, but on contributions; focus not on ownership, but on utility (不求所在、但求所为; 不求所有、但求所用)," aiming to facilitate the flow of innovation resources and the flexible introduction of overseas talent ([China Education News Network](#), May 13). This system of innovation hubs, which are effectively platforms for technology transfer, has flown under the radar to date, but the way they operate and their connections to the United Front system suggest that they warrant scrutiny.

Offshore Innovation Bases Support National Strategy

Over the last decade, overseas talent bases have emerged through a combination of central government directives and local experimentation. The State Council published opinions in July 2017 and September 2018 that called for the construction of offshore innovation bases (PRC Central Government, [July 27, 2017](#), [September 18, 2018](#)). [2] As part of the Haizhi program, most of these bases have been established in free trade zones and high-tech industrial development zones through collaborations between the China Association for Science and Technology (CAST; 中国科学技术协会) and local governments. The original Haizhi program was launched in 2004. Over a decade later, in 2015, trial bases were set up in Shanghai, Shenzhen, Wuhan, and Suzhou. [3] The aim of these local experiments was to create a platform for recruiting international talent, incubating startups, and supporting professional services ([Chinese Preventive Medicine Association](#), June 6, 2016; [Fujian Taiwan Affairs Office](#), May 12, 2017).

Bases are required to establish cooperative relationships with at least 20 reputable overseas institutions and maintain a network of at least 500 overseas science and technology professionals to be classified as overseas talents offshore innovation and entrepreneurship bases ([Fukang People's Government](#), July 28, 2023). Offshore innovation bases involve collaborations with overseas entities such as universities, companies, and united front organizations, depending on each region's specific needs and strategic priorities.

The bases are part of the PRC's broader pursuit of its strategic goals through acquiring foreign technology and accessing international expertise. As stated in the 13th Five-Year National Science and Technology Innovation Plan, "strengthening the construction of offshore entrepreneurship bases for overseas scientific

and technological talent (加强海外科技人才离岸创业基地建设)” is part of a plan to “build a world-leading science and technology powerhouse (建成世界科技强国)” and achieve national rejuvenation ([PRC Central Government](#), August 8, 2016). This was echoed in October 2018 by the vice chair of the All-China Federation of Returned Overseas Chinese (中华全国归国华侨联合会), a united front organization, who stated that the bases offer an opportunity for overseas talents to support national rejuvenation ([China Net](#), October 17, 2018).

The bases are often located in special industrial zones, which the PRC government has set up for similar reasons. The 14th Five-Year Plan for National High-Tech Industrial Development Zones (‘十四五’国家高新技术产业开发区发展规划) encourages the growth of new development zones based on models such as “overseas research and development for domestic transformation, and overseas incubation for domestic acceleration (海外研发—国内转化、海外孵化—国内加速).” In other words, strengthening connections with international innovation hubs and economic cooperation zones to advance the PRC’s goals ([PRC Central Government](#), September 21, 2022).

Suzhou Industrial Park Ties to Harvard, MIT, UC Irvine

Offshore bases collaborate with foreign universities to set up offshore innovation centers. For example, Suzhou Industrial Park works with Harvard University to run the Harvard Weitz Innovation Hub, which was launched in January 2017 with the aim of cultivating over 100 projects and establishing a group of world-leading biotechnology companies ([SIP](#), January 20, 2017; [Free Wechat](#), August 5, 2017). David Weitz, Professor of Physics and Applied Physics at Harvard University, initiated the project. Weitz is a member of the National Academy of Sciences, the National Academy of Engineering and, in 2019, was selected as well as a foreign member of the Chinese Academy of Chemistry ([CAE](#), accessed December 18). Under his advocacy, in July 2017, Suzhou Industrial Park signed a cooperation agreement with the Harvard John A. Paulson School of Engineering and Applied Sciences to establish a China-Suzhou Offshore Innovation and Entrepreneurship Base at Harvard’s main campus ([Jiangsu Proprietary Technology Exchange Center](#), March 29, 2018; [Sohu](#), June 23, 2018).

Suzhou Industrial Park has also set up an overseas base at MIT’s Computer Science and Artificial Intelligence Laboratory ([Jiangsu Proprietary Technology Exchange Center](#), March 29, 2018). This “base” likely constitutes a multi-year research collaboration between the two institutions. According to MIT reports in 2017–2018, the collaboration focused on advancing the theoretical foundations of artificial intelligence (AI) ([MIT](#), accessed November 26). One project under this collaboration was led by Daniela Rus, the director of the AI lab at MIT, who is also a trustee of the Mohamed Bin Zayed University of Artificial Intelligence—a research institution in the United Arab Emirates with extensive links to the PRC’s military university ecosystem. Rus also co-founded Venti Technologies (苏州风图智能科技有限公司), an AI-powered autonomous vehicle company based in the Suzhou Industrial Park ([Sohu](#), November 20, 2019; [China Brief](#), August 15; [CSAIL](#), accessed November 26). The industrial park was listed as a sponsor of the MIT lab until at least 2021 ([MIT](#), accessed December 18).

Suzhou Industrial Park has also set up the Los Angeles Overseas Innovation Incubation Center at the University of California, Irvine. Established in 2019 by EcoKMC, a financial service company with an accelerator in China, the center supports technology transfer, business incubation, and market expansion to founders interested in settling in Suzhou ([2500sz.com](#), January 17, 2022; [SOECC](#), January 21, 2022; [EcoKMC](#), accessed November 26). Its strategic partner network comprises numerous investment institutions and research organizations that it helps bring to Suzhou ([SOECC](#), January 21, 2022; [Liepin](#), accessed November 26). Catherine Zhou (周清理), a member of the board of directors of the Beall Center for Innovation and Entrepreneurship at UC Irvine's business school and the CEO of EcoKMC, runs the center ([UC Irvine Paul Merage School of Business](#), November 6, 2018; [UC Irvine](#), Accessed November 26; [LinkedIn/EcoKMC LLC](#), accessed December 18). Zhou has also interacted with the Chinese Communist Party's (CCP) united front system ([2500sz.com](#), January 17, 2022). She was part of a delegation of the American-Chinese CEO Society that participated in united front events hosted by the Shanghai Federation of Returned Overseas Chinese and by a standing committee member of the Chinese People's Political Consultative Conference—the united front's central coordinating institution. Zhou has also previously been invited to attend a reception hosted by the PRC consulate general in Los Angeles ([The Chinese American Professors and Professionals Network](#), January 26, 2023; [Huarenca](#), February 24, 2023; [Nasdaq.tv](#), February 25, 2023).

Beijing Base Targets Tech Transfer

In December 2022, the Beijing Economic-Technological Development Area (BDA), one of the offshore innovation bases, recognized six overseas research and development institutions as its overseas offshore innovation centers, completing an accreditation process for them ([BDA](#), December 30, 2022). One of these institutions is the US research and development center of Synaptic Medical, a medical technology company. Beijing describes the center as leveraging the United States's advantages in research and development strengths and the PRC's clinical needs to develop treatments for heart arrhythmia ([BDA](#), April 12, 2023). Through its US-based center, the company gained authoritative clinical insights from working with some of the most highly skilled doctors currently treating this cardiovascular condition ([Beijing-China](#), January 13, 2023; [PitchBook](#), accessed November 27).

The center aims to “realize domestic substitution in this field by exceeding the performance and cost-effectiveness of its competitors and breaking the United States's monopoly (将以超越竞品的性能和性价比抢占市场，打破美国技术垄断，实现该领域的国产替代),” according to an article on the development area's website ([BDA](#), April 12, 2023). This clearly articulates Beijing's wider strategy to encourage technology transfer to become more self-reliant and achieve its technology goals. Strengthening the research and development of precision medicine and other medical technologies is one of the nine “major projects (重大项目)” in the 13th Five-Year National Science and Technology Innovation Plan.

Silex Microsystems, a world-leading micro-electromechanical systems manufacturer based in Sweden, is another company that was recognized as Beijing's offshore innovation center in December 2022. The company was acquired in 2016 by the partially state-owned Sai Microelectronics Inc (SMEI), in which the National Integrated Circuit Industry Investment Fund (also known as the “Big Fund”) is invested ([365PR.net](#),

September 30, 2020; [Silex Microsystems](#), accessed November 27). Although Sweden's Inspectorate of Strategic Products banned the export of Silex's technologies to Beijing in October 2021, the person in charge of Silex Beijing has stated that the recognition of the offshore innovation center "will effectively promote technical and personnel exchanges between Beijing and Sweden, accelerate the assimilation and adoption of advanced foreign technologies, and facilitate the domestic application and commercialization of technological achievements" ([Sohu](#), October 8, 2021; [Beijing-China](#), January 13, 2023). This suggests that technology transfer is still taking place.

