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The ROC Boosts Self-reliant Defense

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CONTENTS

The ROC Boosts Self-reliant Defense

Facing exceptional situations across the Taiwan Strait and in international politics, the ROC has been experiencing considerable difficulties and obstacles in acquiring advanced weapon systems and critical defense technologies. Generally speaking, we have been counting on the U.S., abiding by the "Taiwan Relations ACT," to provide the necessary defensive articles, which gave a tremendous help to our defense and security, with some other countries providing less confidential equipment, peripherals and spare parts.

Seeing this difficult situation in our foreign procurement of defense articles over the years, we began to pursue a path to develop a self-reliant defense system. Under the technical assistance of the U.S. and some friendly countries, we were able to produce weapons from low-end weapons, such as light arms, small fast missile boats, jet trainers, etc., to those of western equivalents of high-end ones, such as anti-ship missiles, air defense missiles, indigenous defensive fighters, license-produced Perry Class guided missile frigates, etc., to establish a solid foundation to self-reliantly develop defensive weapons.

After President Tsai and her team took office, they started several new ways of thinking concerning the defense policy, and strengthening a "self-reliant defense" is one of them. In the future, the government is hoping to develop adequate weapon systems and critical technologies which meet the operational environment and concepts in the Taiwan Strait, by promoting a "self-reliant defense" through cooperation with industrial, governmental, academic and research organizations to construct a complete defense industrial chain for Taiwan.

Currently, based on our original technologies of fighter, naval vessels and missiles, coupled with our burgeoning information industrial foundation, the government has chosen three major industries: namely, aerospace, ship-building and information security, as our priority developing directions for self-reliant defense. It is hoped that our relevant technological levels can be upgraded through increased investment to establish a competitive defense industry. Among them, programs to develop advanced trainers for the Air Force and surface vessels and submarines for the Navy are the most noticeable indicators.

The efforts of ROC Self-reliant Defense in recent years: Pan-Shi fast combat support ship (AOE 532), Tuo-Jiang stealth missile corvette and Kuang-Hua VI fast attack missile boats. (Source: Military News Agency)

With regard to research and development (R&D) for defense technologies, we are hoping to emulate U.S. DARPA (Defense Advanced Research Projects Agency) to set up a visionary R&D mechanism for defense technologies within the Ministry of National Defense (MND) to consolidate R&D efforts from domestic industrial, academic and research establishments for farsighted defense technologies. It is planned to set up a discipline of visionary technology application by the Ministry of Science and Technology (MOST) to integrate R&D capabilities from our academic circles for developing defense technologies.

The government went all-out to promote a self-reliant defense and this has shown a strong determination for the ROC to enhance its national security and self-defense. The ROC welcomes all international advanced defense companies to take part in our self-reliant defense programs in a proper manner to create a mutually beneficial and win-win opportunity in between for cooperation in technical R&D, manufacturing and defense production and sales.

The 3D CG of AIDC's XAT-5 jet trainer. ROC government has chosen three major industries: aerospace, ship-building and information security, as Taiwan's priority developing directions for self-reliant defense. (Source: AIDC)

Taiwan has initiated an Indigenous Defense Submarine (IDS) design program from 2016. (Source: Chang, Li-Te)

Recent Trends in China's Missile and Strategic Strike Forces

Richard D. Fisher, Jr

In mid-2016 China's missile forces are being influenced by three major trends. First is the formation of the new People's Liberation Army Rocket Force (PLARF) in late 2015 as a result of sweeping restructuring of PLA focused on increasing jointness, accompanied by an increase in the nuclear forces of the PLA Navy (PLAN) and PLA Air Force (PLAAF). A second and ongoing trend has been the incorporation of new types and variants of missile systems plus new nuclear missile submarines (SSBNs) and bombers. Third, China is moving toward the creation of a national missile defense and anti-satellite (ASAT) system that may require cooperation between the SRF, the new Strategic Support Force (PLASSF) and the PLAAF.

China announced a series of major reforms and restructuring for the PLA at 2015. Most critical, seven Military Regions were compressed into five new Theater Military Commands. Also important was the formation of the new PLA Rocket Force as a new formal service, replacing the Second Artillery Corp established in 1966.

While there is uncertainty regarding the actual current number of PLA strategic missiles, the introduction of multiple independently targetable reentry vehicle (MIRV) warheads on intercontinental ballistic missiles (ICBMs) and future submarine launched ballistic missiles (SLBMs) indicates warhead numbers could soon be increasing more rapidly. By the mid-2020s, however, the PLA could have a strategic strike capability comprising a larger number of nuclear missiles, new non-nuclear Prompt Global Strike (PGS) systems, intermediate and medium range nuclear and non-nuclear missiles, nuclear and non-nuclear short range ballistic missiles, a variety of strategic cruise missiles that are also carried by bombers and submarines, plus anti-missile and anti-satellite missiles.

