

FRS TAIWAN PROGRAM ON SECURITY AND DIPLOMACY

“Taiwan is dealing with an adversary that is fighting a war on the physical, psychological and cyber fronts with much bigger resources.”

A conversation with Chen-wei Lin, April 2021



Dr. Chen-wei Lin (林成蔚) is the INDSR's Chief Executive Officer. He served as a senior advisor in the National Security Council under two administrations and was a core member of Taiwan's representative office in Japan. He has taught as a professor at Hokkaido University Public Policy School and Tokoha University.

Formally inaugurated on May 1, 2018, the Institute for National Defense and Security Research (INDSR, 財團法人國防安全研究院) is dedicated to fueling knowledge-based policy analyses and strategic assessments on Taiwan's security. INDSR's dynamic research agenda and activities are used to develop pragmatic policy recommendations for the government.

Q1/ In both French and European media, coverage of Taiwan is unprecedented. And yet, few people are aware of the threats and challenges your country faces. Could you please provide us with an overview of Taiwan's strategic environment, and the impact of the Covid-19 pandemic?

It is a great pleasure to be invited by the Taiwan Program on Security and Diplomacy to discuss the security challenges facing Taiwan. I hope I can put some context around Taiwan's strategic defense posture so that like-minded democratic nations can form their own takeaways for meeting the challenges you face in Europe.

Security is not about only kinetic conflict anymore. One of the greatest challenges in this millennium, just entering its third decade, is gray zone conflict and hybrid warfare. It is that level just short of actual war, but enough to undermine defenses put up on the diplomatic front, in cyberspace, in military munitions, and in the hearts and minds of a citizenry. This is Taiwan's strategic environment.

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Europe's frontline security concern is Russia. For many in Asia, it is China, viewed both as an opportunity and a threat. For Taiwan, in particular, China is an existential issue. China's Communist Party (CCP) has never renounced the use of force to take Taiwan, despite brisk trade between the two sides of the Taiwan Strait and a shared history.

In the Mandarin-speaking world, Taiwan remains the only country where democracy and a multi-party society thrives. Taiwan has been self-ruled since 1949 when the Nationalists fled to this island in defeat in a civil war with the Chinese Communists. Taiwan transformed from a backward agrarian economy into a high technology export powerhouse and, in 1987, left 38 years of martial law rule to the history books. In 1996, Taiwan held its first direct presidential election. In 2016, Taiwan elected its first woman president, who in 2020 was ranked No 37 in The World's 100 Most

Powerful Women List by Forbes, in large part thanks to her successful stewardship of Taiwan in the Covid-19 pandemic.

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Taiwan is one of Asia's most vibrant democracies and that is a huge concern to the Chinese single-party state. The CCP regime in China undermines Taiwan's international standing by preventing it from having formal diplomatic ties with all but 14 countries and the Vatican, or having a legitimate voice in organizations that support health and combat crime around the world, like the World Health Organization or Interpol. It interferes in Taiwan's democratic processes through malign influence operations and the spread of disinformation. It hacks into Taiwan systems to gain intelligence on our citizenry. The CCP weaponizes the economic links with Taiwan by cutting off Chinese tourist dollars and placing curriculum conditions on cross-Strait student exchanges.

However, to see this as solely a China-Taiwan issue opens a risk for like-minded partners in your own backyard. The CCP's use of gray zone tactics on Taiwan is being employed in other democracies. We are the test bed.

Research from INDSR has regularly looked at the CCP's gray zone tactics. Underscoring the significance and rise of this kind of security issues, a chapter devoted to responding to gray zone threats was included in the just-released *2021 Quadrennial Defense Review* by Taiwan's Defense ministry; this is the first time that the issue has been explicitly addressed in this strategic document.