United Front Organizations and Individuals

Offshore innovation bases collaborate with overseas united front organizations and individuals to connect with overseas experts. In 2017, the base in Wuhan worked with Sun Youshun (孙友顺), a united front-linked individual who has claimed to be an MIT professor, to set up a branch in Boston to foster relevant connections and facilitate technology transfer ([Chengdu University of Technology](#), April 15, 2011; [Hubei Association for Science & Technology](#), February 13, 2017; [Sohu](#), October 29, 2017; [GCTV](#), March 9, 2019). [4] Sun is also the founder of the Eastern US Innovation and Entrepreneurship Alliance (美东创新创业联盟), an organization committed to facilitating the localization and development of high-tech projects owned by overseas high-level talents ([Zhengzhou High-tech Industrial Development Zone Management Committee](#), April 30, 2019). In November 2023, the organization signed a strategic collaboration agreement with the Tianjin offshore innovation base to expand its recruitment channels ([Tianjin Municipal People's Government](#), January 4). Sun is also an expert committee member of the Jilin Federation of Returned Overseas Chinese ([Jilin Province FROC](#), July 25, 2017). The Tianjin base also works with a number of other overseas united front organizations. [5]

Beyond Wuhan and Tianjin, other offshore bases also work with united front organizations. For instance, Shanghai works with the Chinese Association for Science and Technology USA (中国旅美科技协会), the All-Japan Federation of Overseas Chinese Professionals (中国留日同学总会), and the New Zealand China Council for the Promotion of International Trade (新西兰中国国际贸易促进委员会) ([CHRDC](#), September 8, 2016; [Sohu](#), December 12, 2017; [The Paper](#), May 7). Meanwhile, the base in Chengdu works with organizations such as the SoCal Association for Biomedical and Pharmaceutical Advancements (美中生物医学与制药协会) in San Diego and the Canada China Club (加拿大华创会) ([Sichuan Online](#), July 11, 2017; [China News](#), September 22, 2017).

Conclusion

Across the 30 offshore bases throughout the PRC, each employs slightly different approaches to attract foreign expertise and technical investment. The overarching goal of the bases, however, remains consistent: leverage global resources and talent in the service of the country's global ambitions. Through partnerships with world-leading universities, research and development centers, and united front organizations, the bases serve as a critical tool for acquiring technology from overseas and indigenizing it. No research exists to date into the potential dual-use nature of technologies developed through such collaborations, the effect of the

bases on foreign entities, or the national security implications of such operations. As this preliminary study suggests, to the extent that such collaborations further PRC strategic objectives, as they are explicitly intended to, the end results are unlikely to be positive for the Western companies and universities involved.

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Notes

[1] The Haizhi Plan is also known as the “Help Our Motherland through Elite Intellectual Resources from Overseas” (HOME) Program and the “Action Program for Overseas Intelligence for the Country.”

[2] These were titled “Opinion on Strengthening the Implementation of the Innovation-Driven Development Strategy to Further Advance Mass Entrepreneurship and Innovation (关于强化实施创新驱动发展战略进一步推进大众创业万众创新深入发展的意见)” and “Opinion on Promoting High-Quality Development of Mass Entrepreneurship and Innovation to Create an Upgraded Version of ‘Mass Entrepreneurship and Innovation’ (关于推动创新创业高质量发展打造“双创”升级版的意见).”

[3] At a November 2018 meeting in Qingdao to discuss implementing the spirit of the Haizhi Program, CAST confirmed that the construction of overseas talent bases was an upgraded version of the Haizhi Program ([Qingdao Association for Science and Technology](#), December 5, 2018).

[4] *China Brief* was unable to identify a person matching the identity of Sun Youshun working at MIT. There was a Sun Youshun, who completed a PhD and was working as a postdoctoral researcher at MIT in 2006, but no information could be found to corroborate these claims from the ensuing 18 years.

[5] These include the Association of Chinese Professionals in Belgium (旅比华人专业人士协会), the Euro-American Elite Innovators Association (欧美精英创业家协会), the North America-China Scholars International Exchange Center (北美洲中国学人国际交流中心), the Association d’Incubateur Franco-Chinois (法中孵化器联盟协会), and the Zhigui Science and Innovation Center in the United Kingdom (英国智归科创中心) ([Changzhou FROC](#), January 15, 2007; [ACFROC](#), July 2, 2019; [Sohu](#), January 27, 2023; [ACFROC](#), May 4, 2023; [52hrtt.com](#), November 10, 2023; [Tianjin Municipal People’s Government](#), January 4; [National Offshore Entrepreneurial Base for Overseas Professionals Tianjin Binhai](#), accessed November 13).

Instead of Joint Sword-2024C, PLA Intensifies Winter Naval Training

By Cheng-kun Ma and K. Tristan Tang



PLA Navy Southern Theater Command formation conducts training. (Source: PLA Daily)

Executive Summary:

- People's Liberation Army (PLA) naval training drills near Taiwan and surrounding the First Island Chain on December 9–11 did not constitute a full-scale joint exercise but sent a signal to the incoming US administration.
- Beijing's power projection demonstration, involving 60 vessels, signals to President-elect Trump that its naval capabilities in the Western Pacific are comparable to those of the US Seventh Fleet based in Japan.
- The PLA Navy appears to be intensifying its winter naval training around the waters of the First Island Chain, sustaining a sizeable naval presence over eight consecutive days. Coast Guard involvement indicated a possible circumnavigation of Taiwan.
- Taiwan's mobilization seems precautionary rather than a response to an immediate threat, with its Ministry of National Defense establishing a response center and mobilizing forces to maintain a heightened state of readiness.

On December 9, Taiwan's Ministry of National Defense (MND) publicly announced that the People's Republic of China (PRC) had designated seven areas east of Zhejiang and Fujian as temporarily reserved airspace ([MND](#), December 9). At first, there was confusion over the nature and scale of the PRC activities. A senior Taiwanese security official stated that about 90 People's Liberation Army Navy (PLAN) and China Coast Guard (CCG) vessels were operating around the First Island Chain—a record number—while an anonymous US official stated that the scale instead was consistent with previous activities (Reuters, December [10](#); [11](#)).

The latest drills, which occurred on December 9–11, were not another iteration of the “Joint Swords” exercises. [1] Instead, they appear to have been training drills (演訓), not only involving training (訓練) but also certain scenario simulations aimed at strengthening the PLAN's winter far-sea operational capabilities. They also appear to signal to US President-elect Trump's incoming national security team that the two navies possess comparable capabilities in the Western Pacific.

Latest Training Drills See Sustained Naval Presence Encircling Taiwan

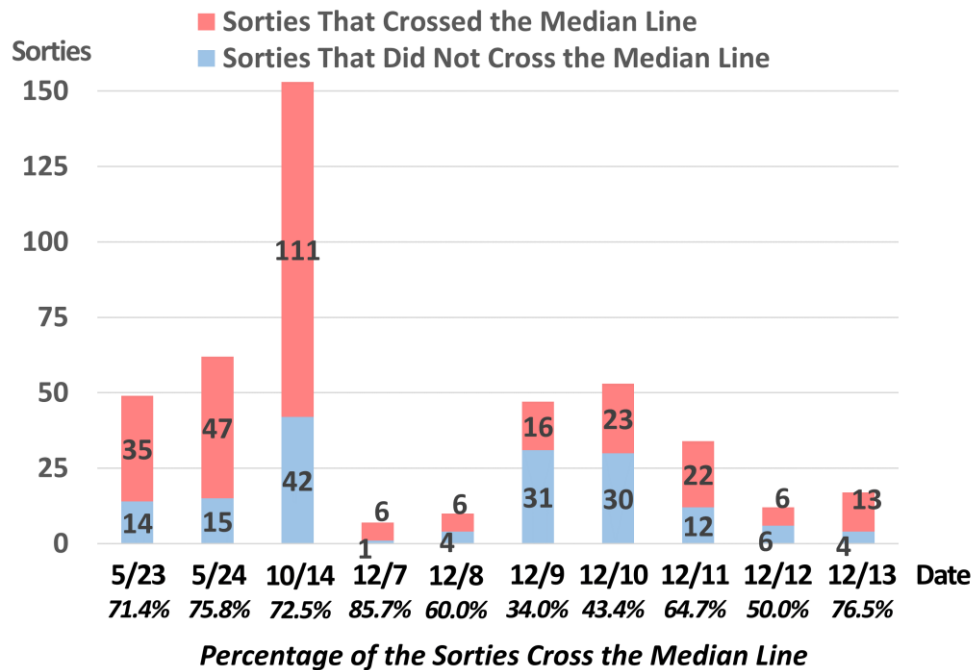
Three important observations from the recent training drills concern the relatively small number of aerial sorties that took place, the sustained presence of a large number of naval vessels in waters surrounding Taiwan, and the involvement of CCG patrol vessels circling the island.

First, the number of PLA aircraft sorties crossing the median line, both in absolute terms and as a proportion of all sorties, was significantly lower than during previous military exercises targeting Taiwan. Total daily sorties detected over the three days were 47, 53, and 34, respectively, with those crossing the median line accounting for 34 percent, 43 percent, and 64.7 percent of total sorties, according to data released by Taiwan's Ministry of National Defense. A comparison of these numbers with those from other events in 2024 is shown in Figure 1 (MND, May [24](#), [25](#), [October 15](#), December [8](#), [9](#), [10](#), [11](#), [12](#), [13](#), [14](#)).

The degree of immediate threat posed by the daily sorties announced by Taiwan's Ministry of National Defense varies. The most immediate and severe threats come from the sorties that cross the median line and fly close to Taiwan's 24-nautical-mile contiguous zone, as Taiwan's military would have barely any time to react. The second-most immediate threat comes from aircraft that cross the median line but operate within Taiwan's southwestern waters and airspace. These aircraft are further from the 24-nautical-mile contiguous zone, providing Taiwan with relatively more reaction time. The lowest level of immediate threat comes from aircraft that do not cross the median line and operate outside the northern and southern ends of the strait and in the airspace on the northernmost and southwestern edges of Taiwan's air defense identification zone. This distinction explains why the Ministry of National Defense only disclosed the number of aircraft that crossed the median line before August 2022.

In the December training drills, relatively few sorties approached Taiwan's adjacent airspace and could be deemed immediate threats. The daily number of sorties operating in the southwestern airspace averaged 15. [2] Beyond these, PLA Air Force (PLAAF) sorties approaching Taiwan each day numbered 1, 8, and 6, accounting for 2.1 percent, 15.1 percent, and 17.6 percent of total sorties, respectively. Flight paths are illustrated in Figure 2, and the trends are shown in Figure 3.