Rise of the PLA Rocket Force

At the end of 2015 China announced a series of major reforms and restructuring for the PLA, under consideration since early in the last decade. Most critical, seven Military Regions were compressed into five new Theater Military Commands that will create greater joint-force synergies among the PLA services under the direct command of the Central Military Commission (CMC). Also important was the formation of the new PLA Rocket Force as a new formal service,[1] replacing the Second Artillery Corp established in 1966 as a lesser ranking independent force.

While it is likely that the CMC will exercise direct control over Rocket Force nuclear weapons as was the case with the Second Artillery, the elevation of the Rocket Force to the level of a formal service likely means that the joint-force potential of the Rocket Force will be better realized. Song Zhong-ping, formerly of the Second Artillery Engineering University, noted the PLARF may eventually have separate commands for nuclear and non-nuclear weapon systems.[2] Another implication is that Theater Military Commands may have more ready

China's Missile Forces			
System	Missiles	Launchers	Estimated Range*
ICBM	75-100	50-75	*5,400-13,000+ km*
MRBM	200-300	100-125	*1,500+ km*
SRBM	1,000-1,200	250-300	*300-1,000 km*
GLCM	200-300	40-55	*1,500+ km*

Estimates reflect the PLS's ongoing modernization of its missile forces and in some cases may have increased. (Source: US DoD)

access to incorporate nuclear armed short, medium and intermediate range missiles under PLARF command when executing theater-level military operations. Rocket Force officers will likely get a better share of Theater Military Command billets.

Not yet clear is how the rising nuclear forces of the PLAN and PLAAF will relate to the PLARF. Song Zhong-ping indicated that eventually the nuclear forces under the PLAN and PLAAF may join the PLARF to form "a new strategic nuclear force."[3] However, with the precedent of new Theater Military Commands, it is also possible that new strategic "combined command" could emerge that would direct strategic nuclear forces and allocate theater level nuclear forces to the theater commands.

PLARF and PLASSF

Also unclear is how the PLA will assign primary responsibility for emerging missile defense and space combat missions with the emergence of the new PLA Strategic Support Force. Again, while the more centralized CMC to Theater Military Command structure may make easier the formation of ad hoc joint mission structures, there are strong indications that the PLASSF may have emerged as the early leader for space combat missions. Early in the last decade the Second Artillery, the PLAAF and the primary space mission executing General Armaments Department (GAD), under the CMC, were vying for control of a potential "Space Force."[4] GAD and 2007 ASAT test veteran General Li Shang-fu emerged as the first Deputy Command of the SSF, and may be the primary commander of the "Space Force."[5] But what is unclear is whether the PLARF or PLASSF will control new systems like the mobile solid fuel Kuaizhou space launch vehicle (SLV) of the China Aerospace Science and Industry Corporation (CASIC). CASIC's larger 2m diameter KZ-II could perform Medium Earth Orbit ASAT missions in addition to satellite launch or intercontinental strike missions.

It remains possible that the PLASSF, PLARF and PLAAF could control parts of the future anti-ballistic missile (ABM) defense mission. The PLASSF and/or the PLARF could control Kuaizhou SLV-ASATs while the PLAAF could control emerging theater missile defense system like the reported HQ-19, which may be similar to the U.S. Terminal High Altitude Area Defense (THAAD) system. Russian Almaz-Antey S-400 SAMs expected to be delivered to the PLA in 2018[6] may also have a robust anti-tactical ballistic missile (ATBM) capability. Asian military sources have indicated that the PLA will have a national missile defense capability by the mid-2020s. These may include new energy weapons like railguns and lasers, systems the PLA has been seeking to develop for decades.

Emerging PLA Prompt Global Strike

The emergence of CASIC's Kuaizhou and KZ-

II SLV/ASATs also points to the potential emergence of a new PLA non-nuclear strike capability similar to what the U.S. sought with its Prompt Global Strike (PGS) program of early in the last decade. CASIC's KZ-II may be similar in size to the China Aerospace Science and Technology Corporation's (CASC) new DF-41 mobile solid fuel ICBM, also thought to have a 2m diameter. Kuaizhou and KZ-II may be early platforms to employ a new hypersonic glide vehicle (HGV) dubbed Wu-14 by the West. HGV's can achieve long ranges while employing a depressed trajectory and maneuvering in order avoid potential missile defenses. The emergence of these new CASIC systems may also mean that that the PLA may deploy a non-nuclear PGS capability before the United States.[7]