From a defense and security perspective, the unfolding of the Covid-19 pandemic has impacted the world in that it has made many governments look harder at how China works its narrative to secure its national interests. It has shown how the CCP uses its overt diplomatic, economic and military levers, alongside its less obvious cognitive warfare tactics, to undermine democratic processes in other countries.

Q2/ In January 2019, Secretary General Xi Jinping asserted that "China must be, will be reunified" and even that it was "an inevitable requirement for the great rejuvenation of the Chinese people". As the Communist Party of China will soon celebrate its 100th anniversary, how do you assess the importance of Taiwan in Beijing's national narrative?

Unifying Taiwan is China's core interest. But Beijing's Taiwan policy will not be the focus for this year, unless its hand is forced. China's propaganda strategy in the

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party's centennial year will focus on delivering a positive image and Xi Jinping's achievements as a leader. Delivering the "victory" in the campaign to end rural poverty, the development of the 14th Five-Year Plan, and other policies are more important in 2021. China will try its best to avoid implementing policies and methods that may jeopardize Xi Jinping's political performance. Making major changes in its Taiwan policy would be one such pitfall to avoid.

That said, Beijing will still pile on the pressure. Military intimidation against Taiwan will not go away, with incursions by PLA assets into Taiwan's ADIZ and conducting military drills around the Taiwan Strait. China could increase its economic coercion on Taiwan through a series of trade obstacles.

On February 25 of this year, China announced that it would ban the import of pineapples from Taiwan from March 1, based on what it said was the detection of scale insects. China's use of such technical obstacles to pressure Taiwan's trade is part of its economic coercion, and part of its effort to maintain the inaccurate narrative that the Taiwan government is not a reliable steward of the economy. It is meant to sow discord between the Taiwanese public and the government – a gray zone tactic we have seen the CCP employ against other democratic and pluralistic societies.

Let me say that our homegrown pineapples are delicious and that Taiwan's official economic growth for 2021 currently is forecast at 4.64 %, up from last year's 3.11 %. The ban whipped up support for our pineapples and there were calls to pair Taiwan pineapples with Australian wine – you recall that in late November 2020 China placed crippling tariffs on Australian wine, an example of the CCP's economic coercion against another democracy. It is a lesson for like-minded democracies on how strong we can be by standing together.

Q3/ On March 26th, 10 Chinese warplanes flew into Taiwan's southwestern ADIZ. These intrusions are also more frequent, as they occurred 27 days out of 31 days in January 2021, compared to 10 in September 2020. Since the INDSR has recently published some data, could you explain the current pattern as well as the likely military, political and diplomatic objectives of Beijing in doing so?

The PLA's training intensity has stepped up in recent years following its military reform and is unlikely to abate

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for a basic reason that practice makes perfect. Strengthening and expanding the PLA's combat presence in the air and sea around Taiwan is part of its preparation for war.

Short of war, China's purpose of increasing its military presence in the region is not only to intimidate the Taiwanese government and people but also to create high military tensions between the United States and China. In doing so, Beijing may be trying to get Washington to hold talks to reduce conflict, giving it an opening to ease the competition between the two powers. For example, on January 23 and 24 of this year, when aircraft carrier USS Theodore Roosevelt and its battle group transited the Bashi Channel into the South China Sea, the PLA sent 13 and 15 military planes, respectively, including bombers and fighter jets, into the nearby air space as well as Taiwan's ADIZ. The actions of the PLA immediately aroused the attention of scholars, experts, and media. On February 10, US President Biden held a telephone conversation with Chinese President Xi Jinping for the first time. It's hard not to associate the two events.

We have been tracking the correlation between the PLA's muscle flexing in the region and international political events that are unpalatable to China. Beijing gives the impression of using the former to retaliate against the latter. In 2020, events leading to the Chinese incursion into Taiwan's ADIZ or crossing the median line of the Taiwan Strait were usually accompanied by what is considered by China as political incidents, such as the visit of US Health Secretary Alex Azar and US Undersecretary of State Keith Krach to Taiwan.