Figure 1: Trends in PLA Sorties Around Taiwan

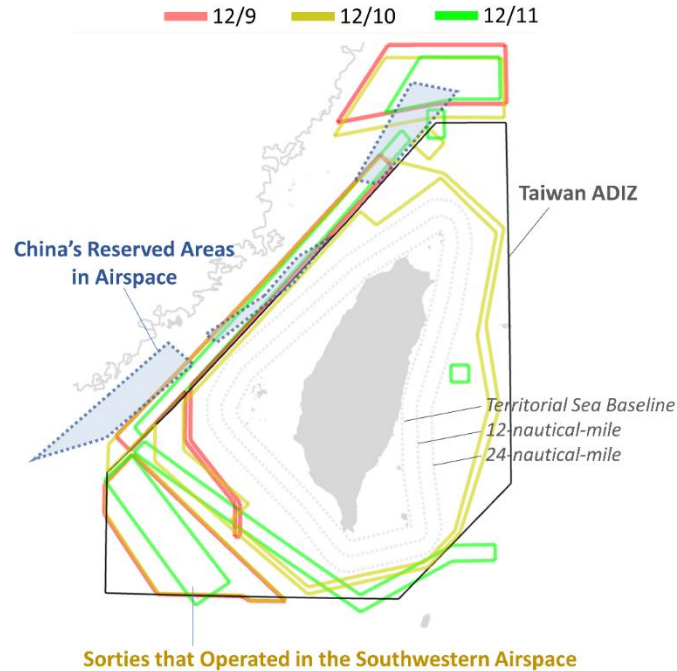


(Source: Compilation by RCDA Based on ROC MND Press Releases)

Second, the number of PLAN vessels operating near Taiwan has increased and persisted for several days. The number of PLAN vessels in waters surrounding Taiwan exceeded 10 each day during the drills, with 12, 11, and 16 ships observed, respectively (MND, December [10](#), [11](#), [12](#)). This number is equivalent to nearly half the total number of destroyers and frigates that Taiwan's Navy can routinely deploy at any given time, imposing considerable strain on Taiwan's training, logistics, maintenance, and personnel rotation. [3] In response, all first-class warships—Taiwan's main combat vessels—stationed at Zuoying Naval Base were deployed on December 10, according to Taiwanese media reports ([UDN](#), December 10).

For Taiwan, the number of PLAN vessels present in its surrounding waters is a significant threat indicator. From December 5–12, the PRC regularly maintained a presence of over 10 naval vessels operating in waters around Taiwan (MND, December [6](#), [7](#), [8](#), [9](#), [10](#), [11](#), [12](#), [13](#), [14](#)). In other words, the PLA sustained significant naval pressure on Taiwan for almost eight consecutive days. This is not the first instance of such high-intensity naval coercion by the PLA. For example, the PLA deployed more than 10 naval vessels in the vicinity of Taiwan almost every day over the period of August 12–19 this year (MND, August [13](#), [14](#), [15](#), [16](#), [17](#), [18](#), [19](#), [20](#)).

Third, many CCG vessels were present in waters around Taiwan for prolonged periods and successfully carried out extensive patrols circling the island. Taiwan's Coast Guard Administration announced that starting December 6, the CCG deployed three vessels to conduct patrols in waters east of Taiwan ([CGA](#), December 10). On December 9, four additional vessels were dispatched through the Taiwan Strait toward waters southwest of Taiwan. While Taiwan's Ministry of National Defense announced the establishment of an emergency response center on December 9, the Coast Guard Administration had already set up such a center on December 6 to address the unusual CCG activities.

Figure 2: Flight Paths of PLA Aircraft Activities Around Taiwan from December 9 to 11

(Source: Compilation by RCDA Based on ROC MND Press Releases)

A total of nine CCG vessels operated around Taiwan. These included the 2203, 2302, 2304, and 2307 vessels, which initially operated in Taiwan's southwestern waters before sailing to its eastern waters, as well as the 2901, 1301, and 1302 vessels and two additional Coast Guard ships ([CNA](#), December 13). These vessels finally departed Taiwan's eastern waters between December 12 and December 13, sailing northward. The closest approach of the CCG to Taiwan's coastline was 36.7 nautical miles, and none of the vessels entered Taiwan's 24-nautical-mile contiguous zone ([LTN](#), December 14).

Naval Drills Focused on First Island Chain

As of December 10, approximately 60 PLAN vessels were operating near Taiwan, the southern Japanese islands, and the East and South China Seas, according to information disclosed by anonymous Taiwanese officials ([Reuters](#), December 10). No further details about the distribution of these vessels across the various waters are currently available. The following two observations are based on publicly accessible information.

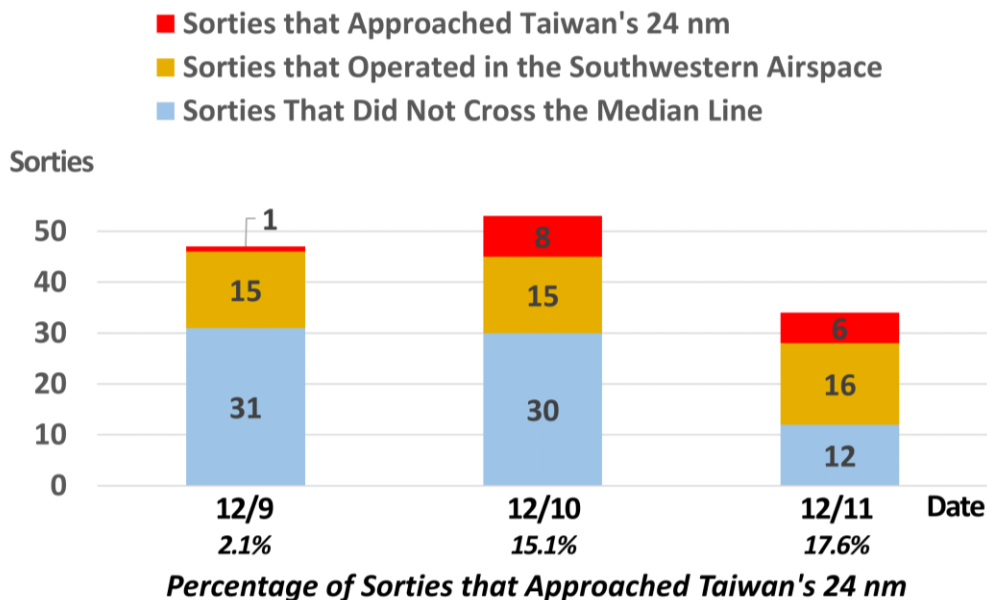
First, at least 12 PLAN vessels were operating in the Philippine Sea, potentially circumnavigating Taiwan. According to data from Japan's Ministry of Defense Joint Staff, 14 PLAN vessels passed through waters near Japan's southwestern islands within a month before December 9, with most movements concentrated between November 27 and December 12 (Joint Staff, November [27](#), [28](#) [\[1\]](#), [\[2\]](#), December [2](#), [4](#), [6](#), [9](#), [11](#), [12](#)). Of these vessels, 12 were likely part of the PLA's activities on December 9–11 (the Type 054A frigates with hull numbers 542 and 548 returned to the East China Sea before December 1). This is a conservative estimate, as the data from Japan's Ministry of Defense only accounts for vessels transiting through the southwestern Japanese

islands and does not include those entering or exiting the Philippine Sea via waters between Taiwan and the Philippines. Details of specific PLA Navy vessels are listed in Table 1.

Among the 12 vessels, most entered the Philippine Sea from the East China Sea between December 4 and December 7 and returned to the East China Sea between December 11 and December 12. They primarily exited the East China Sea through the Miyako Strait, part of Japan's Ryukyu Islands, and the Osumi Strait, near Japan's Kyushu Island. All returning vessels, however, navigated through the Miyako Strait, which is closer to Taiwan.

A potential circumnavigation of Taiwan may have involved eight PLAN vessels. The Type 052C destroyer with hull number 153, the Type 052D destroyers with hull numbers 135, 154, and 155, and the Type 054A frigate with hull number 577 are only recorded by Japan's Ministry of Defense Joint Staff departing the East China Sea. Conversely, the Type 054A frigate with hull number 534 and the Type 056A corvettes with hull numbers 608 and 615 are only recorded entering the East China Sea from the Philippine Sea. A single recorded entry into or exit from the waterways of Japan's southwestern islands suggests that these vessels may have passed through the waters between Taiwan and the Philippines. Most of these ships are based at ports along the coasts of Zhejiang and Fujian Provinces under the PLAN's Eastern Theater Command, implying a possible circumnavigation of Taiwan. A potential route could involve departing from the homeport in Zhejiang, transiting through the East China Sea, the waterways of Japan's Southwestern Islands, the Philippine Sea, the Bashi Channel between Taiwan and the Philippines, the South China Sea, the Taiwan Strait, and back to the East China Sea before returning to the homeport in Zhejiang. Alternatively, the sequence could be reversed.

Figure 3: Trends in PLA Sorties Around Taiwan Over December 9 –11



(Source: Compilation by RCDA Based on ROC MND Press Releases)

Second, the frequency of PLA aircraft activity was significantly reduced compared to naval operations. According to information released by Japan's Ministry of Defense, a Y-9 aircraft and a drone flew from the East China Sea to the Philippine Sea on December 9 and 10, respectively (Joint Staff, December 9, 10). Meanwhile, Taiwan's Ministry of National Defense (MND) reported that one PLA aircraft and one drone flew from the Bashi Channel to the Philippine Sea on December 11 (MND, December 12). Their flight paths indicate they may have been part of a pattern training drill coordinated with PLAN vessels. The minimal PLAAF involvement, however, fell short of the scale expected for a joint exercise. A clear contrast can be seen in the PLAAF's long-distance training drill on November 30, when 12 PLA aircraft and 2 Russian aircraft flew through the Miyako Strait into the Philippine Sea (Joint Staff, November 30). A comparative chart is shown in Figure 4.