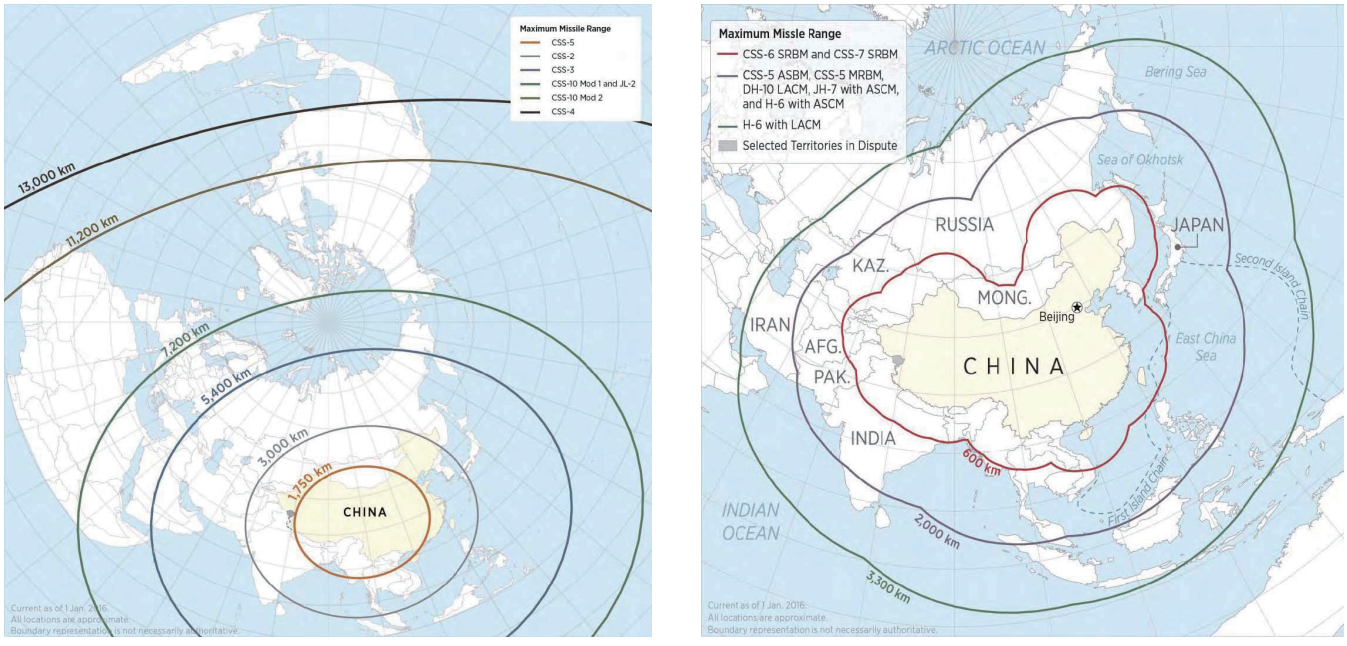
More Intercontinental Warheads from the Land, Sea and Air

After decades of an apparent CASC monopoly on producing ICBMs, it is also possible that CASIC's new Kuaizhou and KZ-II signals that CASIC may become a second source of ICBMs for the PLARF. As it appears to be similar in size to the 13,000km range DF-41, an ICBM version of the KZ-II may also carry MIRVs, perhaps up to ten similar to estimates for the DF-41.

In addition, U.S. government sources report that the PLARF is modifying all of its CASC 12,000km range DF-5A silo-launched liquid fueled ICBMs to carry the MIRV warhead bus of the DF-5B.[8] The DF-5B reportedly carries up to three warheads,[9] but its estimated throw-weight of about 4 tons indicates it may be able to carry up to 6 to 8 warheads.[10] This upgrade indicates the DF-5A/B will serve for many more years and will not be replaced by the mobile DF-41.

The MIRV-equipped DF-41 will be produced in two variants, one carried by a 16-wheel CASC-made transporter erector launcher (TEL). A second version that will be carried by a railroad-based launcher, utilizing rail launcher technology from the Ukraine, started testing from its new launcher in early December 2015.[11] It is likely that some of China's many and often lengthy railroad tunnels may be modified to base and conceal railroad-based DF-41 units. The appearance of rail-based ICBMs raises the question of whether the PLA may in the future create rail-based protective ABM units.

For several years the annual China Military Power reports of the Pentagon have contained the



Maximum range of PLA's ballistic missiles and cruise missiles. (Source: US DoD)

estimate that the PLA Navy eventually may acquire five new Type 094 SSBNs. Each carries 12 single-warhead JL-2 SLBMs with a range of about 8,000km. The Pentagon's latest report covering 2015 states that in the 2020s the PLA could be producing the follow on Type 096 SSBN and for the first time notes it may be armed with a new "JL-3" SLBM.[12] The JL-3 may be equipped with MIRV warheads. It is conceivable that the PLA could build five Type 096 SSBNs and that it will continue to operate its Type 094s for a long period, perhaps with improved versions of the JL-2.

What this means is that amid a general uncertainty—based on open sources—about the total size of the PLA ICBM/SLBM inventory, the number of missiles and warheads may nonetheless be on the cusp of a period of significant growth. The Pentagon reports state that the number of ICBMs, land based missiles, has grown from a high estimate of 50 in 2012 to 100[13] in 2015. To this must be added an eventual 60 JL-2s on Type 094s. So could the PLA be building up to a land based ICBM force of about 200 missiles plus 60 SLBMs by 2020? By the mid-2020s, could MIRV equipped DF-41s and DF-5A/Bs, plus a possible MIRV-equipped JL-3s increase PLA ICBM/SLBM nuclear warheads beyond 500?