Finally, it is worth pointing out that the PLA aircraft incursions are also about gray zone aggression. The adversary is waging a hybrid war of attrition against Taiwan. Every time an enemy aircraft crosses into our ADIZ, Taiwan's Air Force scrambles in response. Day in and day out, that's fatigue on airframes and fighter pilots, that's fuel depletion. All before actual combat has begun.

Q4/ Since her election in 2016, President Tsai Ing-wen has made military modernization one of her key policy goals, making extensive weapons purchases and supporting the increase in military spending to a record-high of \$15.2bn. What have been the major reforms undertaken so far, and what are her biggest achievements in defense-related issues?

Taiwan's defense budget has gotten larger, the first cyber command force was established, two major indigenous defense programs are progressing and the groundwork is being laid for reserve force reform. These hard-won successes will help sustain Taiwan's future.

Between 2017 and 2021, the defense budget has steadily risen every year and should account for around 2.36 % of GDP this year. A year after President Tsai was first inaugurated, Taiwan established the military's cyber command – the Information, Communications and Electronic Force Command. This military service is tasked with ensuring the nation's readiness in cybersecurity as well as researching related developments in electromagnetic technologies. Next year, during President Tsai's second term, reform of the reserve force will start in earnest to ensure that reservists can reliably backup the regular military force.

Two prototypes of the Taiwan's Indigenous Advanced Jet Trainer (AJT) are undergoing operational test phase now (the program was launched in 2017). A total of 66 AJTs will be built by 2026. The Aerospace Industrial Development Corp (AIDC), which previously built a generation of Taiwan's advanced fighter jets and jet trainers, is leading this effort. Another homegrown build is the indigenous submarine program. In November 2020, Taiwan shipbuilder CSBC marked the start of production with its new submarine factory in the southern city of Kaohsiung. Taipei aims to produce as many as 8 submarines. They will replace two Zwaardvis-class subs that Taiwan acquired from the Netherlands in 1987 and 1988. The Taiwanese Navy plans to deploy the new submarines in an anti-shipping role, targeting PLA ships that would carry an amphibious invasion force across the Taiwan Strait. Apart from meeting defense needs, these two programs aim to foster domestic military R&D and manufacturing capabilities.

The nation's first national-level international think tank devoted to research on defense and security issues was established under this current administration. It took eight years to go from dream to reality. INDSR is now three years old and has been listed for two of those years among best new think tanks in the Global Go To Think Tank Index Report. As our Twitter handle @indsrtw says, we are an upstart dealing in policy research and working to safeguard Taiwan.

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There is a lot of focus in the media about Taiwan's foreign weapons purchases and how exponentially small our defense budget – despite being at record highs – is against our adversary. That overlooks the forest for the trees, so to speak. Work on maintaining combat-ready troops and existing defense systems, upgrading equipment, training jointly with international security friends and building a braintrust to foresee how future wars will be fought are important barometers to look at as well.

Q5/ In 2017, Taiwan's Chief of the General Staff, Admiral Lee Hsi-ming, proposed a revolutionary new approach to Taiwan's defense, called the Overall Defense Concept.¹ It is based on an asymmetric defense strategy, where Taiwan maximizes its defense advantages, and targets an invading force when it is at its weakest. Could you present the main guidelines and analyze its added value?

The Overall Defense Concept is Taiwan's defense concept for dealing with a potential Chinese invasion in a resource-constrained environment. In force buildup, asymmetric weapon systems must be small and mobile for strategic dispersion; they must be large in numbers, but cheap and expendable. They must be easy to develop and maintain, yet also resilient and sustainable.

The three stages of the Overall Defense Concept operations under a conflict scenario are force protection, decisive battle in the littoral zone, and destruction of the enemy at the landing beach. The principles of force preservation include mobility, camouflage, concealment, deception, electronic jamming, operational redundancy, rapid repair and blast mitigation.