The PRC government did not announce the activities on December 9–11 as a military exercise, indicating that they were not intended as a fourth iteration of the “Joint Sword” exercises. The training drills instead focused on naval vessel operations and simulations, with naval formations conducting separate exercises in different maritime areas, including the Philippine Sea, the East China Sea, the South China Sea, and waters surrounding Taiwan, rather than being part of a single large-scale military exercise.

Table 1: Maneuvers of PLA Naval Vessels Through Japan's Southwestern Islands Waterways

Hull Number	Date	Exiting or Entering the East China Sea	Strait	Special Note	
153	11/27	Exiting	Miyako Strait	Only a Single Record	
542	11/28		Tsushima Strait	Unrelated to This Training Drill	
548			Miyako Strait		
542	11/29	Entering	Tsushima Strait		
548	12/1				
154	12/4	Exiting	Miyako Strait	Only a Single Record	
155					
577					
132	12/5		Osumi Strait		
134					
529					
135	12/7		Miyako Strait	Only a Single Record	
530					
534	12/11			Only a Single Record	
132	12/12				
134					
529					
530					
608					
615				Only a Single Record	

(Source: Compilation by RCDA Based on Press Releases of Japan's Ministry of Defense Joint Staff)

The extent of “jointness” on show between the Navy and Air Force was limited. Aside from the two aircraft that entered the Philippine Sea from the airspace near Japan’s southwestern islands, only two aircraft were reported by Taiwan’s MND to have flown beyond the First Island Chain through the airspace between Taiwan and the Philippines, which occurred on December 11. This suggests that the training drill was likely primarily focused on the PLAN. Although Taiwanese officials have described the number of PLAN vessels as significant, the scale has not exceeded that of previous large-scale PLA military exercises, according to an unnamed US military official ([Reuters](#), December 11).

PLAN Ships Rival US Seventh Fleet

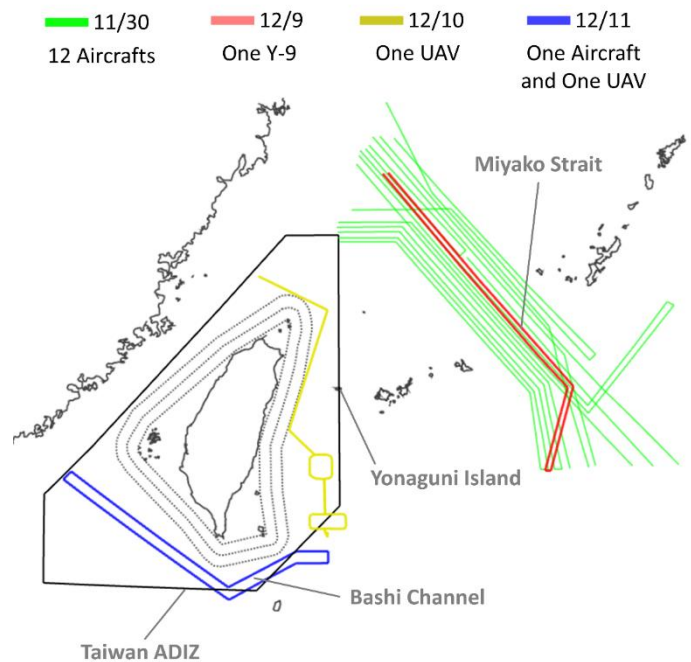
There are two military implications from the recent drills. First, the PLAN has shifted from its usual practices to test and enhance its winter combat capabilities. Typically, after a year of military training and exercises, the PLA conducts fewer such activities during the winter months, with naval vessels sailing less frequently and in smaller numbers than in other seasons. This winter training drill, mobilizing most of the main combat ships of coastal Theater Commands and sustaining them for a week, breaks this norm. Naval forces from various theater commands now conduct far-sea training exercises even during the winter, enhancing their combat capabilities during this season.

Second, many of the proactive military preparations taken by Taiwan’s Ministry of National Defense aim to counter the PLA’s demonstrated potential capability to attack Taiwan as a necessarily precautionary measure. On December 9, the ministry swiftly established a response center and deployed many active-duty units to key areas ([MND](#), December 9; [UDN](#), December 10). These measures were taken in response to the PLA’s large-scale mobilization, which signals a potential capability to attack Taiwan rather than indicating an imminent crisis of attacking Taiwan. The PLAN’s presence around Taiwan, in the East China Sea to the north, the South China Sea to the south, and the Philippine Sea to the east, consisted of 60 warships. Under emergency orders from Xi Jinping, Chairman of the Central Military Commission, these vessels could converge around Taiwan within 24 hours. The PLAAF’s sorties near Taiwan were limited during these drills, but it still maintained a large number of aircraft in the air, with additional units on the ground capable of taking off and reaching Taiwan’s surrounding airspace within 1–2 hours. Taiwan’s preparatory measures should be viewed as precautionary actions in this light, continuing to focus on preventing a transition “from a training drill to an exercise, and from an exercise to combat (由訓轉演、由演轉戰),” in the words of defense officials ([RW News](#), September 19; [UDN](#), December 11).

The December training drill also carries strategic significance. It demonstrates the PLA’s capacity to project combat power simultaneously to the surrounding waters of the First Island Chain to the incoming US administration, even if available sources cannot prove this to have been the PLA’s intention. The PLAN forces involved in the training drills have reached a level capable of rivaling the US Seventh Fleet—the largest forward-deployed US fleet, based in Japan—which typically operates with approximately 50–70 surface ships and submarines ([USINDOPACOM](#), January 23, 2021). The United States benefits from the cooperative combat capabilities of regional navies, but the PRC can leverage its land-based long-range missile strike capabilities, particularly its medium-range anti-ship ballistic missiles, to significantly enhance the PLA’s far-sea area-denial operational capacity.

The PRC's demonstration of its capacity to deploy so many naval vessels around the First Island Chain extends beyond weaponry and combat capabilities to also include logistical support. For the PLAN to deploy 60 warships for training drills lasting a week requires logistics units to ensure the ships are prepared for deployment, maintain operational readiness before the drills, and handle post-mission servicing and repairs upon returning to port.

Figure 4: Flight Paths of PLA Aircraft Penetrating the First Island Chain and Advancing into the Philippine Sea



(Source: Compilation by RCDA Based on Press Releases of ROC MND and Japan's Ministry of Defense Joint Staff)

Conclusion

Beijing's recent drills around Taiwan and the First Island Chain were intended to demonstrate that its navy's overall operational capacity under current normal conditions has reached a level in the Western Pacific comparable to that of the United States. While the training drills did not amount to a full joint exercise on the scale of other activities this year, they nevertheless involved a significant number of vessels operating for a sustained period. The unusual timing of the drills suggests that they may have been intended to signal the PLA's power projection capacity to the incoming US administration.

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Notes

[1] For more on Joint Sword, see *China Brief*, [May 5, 2023](#); [July 26](#); [October 18](#); [November 1](#).

[2] These figures exclude sorties in airspace further away from Taiwan.

[3] For more related assessments, see [Pacnet Commentary at Pacific Forum](#), September 23.

PLA Steps up Security Cooperation With Russia in 2024

By Yu-cheng Chen



A PLA Xi'an-H6K Bomber, similar to the ones used in a recent joint patrol with Russia. (Source: [Wikipedia](#))

Executive Summary:

- This year's second joint aerial patrol between the People's Republic of China (PRC) and Russia marked the debut of the nuclear-capable H-6N bomber, demonstrating Beijing's intent to project nuclear deterrence and challenge Western strategic dominance.
- The two countries have expanded security cooperation this year, including through joint maritime drills near Alaska and in the Arctic.
- A month-long joint patrol between the China Coast Guard and its Russian counterpart in the Arctic shows the expansive scope of Beijing's defined maritime rights and interests and indicates its growing presence in the Arctic.

On November 29, the People's Republic of China (PRC) and Russia conducted their ninth "Joint Strategic Air Patrol (联合空中战略巡航)," their second of 2024 ([People's Daily Online](#), November 30). During the operation, the PRC deployed its H-6N bomber, the first time the People's Liberation Army (PLA) has introduced a bomber with nuclear capabilities into such patrols. The flight traversed the Sea of Japan and the East China Sea without entering Japanese or Republic of Korea's airspace, though it still garnered attention from the United States and regional actors ([Global Times](#), November 29; [Reuters](#), November 30). This patrol was the first such military cooperation conducted following the US presidential election, though it was not necessarily unusual—the seventh joint strategic air patrol took place at a similar time in 2023 ([MND](#), December 14, 2023).

The patrol is part of increasing Sino-Russian military cooperation, which seeks to increase deterrence against the United States and its allies, as well as seeking to more proactively assert the two countries' rights and interests. Over the past few months, the two countries have coordinated in two maritime exercises, as well as joint maritime law enforcement activities in the Arctic Sea. This latter exercise indicates the PRC's growing interest in using Russia to expand its presence in the Arctic.

Sino-Russian Patrol Ventures Into Seas Around Korea, Japan

Since 2019, the PRC and Russia have jointly conducted aerial patrols as part of their annual military cooperation plans. Each year, PLA and Russian military aircraft enter the Republic of Korea's air defense identification zone once or twice under the guise of military exercises or strategic patrols. They have never provided prior notification of their operations ([Yonhap News](#), November 29).