However, the likelihood that the Pentagon does not reveal in its annual reports its real estimates for ICBM numbers and many other PLA systems, out of counter-intelligence considerations, is but one factor that contributes to uncertainty over open-source based estimates for PLA missile numbers. In the 1990s it was thought that the PLA only had "20" DF-5s for many years. However, Iran's revelation of concealed high tunnels for launching long range missiles, which could be based on Chinese designs, points to the possibility that the PLA may have been building similar concealed launch tunnels since the 1980s, indicating it may have many more than just 20 DF-5s.[14] Furthermore, China's "Underground Great Wall" of about 3,000km of tunnels has provided vast areas in which to conceal a larger number of missiles.

It may also be necessary in the not too distant future to start counting PLA air-launched intercontinental warheads. The current modernized Xian Aircraft Corporation H-6K bomber may have a range of 3,000 to 4,000km but it does not yet have provision for aerial refueling. It carries 6 or more DF-10K/CJ-10K/ CJ-20 1,500km range land attack cruise missiles, which could be armed with small nuclear warheads. The PLA may have 100 H-6Ks by 2020. A next-generation strategic bomber called H-10 may be in service by 2025 and it is expected to have "flying wing" configuration.[15] It may also be equipped with a next generation stealthy and longer-range cruise missile.

To ensure targeting for the DF-26 and DF-21 ASBMs the PLA is building multiple satellites, ground-based long range phased array radar (LPAR), over the horizon radar (OTH) in addition to multiple unmanned (UAV) and manned aircraft platforms.

New Theater Nuclear and Non-Nuclear Systems

It is likely that most PLARF intermediate, medium and short range ballistic missiles, plus long-range cruise missiles, are equipped with a range of non-nuclear and nuclear warheads. Nuclear armed ballistic missile systems most likely include the 4,000km range DF-26, the 1,700km range DF-21 and 2,150km range DF-21A, the 800-1,000km range DF-16 and the 360km range DF-15. It is also possible that the 1,500km range DF-10 ground-launched land-attack cruise missile has a nuclear armed version. The potential variety of PLARF theater nuclear missiles calls into question whether the oft-stated PLA nuclear "doctrine" of No First Use (NFU) ever applied to theater nuclear forces.

Since the Pentagon's China Military Power report covering 2012 reported that the PLA had "75-100" medium range ballistic missiles, the

latest report covering 2015 says the PLA has "200-300" medium range ballistic missiles.[16] For a high estimate, this could indicate the PLA is producing up to 65 new medium range missiles per year, or up to about 500 by 2018-2019.

Three new intermediate and medium range ballistic missiles were revealed during China's 3 September 2015 military parade, likely indicating that they all have entered unit service.[17] Most interesting was the new CASIC DF-26, which the parade announcer said already had an anti-ship version. This is likely a version of the maneuvering anti-ship warhead developed for the DF-21D. This is also the first PLA theater missile capable of reaching Guam. In the future the DF-26 may also be equipped with new HGV warheads.

Though it reportedly became operational in 2010, the 1,700km range DF-21D anti-ship ballistic missile (ASBM) made its first public appearance in the September 2015 parade. Vague images of its warhead revealed in early 2016 indicate that has a long conical shape with possible fins at the base,[18] in contrast to the likely bi-conic warhead design on the CASIC DF-21C and CASC DF-15B, both deeply influenced by the U.S. Pershing II MRBM. There are indications that China is building missile hangers on Woody Island in the Paracel Group in the South China Sea that might accommodate the DF-21D ASBM.[19] From Woody Island the DF-21D could cover all of Taiwan and attack U.S. ships just departing bases on Okinawa.

To ensure targeting for the DF-26 and DF-21 ASBMs the PLA is building multiple satellites, ground-based long range phased array radar (LPAR), over the horizon radar (OTH) in addition to multiple unmanned (UAV) and manned aircraft platforms. In 2016 the PLA may control over 30 imaging satellites plus nine electronic intelligence (ELINT) satellites, while civil-military initiatives like the 138 Jilin small imaging satellite network are planned for 2030. The Shenyang Aircraft Corporation may be testing their new Shendiao (Divine Eagle) twin-fuselage large high altitude long endurance (HALE) UAV.[20]

In February 2016 the PLA revealed a new version of its 800-1,000km range CASIC DF-16, that likely began entering service in 2011. The new version uses the bi-conic maneuverable precision guided warhead seen on the DF-21C and the DF-15B.[21] The longer range and faster DF-16 is a likely response to Taiwan's purchase of better missile defense systems like the Patriot PAC-3 interceptor. The early version DF-16 uses the multi-payload stage of the CASIC DF-11 Mod 1 SRBM.