Micro-missile assault boats, shoulder-launched air defense missiles, and land-based anti-ship missiles scattered throughout the island would increase the difficulty of enemy operations to lock on and counter such guerilla defenses. Then you might ask about how the big tanks and jets which Taiwan has purchased in recent years fit in with ODC. These conventional weapon systems are effective during peacetime for countering gray-zone aggression. There is also a psychological – asymmetric-like – aspect to deterring

the adversary when one has some high-value items in one's arsenal. Make no mistake that Taiwan is dealing with an adversary that is fighting a war on the physical, psychological and cyber fronts with much bigger resources.

Q6/ Space is becoming a more contested environment. Many Asian countries display advanced capabilities, and China is one of the leading powers in space as demonstrated by its 2007 anti-satellite missile test and the deployment of dozens of military satellites since. How is Taiwan following that trend and developing space-based assets for reconnaissance, weather tracking, communication, and more?

China's military-civil fusion approach in advancing dual-use technologies in the space domain is military-driven, not least because it is being coordinated under the Chinese Communist Party's highest military command and the PLA Strategic Support Force. China's Beidou System (BDS), SAR Satellites, the Chinese version of Starlink, the Tiangong space station and China's newly announced Export Control Law will dramatically change the Indo-Pacific strategic landscape along with the developing AI and quantum communications under the authoritarian regime.

In contrast, Taiwan's space ambitions have been fueled by an *esprit de corps* that champions cooperation. Taiwan's National Space Organization is one of only eight satellite "data provider nodes" in the

regional HADR space solution initiative Sentinel Asia, which supported more than 100 rescue missions in the last decade. Taiwan satellites FORMOSAT-5 and FORMOSAT-7, both in operation, have significantly contributed to the effectiveness of global space weather observation. Taiwan's new weather satellite Triton, which can improve typhoon intensity and path prediction, will be launched by the French giant Arianespace by 2022.

Meanwhile, the key electronic subsystem of the Alpha Magnetic Spectrometer on the International Space Station is sourced from Taiwan's defense enterprises NCSIST and AIDC. Of course, none of these achievements would have been possible without the support of like-minded partners, including the United States, Japan, ASEAN, India and the European Union.

¹ LEE Hsi-min, LEE Eric, "Taiwan's Overall Defense Concept, Explained", *The Diplomat*, November 3, 2020.

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The space industry is part of the six core strategic industries to power economic growth in the current government's national development policy. The Space Development Promotion Act is expected to pass in 2021 to create an ecosystem in both industry and academia. In the past, Taiwan focused on optic remote sensing and weather satellites. Now the frontier is shifting to smarter and nimbler capacities, especially AI applications, LEO communication, CubeSats and small launch vehicles.

With Taiwan's tech strengths in semiconductor and precision manufacturing, our new space posture aims to reposition ourselves on the global supply chain and seek space resilience. The Taiwan government has budgeted NT\$ 25 billion (US\$ 890 million) to develop 10 next-generation remote-sensing satellites by 2028 with indigenously developed key components, including six prototype high-resolution optical remote sensing satellites, two ultra-high-resolution smart optics remote-sensing satellites and two SAR satellites. Moreover, an experimental "Beyond 5G" LEO communication system is also promised by 2024, with a NT\$ 4 billion (US\$ 143 million) investment.

Q7/ Taiwan has two modern attack submarines, while China has more than 50. Last November, Taiwan's CSBC Corporation began production of eight attack submarines, the first indigenous ones in the Navy's arsenal. How can this fleet of submarines improve the island's defense against hostile military operations?

For a long time, the PLA's superiority in the number of submarines and the vulnerability of Taiwan's sea lines of communication (SLOCs) have constituted a problem in our maritime defense. The complexities of hydrology and technology in this domain mean that even strengthening Taiwan's anti-submarine warfare capabilities will not guarantee unfettered passage. Taiwan cannot eliminate the underwater threat posed by the PLA Navy, but with its own submarine force, it forces the adversary to recalibrate, and possibly deter, invasion plans.