A total of 27 aircraft were involved in the two-day Sino-Russian joint strategic aerial patrols, according to a report from the Japanese Ministry of Defense's Joint Staff. The report noted that two of the PLA's H-6 bombers and two J-16 fighter jets flew from the East China Sea to the Sea of Japan on November 29. That same day, two H-6 bombers and two Russian Tu-95 bombers conducted long-range flights from the Sea of Japan to the East China Sea. During the patrol over the Sea of Japan, a Russian fighter jet joined the formation ([NHK](#), November 30). Prior to the joint patrol, a PLA's Y-9 electronic reconnaissance aircraft had already flown from the East China Sea to the Sea of Japan ([Liberty Times](#), December 1). This means that a total of 10 Chinese and Russian aircraft, including bombers, conducted operations near Japan.

On November 29, five PLA and six Russian military aircraft entered and exited the Republic of Korea's air defense identification zone without prior notice. None of these aircraft violated the country's airspace, just as in the December 2023 iteration of the patrols ([USNI News](#), December 14, 2023; [UDN](#), November 29). During the operation, PRC military aircraft entered the air defense identification zone from the southwest near Socotra Rock (also known as Ieodo) and flew toward Dokdo (also known as the Liancourt Rocks), while Russian military aircraft approached Dokdo from the northeast. The two groups of aircraft converged over waters south of Dokdo, loitered in the airspace briefly, and then returned to their respective bases.

On November 30, the Japanese Ministry of Defense reported the presence of a total of 17 PLA and Russian bombers and fighter jets operating in airspace around Japan. These bombers were observed flying from the

PRC, passing between Okinawa's main island and Miyako Island, and heading toward the Pacific Ocean. During the operation, four PLA's J-16 fighter jets, one additional PLA's military aircraft, and one Y-20 aerial refueling aircraft joined the formation. Subsequently, the four bombers reversed course over the Pacific Ocean and flew back through the airspace between Okinawa and Miyako Island before heading to the East China Sea ([CNA](#), December 1).

PLA Advances Strategic Deterrence Capabilities

On November 29, the PRC Ministry of National Defense released a brief statement regarding the joint strategic aerial patrol, stating that it was conducted "in accordance with the annual cooperation plan between the Chinese and Russian armed forces (根据中俄两军年度合作计划)" ([MND](#), December 14, 2023). This annual joint patrol, a hallmark of bilateral military cooperation since 2019, is part of a broader annual cooperation framework.

Unlike in previous years, this year's operation saw the participation of the H-6N strategic bomber—which is capable of carrying nuclear weapons—for the first time ([Xinhua](#), November 29). Official media channels shared images and videos on social media, including X and Weibo. These posts highlight that this was the first time the H-6N was involved in such a combat patrol, though they do not explicitly mention its nuclear capabilities ([Weibo/CCTV](#), November 29; [X/@CCTV Plus](#), November 30). The incorporation of these aircraft as part of the patrols underscores recent advances in the PLA's military technology and capabilities.

According to state-owned media the *Global Times*, the joint strategic aerial patrol had two main aims. First, it was intended to strengthen mutual trust and cooperation between the two militaries. Second, it formed part of broader preparations for comprehensively addressing regional and global security challenges. The report cited PLA officials emphasizing the H-6N's improved aerial refueling capability compared to that of the H-6K (an earlier model), enabling it to undertake longer-range missions and significantly expanding the strategic reach of the PLA Air Force ([Global Times](#), November 29).

The joint patrol also extended the strategic messaging established during the eighth iteration of the exercise in late July, when Chinese and Russian bombers flew to within approximately 200 miles of Alaska's coastline. These operations demonstrate Beijing's intent to showcase its nuclear deterrence capabilities to the United States and other Western nations. This aligns with growing concerns within the US government regarding the PRC's expanding nuclear arsenal and strategic ambitions ([ICCS](#), September 4; [DOD](#), December 18).

Sino-Russian Cooperation as Counterbalance to Western Powers

The intensification of Sino-Russian military cooperation reflects the two countries' shared objective of counterbalancing Western powers, particularly the United States ([CNA](#), September 19). Both nations face mounting pressure from the West. Russia has been subjected to severe sanctions and diplomatic isolation following its invasion of Ukraine, while Beijing increasingly has been embroiled in disputes with Washington over issues such as Taiwan and the South China Sea. This shared predicament has driven both countries to strengthen their strategic partnership and bolster military collaborations ([CNA](#), May 24).

In recent months, the PRC and Russia have expanded security cooperation not only in joint military exercises but also in maritime law enforcement operations. Beginning with the first Sino-Russian bomber patrol over the Bering Sea in July 2024 and extending to subsequent operations in the Sea of Japan, the frequency and geographic range of this cooperation have steadily increased. This development highlights a growing level of mutual trust and interoperability.

The two nations have conducted two military exercises together this year, “North-Joint 2024 (北部·联合-2024)” and “Ocean-2024 (海洋 2024)” (*EDM*, November [14](#), [18](#)). These drills have raised concerns within the North Atlantic Treaty Organization (NATO) about potential security threats posed to Europe and the Indo-Pacific region by Sino-Russian activities and have emphasized the two nations’ capability to coordinate responses to perceived strategic challenges in both maritime and aerial domains, and their willingness to enhance that capability ([RTI](#), September 9).

Beyond military coordination, the first-ever joint patrol conducted by the China Coast Guard (中国海警) and the Russian Federal Security Service took place in Arctic waters on October 2 ([CCTV](#), October 2; *EDM*, October 8). This patrol marked a significant milestone in Sino-Russian maritime cooperation. The timing coincided with the PRC’s National Day celebrations and the 75th anniversary of diplomatic relations between the two nations on October 1. During the patrol, China Coast Guard vessels were tested in the harsh Arctic environment, demonstrating their resilience to extreme weather ([Polar and Ocean Portal](#), October 10). The joint patrol was conducted within Russia’s exclusive economic zone and the Bering Sea near Alaska ([World Journal](#), October 2).

Both nations are increasingly focused on the protection and development of infrastructure, trade, and other activities in the Arctic. As the region’s ice recedes due to global warming, the Northern Sea Route is becoming more viable, enhancing its strategic importance. The route offers a shorter maritime passage between Europe and Asia but also provides opportunities to exploit the region’s abundant natural resources. The two countries envision a jointly developed “Ice Silk Road,” with a ship named the “Arctic Express” making the inaugural journey this summer as part of the project from Arkhangelsk in Northern Russia to Shanghai (*EDM*, September 5).

Key details in PRC coverage of the activities illustrate the unusual extent of this operation for the China Coast Guard. These include noting that the China Coast Guard vessels traveled a total of 17,000 nautical miles up to the Arctic and back to defend “maritime rights and interests (海洋维权).” The Coast Guard vessels spent a month on the water, indicating that this was also an attempt to train endurance and resilience and test the Coast Guard’s capacity for protracted missions. It also underlines the increasingly expansive scope of Beijing’s definition of the extent of its interests far beyond its borders and waters. The two countries’ coast guards engaged in a number of maritime security-related activities during the operation, as well as taking part in sports and other cultural exchanges, which suggests a desire for long-term cooperation between the two organizations. Such actions are seen as setting a precedent for future bilateral maritime cooperation ([Xinhua](#), October 18).

Conclusion

Recent exercises between the PRC and Russia involved both countries' air forces, navies, and respective coast guards. This is evidence of the strength of the bilateral relationship and the desire from both sides for enhanced security cooperation.

The route taken in the joint aerial patrol in November indicates that the two countries continue to refuse to recognize the Republic of Korea's air defense identification zone, while their deliberate traversing of key maritime corridors surrounding Japan is another element of persistent gray zone tactics used against these and other countries in the region. Taken together, these activities also demonstrate the strategic resolve of both countries to counterbalance perceived encirclement by Western allies in the region.