For 2015 the Pentagon reports that the PLA has "1,000-1,200" SRBMs, a number the Pentagon says was reached in October 2011. One question is whether the number of SRBMs may also start a period of exponential growth, should the single missile TEL DF-15 and DF-11 be replaced by new multiple-missile per TEL SRBM systems. Both the 280km range CASC DF-12/M-20 and the 280km range CASIC BP-12A are paired with smaller but long range artillery rocket based SRBMs. The DF-12 TEL can carry one or two boxes of four 290km range two-stage A300 artillery rocket-based precision-guided SRBMs. Likewise, the BP-12A TEL can carry two boxes of four 200km range CASIC SY400 precision guided small SRBMs.[22]

DF-26 ballistic missiles. (Source: Asia-Pacific Defense Magazine)

So the DF-12 and BP-12A TELs can carry two large SRBMs, one large and four small SRBMs or eight small SRBMs. The Pentagon report covering 2015 notes that the PLA has up to 300 launchers, with a high estimate of 1,200 missiles, or up to four missile loads per launcher. Assuming high launcher estimates and four missile loads,

the potential new DF-12 and BP-12A systems could generate possible inventories of 2,400 missiles (2x large SRBMs), 6,000 missiles (1x large + 4x small SRBMs) or 9,600 missiles (8x small SRBMs). Even if the higher expected cost for these new systems cuts the number of missile loads from four to two, that means potential SRBM inventories of 1,200, 3,000 or 4,800 missiles.

Given their compatibility with PLA Army multiple launch rocket systems (MLRS) it is possible that new artillery rocket based SRBMs may be adopted by the PLA Army. There are indications that the PLA Army is acquiring new Norinco 300mm precision guided rockets. At the 2014 Zhuhai Airshow CASC introduced its WS-43 loitering attack munition, which can search for targets for 30 minutes at a range of 60km. A larger version with greater range might approach the utility of a SRBM.

Potential Future Anti-Submarine Missions

Since early in the last decade the PLA has been investing in the development of new underwater sensor networks to greatly increase its ability to prosecute enemy submarines, a long-standing strength of the United States and Japan. In late 2015 the China State Shipbuilding Corporation (CSSC) advertised its "Underwater Great Wall" system of moored sonar arrays, ship sonars and unmanned surveillance systems, with all signals processed by shore-based supercomputers.[23] It is possible that the PLA could in the future arm its medium and intermediate range ballistic missile and long range cruise missiles armed with small anti-submarine torpedoes or depth charges to attack submarines located by the Underwater Great Wall. While the PLAN has long been developing anti-submarine rocket-carried torpedoes, in 2014 Poly Technologies introduced an artillery rocket modified to carry a torpedo out to 100km.[23]

Growing Strategic Cooperation With Russia

Casting further concern over China's strategic military potential is the growing coincidence of strategic cooperation with Russia. In late May 2016 Russia and China held a joint missile defense exercise at the command post level. This exercise occurred close to a Russian launch of an ABM/ASAT missile. A decision to seek such a level of cooperation can be seen as a response to missile defense cooperation between the U.S., Japan and South Korea, but it also raises other concerns. If China and Russia cooperate increasingly regarding missile defense, there is then a real prospect they may cooperate regarding offensive strategic forces. It is conceivable that on the eve of a future U.S.-Chinese crisis over the future of Taiwan, that Russia could "tilt" its nuclear missiles forces with that of China's to produce a coerced response in Washington.

DF-16 ballistic missiles. (Source: Asia-Pacific Defense Magazine)

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Taiwan in the 21st Century Still Holds Geostrategic Importance

Chang, Li-Te

During the Cold War, Taiwan, located in the middle of the first island chain, is one of the important choke points of U.S. Containment of the Communist expansion in the Asia Pacific. U.S. General Douglas MacArthur referred to Taiwan as "an unsinkable aircraft carrier" by stressing that if Taiwan were to fall in the hands of the Communists, it would post a threat to the U.S. Far Eastern Front, and he proposed that the U.S. should assist in defending Taiwan.

After the Cold War, the U.S. became the only super power in the world; Japan, China, Russia, and India became regional powers. The U.S. assumed the leading role to establish regional security order and the level of military confrontations in the Asia Pacific began to fade. In the meantime, two sides of the Taiwan Strait began to expand civilian exchanges. Although some tensions did occur (such as Taiwan Strait missile crisis in 1996), the importance of Taiwan as a sentinel of containment was no more.

In recent years, China's national power and military might be growing rapidly, and its strategy of expansion and activities to forcibly maintain its sovereignty and national interests are felt by its neighboring countries and the U.S. in the form of the squeeze from China's military strength. Even though the U.S. has been promoting an "Asia-Pacific Re-balance" policy in order to enhance its military presence in the region, the U.S. in fact has to disperse its military forces to every corner of the world to engage in a global war on terrorism and security situations. China has been vigorously improving its A2/AD (anti-access /area-denial) capabilities, and it will be difficult for the U.S. to interfere in the future possible military conflict in the Taiwan Strait. Some experts indicated, the importance of Taiwan, with its limited national power, is decreasing in the geopolitical and geostrategic fields, and China is indeed a key player to influence this region. Therefore, the U.S. should enhance its relations with China. Consequently, some U.S. experts and scholars in the national security circles began to spread the words of a possible U.S. rethinking of security promises for Taiwan, and even abandoning Taiwan.