Taiwan has four submarines, two of them dating from WWII. They are considered defensive weapons for Taiwan because of the threat the island faces from a very large adversary. Beijing authorities have never renounced the use of force to take Taiwan. Taiwan's ongoing indigenous submarine program will add to and modernize the current fleet. Compared with surface ships, the stealth and deterrence characteristics of

submarines can often pose a greater threat to the enemy. Submarines can perform tasks such as counter-attack and reconnaissance. They can fight independently, yet also carry out joint operations. They can engage in search and rescue missions and special operations.

Q8/ An INDSR assistant research fellow advocated Taiwan to join a global semiconductor supply chain alliance against China and maintain the country's "silicon shield" based on its predominance in some key sectors, such as foundries. How can China's dependence on semiconductors be leveraged to better defend Taiwan against hostile actions?

Although China's semiconductor industry accounts for only around 1 % of its GDP, chips now play a far more important role in manufacturing devices used in home living to remote working, and from items as small as mobile phones to as big as intelligent vehicles. Moreover, China's 14th Five-Year Plan intends to transform China's economy into a digital one, which is based on 5G, the Internet of Things, and Cloud computation. This very much relies on chips made with advanced process technology, which are only available from TSMC of Taiwan, Samsung of South Korea, or Intel of the United States. In short, China is still catching up.

With China's past failures in developing advanced fabs, coupled with the current tightening of US sanctions, it is extremely unlikely that China will achieve state-of-art semiconductor manufacturing capabilities in the next 5-10 years. It means that China needs Taiwanese fabs, like TSMC, where the very high-end chips are manufactured.

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Taiwan's chip industry is a global powerhouse. This goes back to the 1970s and 1980s, when the government set a strong industrial policy to guide the transformation of the agrarian island economy into a high technology export-oriented juggernaut. TSMC is the world's most valuable chip company and the world's largest foundry. Taiwan's IT prowess, not limited to chips, was built on a foundation of partnering and cooperating with international companies over decades. This global supply chain network is the basic idea of the so-called silicon shield. Another aspect of this strength is that Taiwan's chip industry is also a must-have for China, which dis-incentivizes Beijing authorities from using military force against Taiwan. To be clear, it is essential to both strengthen Taiwan's role as a

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responsible, global supply chain partner and keep the most advanced chip manufacturing technology in Taiwan

To strengthen Taiwan's role as a responsible, global supply chain partner by maintaining stable chip supplies means that demand for Taiwan's chips will increase. Two recent examples show the positive impact from this. First, during the US-China technology war, when the Trump administration requested sensitive or military semiconductor parts to be produced in the United States, TSMC responded quickly and positively. TSMC, however, was also able to keep providing chips to many of its China clients. This balance, to maintain a stable supply both to the United States and China, enhances the trust of both parties in TSMC, while at the same time acting as an incentive for China not to use military force on Taiwan, for fear of cutting off its own access to much-needed semiconductors. Second, encouraging stable chip supplies improves Taiwan's strategic importance in the world, allowing the Taiwan government the leeway to request and coordinate with the nation's chipmakers during times of global need, such as when automotive chips were in short supply.

To keep the most advanced chip manufacturing technology in Taiwan is aimed at maintaining the nation's strategic importance. Taiwan has benefited from clustering its IT industry, which made business sense when it was mapped out decades ago, but today makes strategic sense as well. China has long relied on poaching or stealing Taiwan's technical talents to solve its deficiencies in human resources and required technology. In addition to continuous investment and research and development (R&D) with like-minded partners to keep state-of-the-art technology on the island, legal protection of trade secrets, such as Taiwan's Trade Secrets Act (營業秘密法) last amended in January 2020, are also important to implement strictly.