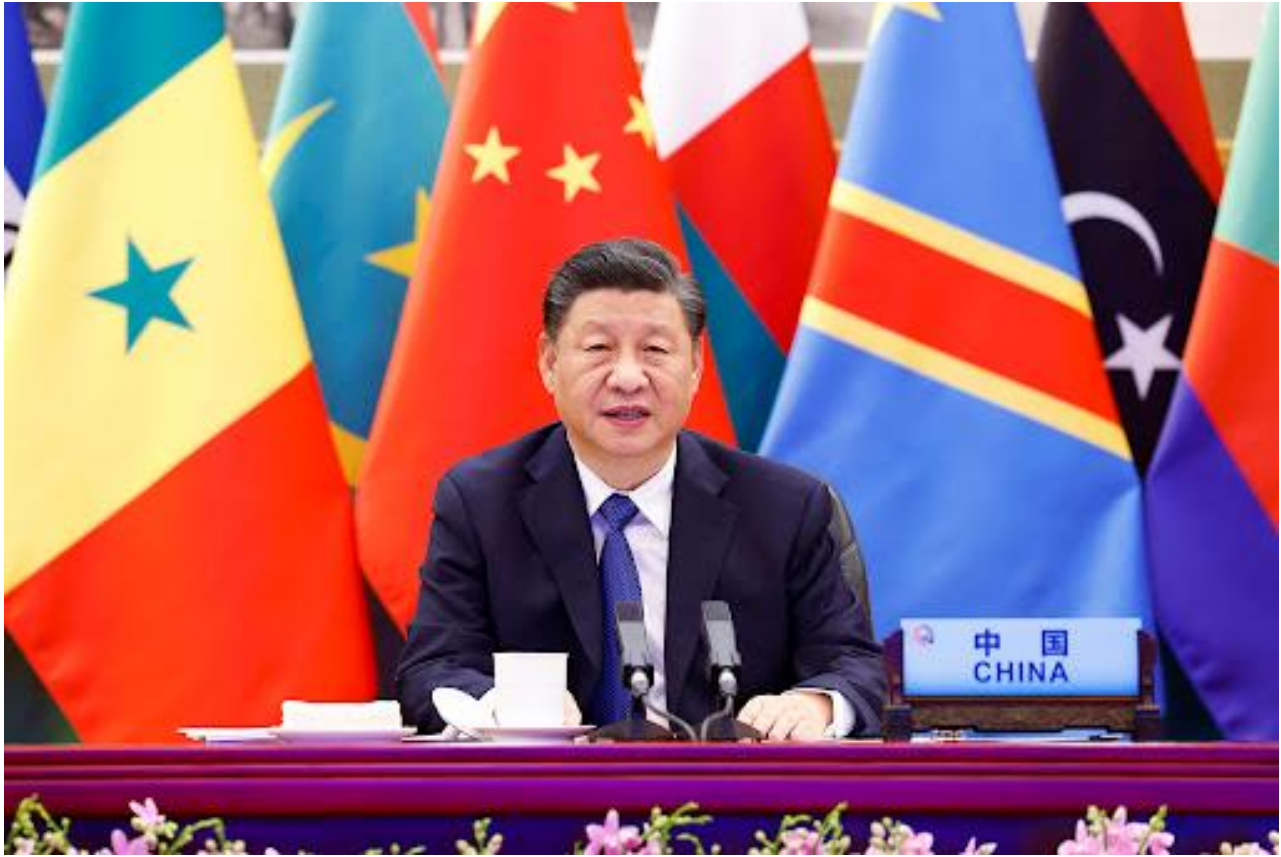
An escalation in collaborative military maneuvers poses tangible security threats not only regionally but also globally. An incoming Trump administration in the United States will affect the calculus of US allies in the region. How these players react, adjust, and adapt to growing PRC and Russian activities will influence the regional security landscape going forward.

The views expressed in this article are solely those of the author.

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State Goals, Private Tools: Digital Sovereignty and Surveillance Along the Belt and Road

By Che Chang, Lian Huang, and Athena Tong



President Xi Jinping Addresses the Forum On China-Africa Cooperation. (Source: [FOCAC](#))

Executive Summary:

- Beijing promotes digital sovereignty in its engagements with other countries but with the caveat that it can maintain access to partner countries' digital systems.
- Leaked documents from cyber contracting firm iS00N indicate a focus on One Belt One Road partner countries, targeting critical systems, including telecoms, government ministries, and financial institutions.
- A new paradigm of using nominally private firms allows Beijing to put distance between its inclusive rhetoric of "win-win cooperation" while companies hack partner countries' infrastructure at the direction of its security services.

In November 2024, Chinese Communist Party (CCP) mouthpiece the *People's Daily* published an article amplifying Beijing's commitment to the "high-quality development (高质量发展)" of the One Belt One Road (OBOR; 一带一路) initiative ([People's Daily](#), November 28). In particular, the article emphasized digital cooperation and technological standards. This aligns with Beijing's public promotion of encouraging international cooperation through UN development mechanisms. It is at odds, however, with the work of commercial contractors integrated with the public security apparatus of the People's Republic of China (PRC) that are tasked with systematically compromising PRC partner nations' digital sovereignty.

Documents from iS00N Information Technology (安洵信息), a PRC cybersecurity contractor that was the subject of an extensive leak in February, reveal how private firms serve as instruments for expanding the PRC's cyber control while maintaining diplomatic deniability for such actions ([China Brief](#), March 29). These documents suggest a particular focus on OBOR countries. As Beijing expands its digital presence through initiatives such as the Global Data Security Initiative (全球数据安全倡议) and regional cooperation frameworks, partner nations face increasing pressure to balance the benefits of PRC technological investment against growing risks to their sovereign interests.

PRC Extends Influence Through Digital Sovereignty Framework

The Digital Silk Road (数字丝绸之路) initiative, launched in 2015 as a key component of OBOR, is in part a strategy for Beijing to build next-generation digital infrastructure—and thus increase influence and control—in developing markets ([Belt and Road Portal](#), November 30, 2023). This digital dimension encompasses investments in telecommunications networks, artificial intelligence capabilities, cloud computing infrastructure, and smart cities, fundamentally reshaping the digital architecture of participating nations. At the infrastructure level, PRC firms have established 34 cross-border terrestrial cable networks and multiple submarine cables connecting to Russia, Mongolia, the Association of Southeast Asian Nations (ASEAN), Central Asia, and South Asia while deploying nearly 1.9 million 5G base stations covering 3.3 billion people ([Chinese Academy of Social Sciences \[CASS\]](#), January 29). This physical expansion is reinforced through institutional arrangements. Beijing has signed memoranda on digital economic cooperation with 18 countries and established bilateral e-commerce mechanisms with 30 nations since 2017 ([Cyberspace Administration of China](#), April 10). Beijing also uses the Digital Silk Road to promote technical standards and governance frameworks, positioning itself as a leading architect of the global digital order.

The PRC has strategically reframed its digital expansion within the United Nations 2030 Sustainable Development Agenda ([UN](#), June 5, 2019; [UNDP](#); [PRC Permanent Mission to the UN](#), September 15, 2023). Rather than explicitly promoting the Digital Silk Road brand, Beijing presents its digital infrastructure projects as essential contributions to global development goals. This positioning serves multiple purposes. First, it frames PRC digital infrastructure as a global public good rather than an extension of national interests; second, it deflects criticism of the country's technological expansionism; and third, it creates institutional momentum for the PRC's technical standards through UN development mechanisms. The framework's effectiveness stems from what PRC analysts term "hard connectivity (硬联通)" through infrastructure and "soft connectivity (软联通)" through institutional arrangements ([CASS](#), January 29). Recent refinements to

the PRC's cross-border data governance policies, including measures for “high-level opening up (高质量开展)” in pilot free trade zones, illustrate how Beijing balances technical control with narratives of openness and mutual benefit. The growing number of nations participating in PRC digital infrastructure projects suggests this approach has found receptive audiences, though the long-term implications for recipient countries' digital sovereignty remain to be seen.

i-SOON Hacked Partner Countries, Focused on Telecoms, Ministries

The February 2024 leak of over 570 files from iSOON Information Technology revealed a sophisticated cyber operations program systematically targeting digital infrastructure in OBOR partner countries. These documents expose a meticulously engineered approach to cyber intelligence that goes far beyond traditional hacking, representing a comprehensive digital mapping of critical infrastructure along emerging economic corridors.

Table 1: iSOON Targets in OBOR Countries

Region	Target Type	Notable Patterns
Vietnam	Government	Supreme People's Court, Social Affairs Department.
Thailand	Government and Telecommunications	Multiple ministries (Foreign Affairs, Interior, Commerce), Senate, National Intelligence Agency, telecom operators (CAT, TOT, AIS).
Malaysia	Government and Military	Multiple ministries (Engineering, Interior, Foreign Affairs, Defense), military networks, DIGI telecoms.
Indonesia	Government	Foreign Affairs Ministry.
Cambodia	Government	Ministry of Economy.
Pakistan	Telecommunications and Government	Zong network, Punjab Counter-Terrorism Center email systems.
Kazakhstan	Telecommunications and Finance	Beeline, Kcell, Tele2, Telecom, Employee Pension Fund.
Kyrgyzstan	Telecommunications	Megacom operator.
Myanmar	Telecommunications and Government	MPT Communications (user data), government email systems.
Nepal	Government and Telecommunications	Nepal Telecom, government departments.
Philippines	Telecommunications	Bayan operator data.

(Source: Document 01cdc26f-e773-4ad7-8808-d04abf16aae7.md)

The company's operations reveal an extensive network of compromised systems across OBOR countries. According to iSOON's internal documents, it has established monitoring capabilities targeting government ministries, telecommunications providers, and critical infrastructure (see Table 1). iSOON's technical infrastructure includes Remote Access Trojans (RATs)—ShadowPad and ThreadStone—with multi-platform

capabilities across Windows, Linux, Android, iOS, and MacOS systems, enabling comprehensive surveillance aligned with OBOR strategic priorities. [1]

In Southeast Asia, where maritime and land routes converge, iS00N has established substantial monitoring capabilities. For instance, it has accessed systems such as Thailand's Ministry of Digital Economy and Society and Ministry of Interior, as well as Malaysia's Ministry of Works. This likely has privileged it with visibility into infrastructure planning along the China-Indochina Peninsula Economic Corridor—a key component of OBOR ([State Council Information Office](#), August 4, 2020). Beyond simple cyberattacks, iS00N has deployed four sophisticated tools to access target systems:

- Exploit and shellcode creation,
- Internet profiling and reconnaissance,
- Active attack capabilities, including webshell deployment, and
- Advanced document analysis and system debugging.

Central Asia, another important region for OBOR projects, has also been targeted by iS00N. In Kazakhstan, which is part of the New Eurasian Land Bridge Economic Corridor, hackers have achieved persistent access to major telecommunications providers, including Beeline, Kcell, and Kazakhtelecom. Targeting telecommunications systems—a key tactic used by threat actors like iS00N—has taken place alongside access to financial institutions and regulatory bodies.

iS00N Part of New Digital Statecraft Paradigm

iS00N is part of a commercial ecosystem within the PRC that offers services that include sophisticated cyber capabilities previously limited to state actors (see Table 2 for service pricing). This market-driven approach has transformed cyber operations, likely making them more adaptable and better suited to precisely targeting critical digital infrastructure along OBOR corridors. Nevertheless, the state remains the key client for these services, and tasks are carefully aligned with state security objectives.