During the Cold War, General Douglas MacArthur referred to Taiwan as "an unsinkable aircraft carrier" by stressing that if Taiwan were to fall in the hands of the Communists, it would post a threat to the U.S. Far Eastern Front, and he proposed that the U.S. should assist in defending Taiwan.

A Democratic Taiwan's Survival Vital to the Framework of Asia Pacific Strategy

From a peaceful status quo of the Asia Pacific, it would be difficult to observe the importance of Taiwan's strategic location. However, from a different angle, if the democratic system of Taiwan is altered by outside influence, especially from that of China, the relevant impact is much easier to comprehend. The possible results of the impact include:

1. China is going to control important

strategic passageways of aerial and sea lanes of communication in the Western Pacific, South China Sea and Indian Ocean.

2. Taiwan, acting as "an unsinkable aircraft carrier," is a convenient exit for the People's Liberation Army (PLA) to get access to the first island chain, and will be used as the PLA's forward base to project its forces to the Western Pacific. U.S. General Douglas MacArthur and two renowned U.S. academics: Mr. John J. Mearsheimer and Mr. Denny Roy have all made the same remarks a long time ago.

3. Without Taiwan as a curbing and buffer zone, Japan, South Korea and the Philippines will have to suffer from tremendous military pressure from China. Japan will encounter a more unfavorable situation in dealing with territorial issues of East China sea and the Senkaku Islands. The SLOCs (sea lanes of communication) of Japan and South Korea will have to face directly the threats and interdictions from Chinese littoral firepower and air and naval forces stationed in Taiwan, even if the SLOCs detouring to the east side of the Philippines are adopted.

4. Because of the absorption of Taiwan's economic and military resources, China may have the power balance in Asia further tilted to its favor, and thus alter the political situation in the Asia Pacific. Coupled with the concerns of military pressure as above, neighboring countries in the region may switch side to China, and the U.S. and Asia Pacific Alliance will be shaken. Consequently, the Chinese goals of denying U.S. power presence in Asia Pacific and constructing a New Superpower Relations between the U.S. and China will likely be achieved substantively.

As previously mentioned, we may understand the importance of Taiwan's geostrategic value. Facing a rapid growth of Chinese military, Taiwan does suffer from a huge pressure in defense. But the defense capabilities of the ROC (Taiwanese) Armed Forces are more powerful and advanced than those recognized by the general public. Even if its defense coverage is limited to the ADIZ (air defense identification zone) on the east of maiden line of the Taiwan Strait, Taiwan still holds its geostrategic value.

Taiwan is located in the middle of the first island chain, and Taiwan will still holds geostrategic importance in the 21st Century.

Taiwan's Geostrategic Functions in the Future

1. Strategic Eye and Early Warning Center in Asia Pacific

Facing military threats over the years and located in the convergence point of aerial and sea lanes of communication in Asia Pacific, Taiwan, with its civil-mil radars, E-2K AEW&C and P-3 ASW aircraft, can effectively monitor status of all aircraft and vessels over hundreds kilometers in its vicinity. A long-range surveillance radar, an upgraded U.S. Pave Paws, is situated at mountainous area in Hsinchu in February 2013, and its coverage can reach as far as thousands kilometers. Test launches of land-based and submarine-launched ballistic missiles in Korean Peninsula, Mainland China, South China Sea, and Western Pacific can be detected by it.

This capability can allow Taiwan to become "The Strategic Eye" in the middle of the first island chain and provide early warnings for test launches of medium and long range ballistic missiles in the region and data for follow-on missile technology analysis.

2. Curbing and Buffering Effects in Geostrategy

Taiwan is located in the middle of the first island chain, and, during the Cold War, was one of the choke points to contain Communists' naval expansion by a U.S.-led Asia alliance. Currently, Taiwan has been keeping close trading and civilian exchanges with China, but China has never renounced the use of force against it and has deployed sizable land, aerial, naval and missile forces confronting the island. From this perspective, Taiwan has curbed a fair amount of PLA forces, which cannot be diverted to other places, and its neighboring countries are less stressful for their own defenses.

In addition, important SLOCs of Japan and South Korea are passing through the Taiwan Strait in the northbound and southbound directions, but

ROC Armed Forces and Coast Guard have a well-equipped fleet of aircrafts and vessels, which can implement HA/DR, freedom of navigation, aerial and naval SAR missions whenever necessary. (Source: Military News Agency)

China is expanding to the East, heading towards Western Pacific. The location of Taiwan, together with Okinawa of Japan, provides a considerable level of barrier and buffer for those SLOCs vital to the economies and survival of Japan and South Korea. This is the reason why Japanese strategic scholars have been looking highly of Taiwan's importance.