Q9/ As a follow-up on Chinese political interference, the INDSR's 2020 annual report on China made special mention of the country's online "cognitive warfare" (認知戰) – part of its larger hybrid warfare. How would you define that concept, its impact on Taiwan in the future, and how to counter it?

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The CCP regime has been exercising cognitive warfare on Taiwan for decades. It is trying to win hearts and minds – but really what lies between the ears –, thereby influencing behaviors and, ultimately, undermining trust and confidence towards democratic systems and governance. In the past, this was performed through what we are familiar with as the united front work. Nowadays, the CCP runs cognitive operations through both online and physical means and employs algorithms. It is old wine packaged in new fancy bottles, so to speak. The experimenting with this hybrid method by the CCP has not been entirely convincing against its target audience: the Taiwanese. Outcomes have been mixed and success limited, particularly after the breakout of the Covid-19 pandemic.

What remains unchanged for the Taiwanese is that cognitive warfare, like other gray zone conflicts, is not going away – even when the adversary is named and shamed under airtight attribution. What the Taiwanese could do to mitigate and counterbalance the CCP's cognitive campaign is to form a whole-of-society front domestically and abroad with like-minded partners to detect, expose, verify and correct malicious activities of the sort in a timely manner. Last but not least, counterstrike in kind is now officially an option on the table for Taiwan's Ministry of National Defense and National Security Bureau.

Q10/ In October, Taiwan's Ministry of Defense announced that it was setting up the Defense and Reserve Mobilization Administration, a new unified agency to oversee the reserves. What is the current status of both the military conscription as well as the reserves in Taiwan, and are there any plans to further strengthen it?

With the launch of the all-voluntary recruitment system, Taiwan's one-year compulsory service entered the history books. However, the nation's Constitution stipulates that citizens are obliged to perform military service. Therefore, as a compromise, a mandatory military training service of four months, on average, for men was maintained to ensure skills for a basic qualified rifleman. After such training, and for those who leave the service, the men are incorporated into the reserve force and will be called up regularly to continue training. Therefore, Taiwan's current military service system is a concurrent recruitment system. The source of reserve soldiers fall into three categories: voluntary service, compulsory service, and military training.

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In the face of increasingly severe threats from the enemy and greater military power projection of the PLA following its reform, Taiwan's armed forces have strengthened their foundation and asymmetric combat power, while rapidly improving defense capabilities. Taiwan has also plans to increase and improve its reserve combat capabilities. Starting from 2022, a new "defense mobilization administration" will coordinate reservists' operations and the frequency and duration of call-ups will increase. Each reserve military training call-up will be increased to 14 days from 5-7 days, while the frequency of a call-up will move to an annual basis from a two-year turn. The number of reserve brigades will be expanded from the current 7 to 12, and these will fall under the jurisdiction of each theater, with the aim to meet defense operation needs. In addition, the Ministry of National Defense has organized a team dedicated to enhancing reserve combat capability in five areas: organization, troop, management, training, and equipment.

Q11/ Last but not least, women represent 15.5 % of the French military workforce, one of the most feminized in the world. Since Taiwan is one of the most progressive society in terms of gender equality and the promotion of women, values shared with the Europeans, are there specific plans within the military to further include women?

We are proud of our women in the military. Proportionally, they account for over 15 % of Taiwan's armed force and represent all the services – fighter pilots, field commanders, captains, special forces, and more. The proportion of women in Taiwan's military doubled from 7.7 % in 2012 to 14 % in 2018. Prior to 2018, the proportion of women allowed in the military was capped at 15 % of the total force, but those restrictions have since been lifted. Last year, two women became Taiwan's first military officers to wed their same-sex partners. They were among 188 couples married in a mass military wedding ceremony.

And do not forget, while she is a civilian, Taiwan's commander-in-chief, who is also our nation's president, is a woman.

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**Interview conducted in March 2021
by Dr. Antoine Bondaz**

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