For Beijing, a key benefit of this approach is that it allows the government to maintain operational distance while simultaneously extending its digital reach. This strategic ambiguity provides valuable cover in multilateral fora such as ASEAN and the Shanghai Cooperation Organization, where the PRC advocates for digital sovereignty for individual countries despite maintaining extensive monitoring capabilities through private proxies. This plausible deniability presents significant challenges for OBOR partner countries and the broader international community in confronting the PRC about its cyber operations.

Beijing has developed a complex ecosystem for implementing its digital strategy abroad, as the emergence of sophisticated cybersecurity contractors with deep ties to the Ministry of Public Security (公安部) indicates. While maintaining formal separation, these firms receive continuous strategic guidance that ensures their operations align precisely with national cybersecurity objectives. As internal training materials from iS00N

show, there is extensive coordination between private contractors and the state security apparatus ([China Brief](#), March 29).

Firms such as iS00N serve as critical intermediaries in the PRC's digital expansion strategy and are examples of how the state has effectively privatized key aspects of its digital control infrastructure while maintaining strategic oversight. Contractors like iS00N operate with significant autonomy yet remain carefully aligned with broader national cybersecurity imperatives. This model potentially represents a new paradigm of digital statecraft, where the boundaries between private enterprise and state security become increasingly blurred.

Table 2: Pricing for iS00N's Services

Platform Category	Annual Cost in 1000s RMB (1000s USD)	Key Capabilities
Mailbox Platform	600 (83)	Phishing, covert email collection
Twitter Platform	400 (55)	Account hacking, monitoring
Windows RAT	250–500 (35–69)	Stealth operations, remote management
Other OS RATs	180–250 (25–35)	Cross-platform control

(Source: Document 9fd06037-11f1-4ad5-9a7d-cbfb3fa4193b.md)

Implications for Digital Development

There are fundamental tensions in the PRC's vision of digital sovereignty. These are evident in Beijing's recent multilateral commitments. At the latest BRICS [2] summit in Kazan, Russia, President Xi Jinping announced several new initiatives aimed at deepening digital cooperation. These included a China-BRICS Artificial Intelligence Development and Cooperation Center and a BRICS Digital Ecosystem Cooperation Network ([MFA](#), October 23). Similarly, the Forum On China-Africa Cooperation (FOCAC) Beijing Action Plan (2025–2027) unveiled at the September summit in Beijing outlined additional digital cooperation frameworks, such as the Action Plan for China-Africa Digital Cooperation and Development and strengthened cooperation in digital policy, infrastructure, and security ([MFA](#), September 5; [China Brief](#), September 20). These institutional mechanisms, presented as tools for “high-quality development,” contrast with the PRC's extensive cyber activities targeting those same countries. These tensions are particularly striking in Africa, where the PRC has committed in its agreements at FOCAC to protecting users' personal data and strengthening cybersecurity ([MFA](#), September 5; [CyberBRICS](#), October 22).

The PRC's push in multilateral fora for digital sovereignty has gained momentum since 2015, when the first meeting of BRICS communications ministers in Moscow articulated priorities for information and communication technology (ICT) collaboration ([Russian International Affairs Council](#), October 23). This momentum is reflected in Xi's September 2024 FOCAC keynote address in Beijing, where he emphasized “digital cooperation (数字合作)” and announced plans to “build with Africa a digital technology cooperation center and initiate 20 digital demonstration projects” ([PRC State Council](#), September 5).

The iS00N leaks make clear that the PRC's promotion of digital sovereignty comes with the caveat that Beijing can maintain access to partner countries' digital systems. While the PRC pushes "high-quality development" as part of its vision of digital expansion, the operational reality revealed through iS00N's activities suggest that "high-quality development" serves as diplomatic cover for deepening digital control. The comprehensive targeting of both aligned and independent partners indicates that the PRC views surveillance capabilities as an essential component of its development strategy, even as it promotes digital sovereignty through multilateral forums.

Conclusion

The systematic deployment of private surveillance contractors along the Digital Silk Road reveals the PRC's sophisticated approach to maintaining control while promoting digital sovereignty. Beijing's emphasis on "high-quality development" frames digital cooperation as empowering partner nations, but the operational reality revealed in iS00N's internal documents demonstrates that private firms serve as instruments for expanding the PRC's cyber control in OBOR partner countries. The comprehensive targeting of both aligned partners and more independent nations suggests that the PRC views digital surveillance as an essential tool for maintaining strategic control over its technological investments.

The instrumentalization of private contractors represents an evolution in the PRC's digital strategy. By maintaining operational distance through firms like iS00N while simultaneously championing digital sovereignty through UN frameworks and bilateral initiatives, Beijing has created an effective mechanism for extending its digital reach while preserving diplomatic credibility. The future of digital development along the Belt and Road will ultimately depend on whether recipient nations can effectively balance technological engagement with the PRC while protecting their digital sovereignty.

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Notes

[1] Document 9fe6b262-9944-417d-a0c4-9f2de1de2994.md; document 12756724-394c-4576-b373-7c53f1abbd94.md

[2] BRICS refers to an informal intergovernmental organization of emerging market economies, which includes Brazil, Russia, India, China, South Africa, Iran, Egypt, Ethiopia, and the United Arab Emirates.

PRC Gray Zone Activities Against Taiwan: Civilian Drone Incursions

By Yiyao Alex Fan



A drone similar to the PRC civilian drones flown over Taiwan. (Source: [Wikipedia](#))

Executive Summary:

- Civilian drones launched from the People's Republic of China (PRC) have repeatedly violated Taiwan's airspace over the outlying islands of Kinmen and Matsu, which serves as part of a gray zone campaign to discredit the island's ability and undermine its determination to defend itself.
- Incursions were effectively discontinued following the downing of one drone, indicating that credible deterrence is crucial to countering PRC operations in the gray zone.
- The PRC's repeated efforts to curb civilian drone operations following the shoot-down not only suggest civilian involvement, but also reveal the authorities' aversion toward unintended escalation.

The People's Republic of China (PRC) recently conducted a round of military training drills near Taiwan following Republic of China (ROC) President Lai Ching-te's (賴清德) transit through Hawaii and Guam. The unannounced drills constituted yet another indicator of the PRC's persistent military pressure as well as its growing assertiveness in and around the Taiwan Strait ([Office of the President of the ROC](#), December 5; [MND](#), December 9). The lack of an announcement by the PRC is part of extensive gray zone operations against Taiwan. Such activities use coercive or subversive actions that are outside the norms of peaceful interstate diplomacy, economic activity, and people-to-people contact, but that fall short of armed conflict ([DNI](#), July 2024).

PRC civilian drone incursions into the airspace over Taiwan's outlying islands have frequently accompanied military activities in the last two years but have received little attention. A closer examination of this gray zone activity, which cannot even be attributed with certainty to the PLA, suggests that seemingly innocuous civilian drone activities are more than mere irritants. Like other coercive tactics seen across the Taiwan Strait, regular, unobstructed drone overflights over Taiwan's airspace discredits the island's ability and determination to defend itself. This plays into the PRC's broader ambition of achieving unification with Taiwan without resorting to kinetic conflict. However, this case study also demonstrates the importance of credible deterrence in countering PRC operations in the gray zone.

Incursions Initially Exploited Taiwan's Desire to Avoid Conflict

The first instance of a drone incursion took place on July 28, 2022, just days before then-Speaker Nancy Pelosi's visit to Taiwan, when a flying object appeared twice over a key military outpost in the Matsu islands, an archipelago administered by Taiwan near the coast of the PRC's southeastern Fujian province. Taiwan's Ministry of National Defense (MND) identified the object as a drone and suspected that the event might be an act of reconnaissance and a test of the military's response ([MND](#), July 28, 2022). Shortly afterwards, during the PLA's exercises around Taiwan, small-sized, commercial-grade drones began penetrating the airspace over Kinmen and Matsu, the front-line island administered by the ROC situated alongside the coast of mainland China. Incursions persisted throughout August 2022, with drones deliberately breaching the ROC's airspace and hovering near various isles in the region. In response, the MND authorized the use of stronger countermeasures, which ultimately resulted in the downing of one civilian drone on September 1 that year, effectively ending the gray zone activity. Sporadic instances of drone harassment resurfaced in 2024, yet none have been definitively attributed to the PLA.