3. Contributions to Non-Conventional Security

Natural disasters, like typhoons, floods, earthquakes, and tsunamis have not abated in threatening mankind and serious mishaps either in the air or on the seas would take a toll on human lives and property. The Republic of China (Taiwan), as an indispensable member in Asia Pacific, has never ignored its international obligations, and has been extending assistance to countries encountering regional and international major disasters. Taiwan had even assigned aircraft and vessels to provide relief supplies or SAR (search and rescue) and medical personnel to those countries suffering from disasters, such as the Haiti earthquake, South Asia tsunami, and Haiyan Typhoon in the Philippines.

Taiwan is located in the middle of Asia Pacific and the ROC Armed Forces and Coast Guard have a well-equipped fleet of aircrafts and vessels, which can be thrown into operations of HA/DR (humanitarian assistance and disaster relief),

maintaining freedom of navigation, and aerial and naval SAR, whenever necessary. If Taiwan can be incorporated into relevant security mechanism in the region, the ROC can surely make more contributions in non-conventional security affairs in the Asia Pacific.

4. As a Role Model of Freedom and Democracy for the Chinese People in Asia Pacific

After decades of democratic practice and several peaceful transitions of power, Taiwan has been proven as a mature and stable democratic country. When U.S. President Barak Obama attended the ASEAN summit in Vientiane, Laos on September 7 this year, he spoke of Japan, South Korea, and Taiwan by stressing that democracy can also prosper in Asia. In comparison, China is a one-party state ruled by the Chinese Communists. Loosening censorship on media reports and internet freedom in recent years has suddenly tightened lately. Beijing began to interfere with the elections for the Chief Executive and the Legislative Council in Hong Kong, and even assigned agents to kidnap media professionals who are unfriendly to the Beijing authority.

Taiwan is located in the middle of Asia Pacific. If Taiwan can be incorporated into relevant security mechanism in the region, the ROC can surely make more contributions in nonconventional security affairs in the Asia Pacific.

Therefore, it is not just a slogan for Taiwan to become a role model of freedom, democracy, and rule of law for all the Chinese people in Asia Pacific. Taiwan should continue pursue proper ways and channels to exert its positive influence on the people and government of China, and gradually help China to steadily open up to transition to democracy, freedom and the rule of law, and by doing so it will help to maintain regional peace and stability.

III. Enhance Its Own Strategic Position--Direction of Taiwan's Future Efforts

As mentioned before, the geostrategic importance of Taiwan didn't decrease as some suggested, and Taiwan has transformed from a sole outpost of strategic containment in the Cold War to be a diversified one. Its contributions and area of influence have increased.

However, if Taiwan wants to generate those strategic effects, the pre-conditions shall be a peaceful and stable Taiwan Strait situation and a positive recognition from the Chinese Mainlanders. Excessively antagonistic and confrontational bilateral relations will deteriorate the status quo, and Taiwan will be a strategic burden in the region, not the one that produces a positive strategic effect.

Next, Taiwan should continue improving its self-defense abilities and developing "innovative and asymmetric" capabilities to close the gap of military strength between the two sides of the Taiwan Strait and not to allow China to have an idea that it can easily use force to deal with Taiwan.

The U.S.-Taiwan relations are the most important facet of the ROC's diplomatic efforts. The US's supportive attitude towards Taiwan's security and diplomatic issues as well as U.S. military sales are indispensable to the ROC. The existence of a democratic Taiwan and its geostrategic functions are also beneficial to the implementation of the U.S. Asia Pacific policy. It is hoped that, with U.S. assistance, Taiwan may be involved in regional security mechanism or other cooperation programs appropriately to allow it to make more contributions to the region. When new leadership of the U.S. is elected, we hope that the bilateral relations can prosper more and the cooperation on issues mutually beneficial and of a win-win nature can be further strengthened.

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China's Strategic Dilemma on THAAD Deployment in South Korea