The series of drone incursions conducted by PRC actors is a textbook example of gray zone operation. Like all activities in the gray zone, flying civilian drones over restricted airspace remains below the threshold that would justify a military response and does not threaten the core interests of the defender ([RAND](#), June 27, 2019). This allows the PRC to eschew an outright conflict, minimizing the risk of penalties or retaliation while incrementally advancing its aim of unification through coercion. Initially, Taiwan's military adhered to standard procedures by firing warning flares ([MND](#), August 4, 2022). However, this response proved impotent, as incursions intensified and drones returned in greater numbers, emboldened by the lack of meaningful repercussions. Taiwan's restrained response, rooted in its defense principle of "seeking neither escalation nor

Table 1: Drone Sorties Over Taiwan's Airspace, 2022–2024

Date	Time	Location	Number of sorties	Notes
2022				
July 28	Unknown	Matsu	2 sorties	The first reported instance of drone incursion
The 2022 military exercises around Taiwan commenced				
August 3	Night	Kinmen	At least 2 sorties	
August 4	Night	Kinmen	4 sorties	
August 5	Night	Kinmen and Matsu	At least 7 sorties	
August 6	Night	Kinmen	3 sorties	
August 7	Night	Kinmen	1 sortie	
August 8	Night	Kinmen and Matsu	10 sorties	1 sortie over Kinmen, 9 sorties over Matsu
August 9	Night	Kinmen	1 sortie	
The exercises officially concluded				
August 16	Day	Kinmen	1 sortie	The drone-captured footage circulated virally on social media platforms
August 27	Unknown	Kinmen	Unknown	
August 29	Day	Kinmen	1 sortie	
August 30	Day	Kinmen	4 sorties	
August 31	Night	Kinmen	3 sorties	
September 1	Day	Kinmen	1 sortie	The drone was shot down
September 2	Day	Kinmen	2 sorties	Dropped food was discovered on the beach
September 12	Night	Kinmen	1 sortie	
2024				
March 29	Day	Kinmen	Unknown	Identified to be operated by civilian(s)
April 8	Day	Kinmen	2 sorties	
May 24/25	Unknown	Kinmen	Unknown	Identified to be operated by civilian(s)

(Source: Press releases from Taiwan's Ministry of National Defense)

conflict (備戰不求戰),” was both a rational strategy and a vulnerability that the gray zone operation quickly exploited ([MND](#), August 24, 2022).

The PRC rationalized the incursions with legal and political justifications to repudiate the ROC’s claims of sovereignty. When asked to comment on the presence of civilian drones over Kinmen, the PRC’s Foreign Ministry spokesperson responded: “Chinese drones flying over China’s territory, that is not something worth being surprised at (中国的无人机在中国的领土上飞一飞，这不是什么值得大惊小怪的事)” ([MFA](#), August 29, 2022). Similarly, an article on the state-run tabloid the *Global Times* argued that it was “legal for Chinese people to fly drones in the country’s territory as long as it meets the requirements set by the Chinese authorities.” The flyovers did not violate any international laws, the article asserted, while the flight restrictions in Kinmen were invalid because “Taiwan is a part of China and the Taiwan authorities have no legislative rights” ([Global Times](#), August 30, 2022). Through the utilization of legal warfare, coupled with a sustained physical presence established by the gray zone operations (albeit temporarily), the PRC could significantly undermine the ROC’s claim to a separate airspace over Kinmen and Matsu while substantiating its one-China principle that the islands, and by extension, Taiwan, are all part of China – in a way similar to the erasure of the median line in the Taiwan Strait.

The drone incursions were also aimed at inducing pessimism and divisions among the people of Taiwan at a time of heightened tensions and great uncertainty. The ROC military’s inability to effectively detect and counter the small-sized commercial drones, compounded by its unwillingness to challenge and confront those provocations, likely invited more audacious behaviors by PRC actors. After the second encounter on August 3, 2022, the ROC’s Kinmen Defense Command assured the public that it could “fully grasp the surrounding dynamics (全般掌握周邊動態)” and was “capable of responding to emergencies immediately (有能力即時應處)” ([MND](#), August 4, 2022). Yet, the statement failed to inspire public confidence when a video went viral on Chinese social media. In footage taken by a civilian drone on August 16, uniformed ROC soldiers were seen hurling rocks at the aircraft as the latter casually hovered over a military installation in broad daylight. Viewed around 240 million times on Weibo, the footage prompted widespread ridicule in mainland China, with netizens deriding the ROC military as timid and inept ([DW](#), August 25, 2022). “This is the feeling of looking at a primitive tribe of indigenous people,” mocked one top comment on the video. “They didn’t even dare to shoot,” wrote another ([Business Insider](#), August 25, 2022). Across the strait, the incident cast serious doubt on the military’s capabilities. Some deemed it an utter humiliation, while lawmakers fumed over what many charged as incompetence ([FTV News](#), August 29, 2022).

Taiwan’s Escalated Response Proved Effective

Amid public outcry, the Kinmen Defense Command vindicated itself in a press release on August 24, claiming that its troops strictly adhered to the principle of avoiding escalation. The incursion of PRC drones was part of an orchestrated disinformation campaign to divide and discredit the ROC armed forces, the Command explained, and that the people of Taiwan should not fall victim to such “cognitive warfare (認知作戰)” ([MND](#), August 24, 2022). Later, at around midnight the same day, the Ministry of National Defense released a separate statement clarifying the procedures for handling civilian drone intrusions. In addition, it announced

that the military would acquire drone defense systems in 2023 and would prioritize their deployment on the outlying islands to tackle the gray zone challenge ([MND](#), August 24, 2022). A few days later on August 30, Taiwan's then-president Tsai Ing-wen (蔡英文) personally inspected the troops stationed on Penghu islands, an archipelago west of Taiwan, in an apparent effort to restore public confidence in the military and boost morale. Tsai gave a speech in which she emphasized the emerging threat of civilian drone incursions, pointing out that the PRC had been utilizing a range of gray zone tactics alongside cognitive warfare as a means of coercion. "I have already ordered the Ministry of National Defense to take necessary and strong countermeasures as appropriate to safeguard the security of our country's airspace (我已經下令國防部, 適時採取必要而且強力的反制措施, 捍衛國家領空的安全)," she reassured her audience ([Office of the President](#), August 30, 2022). On that day, troops in Kinmen began firing live munitions at the drones ([MND](#), August 30, 2022).

Definitive Attribution Remains Elusive

However, unlike some of the more conspicuous forms of gray zone operations seen in the Taiwan Strait, the incursions of civilian drones blur attribution and grant plausible deniability. PRC state media and commentators brushed off the accusations holding the PLA responsible, instead claiming the incursions were "normal civilian legal activities" ([Global Times](#), August 30). In another article, the *Global Times* also touted the idea that the August 16 incursion was likely an unintended consequence of "a blogger on the mainland livestreaming the flight of his or her private craft" ([Global Times](#), August 25, 2022). This explanation might be true. Reviewing all the documented incursions, August 16th stands out as an anomaly: it was the first intrusion after the PLA's exercises had concluded and occurred following a brief hiatus. It also deviated from the previous patterns by being the first intrusion during daytime, and was the first time an ROC military outpost was filmed, with the footage disclosed to the public.

Incursions that took place on September 2 and September 12 were equally unusual, suggesting they may have been carried out by civilians. In the former instance, troops in Kinmen found a plastic bag of food near a beach, and suspected it was dropped by the drone which entered the restricted airspace earlier that day ([MND](#), September 2, 2022). A Weibo user soon claimed responsibility, admitting that it was a deliberate act of protest ([China Times](#), September 2, 2022). He also posted a video showcasing the entire intrusion process ([Youtube](#), September 3, 2022). The day after the airdrop incident and two days after a drone was shot down, a decree to ban the operation of civilian drones for ten days was issued in the city of Xiamen, a PRC city across the Taiwan Strait from where the drones were believed to have been launched. Officially, the temporary ban was intended to ensure public safety during an annual trade fair which would soon take place in the city ([Xiamen TV](#), September 3, 2022). Nevertheless, on September 12, a defiant drone flew over Kinmen despite the ban. It is uncertain if the PLA was involved in that particular flight given its preference for retaining plausible deniability.

Subsequent incursions in 2024 have been identified by the MND to be carried out by civilians in the PRC. A prominent case that occurred during the PLA's Joint Sword-2024A exercises around Taiwan in May involved a private company dropping allegedly crudely made propaganda leaflets in an apparent attempt to garner

attention online (MND, [May 26](#); [June 8](#)). The occurrence of those individual instances, however, only further complicates the issue of attribution. It is unknown if civilians were inspired by the preceding PLA gray zone operations or vice versa, nor can it be definitively determined whether the PLA is responsible for any of the drone activities.

In the end, an effective response led to a swift reversion to the status quo ante. On August 30, 2022, when the ROC military began firing live munitions at the drones, the provocative PRC commentator and former editor-in-chief of the *Global Times* Hu Xijin (胡锡进) decried it as “an egregious act (性质恶劣)” and claimed Taiwan’s military would “pay the price (为此付出代价)” if it dared shooting down any of the drones ([China.com](#), August 31, 2022). However, no retaliation followed the downing of a drone the next day. Instead, incursions essentially came to a halt. Hu jettisoned his hardline posture overnight, instead urging Taiwan to “exercise restraint (应当克制),” claiming that none of the drones belonged to the PLA ([Radio Free Asia](#), September 1, 2022). The spokesperson for the PRC’s Taiwan Affairs Office meanwhile dodged the question when asked about these developments, instead accusing Taiwan of “hyping up tensions (制造紧张气氛, 升高两岸对立对抗)” ([Office of Taiwan Affairs](#), September 14, 2022). Furthermore, following Xiamen’s ten-day drone ban, the city announced an additional mandate which permanently tightened government control on both civilian acquisition and operation of drones, citing public security reasons ([Siming.gov](#), September 21, 2022).

Conclusion

Civilian drone incursions are just one of many dimensions of the gray zone challenge posed by the PRC in the Taiwan Strait. This specific episode, based on open-source information, showcases Beijing’s efforts to incrementally coerce and weaken Taipei by using a variety of instruments at its disposal to achieve its political ends. There are two implications. First, activities in the gray zone will only be emboldened when there is an absence of credible deterrence and clear red lines. The end of systematic drone activities over the ROC’s outlying islands indicates that the gray zone operation has been suspended when faced with a compelling response, in the form of shooting down intruding drones that violate its airspace. Second, the PRC’s repeated efforts to curb civilian drone operations following the shoot-down not only provides a compelling suggestion of civilian involvement, but more importantly, they also reveal PRC authorities’ aversion toward unintended escalations.

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