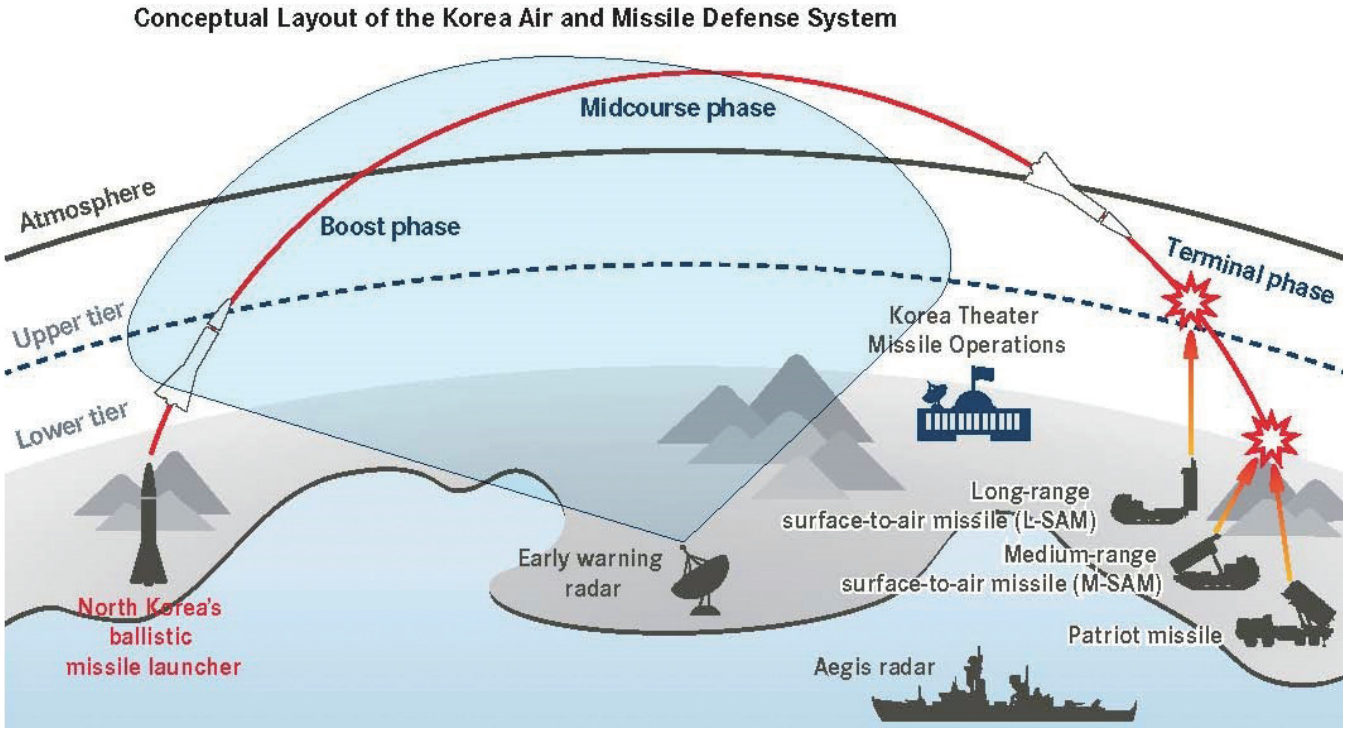
Lin, Po-Chou

Since Kim Jong-un ascended to the leader of North Korea in 2012, the development pace of nuclear weapons and missiles in the country has been gradually increasing. In December 2015, South Korean President Park Geun-hye decided to kick off negotiations with the U.S. counterpart with an aim at deploying THAAD (Terminal High Altitude Area Defense) in South Korea, and the deployment sites were finalized in July 2016. This decision of deployment has shown that South Korea is agitated by North Korea's rapid development of nuclear weapons and regards China as not actively exerting its substantive leverage in dealing with issues of North Korea nuclear weapons as it should have done. On the contrary, China has begun economic sanctions against South Korea in order to dissuade its deployment of THAAD, and thus dealt a heavy blow to their bilateral relations.

South Korea's North Korea Policy

1. Sunshine Policy: 1998-2008

From 1998, South Korean government was led by liberal-leaning President Kim Dae-jung and President Roh Moo-hyun consecutively to adopt "The Sunshine Policy" towards North Korea in the hope to discourage the North's development of



(Source: ROK MND)

nuclear weapons by mutual contacts, reconciliations, and providing economic assistance. President Kim was even awarded the Nobel Peace Prize for his efforts in this regard. According to the data from the Ministry of Unification of South Korea, the amount of USD 1.682 billion of economic aid was given to the North during the tenures of Kim and Roh.[1] However, after reviewing the results of the policy from 1998 to 2008, although North Korea agreed to denuclearization of the Korean Peninsula in the Joint Declaration of the Six-Party Talks held in September 2005, it has yet to fulfill its commitment to renounce the development of nuclear weapons. Instead, when Kim Jong-un took the reign of North Korea, its development pace of nuclear armament was increased, casting a shadow over the security in the Northeast Asia.

2. "Strategic Patience" approach: 2008-2013

When conservative-leaning Lee Myung-bak was elected to the presidency of South Korea in 2008, he switched the course, and began improving cooperation with the United States in dealing with North Korean issues. He adopted a "hard-liner approach" not to offer economic aid to the North unconditionally, but to enhance sanctions on the country. The approach of Lee and the so-called "Strategic Patience" adopted by U.S. President Barak Obama are asking North Korea to stop provocative actions and suspend development of nuclear weapons, then the needed assistance and exchange might resume.[2] Facing these, North Korea countered with making incidents, like sinking of the Cheonan, bombardment of Yeonpyeong island, etc in 2010. On the other hand, China vetoed a draft U.N. Security Council resolution proposed by the U.S., Japan, U.K., and France to impose sanctions on North Korea, the bond between China and North Korea was further strengthened "as close as lips and teeth."

3. Cooperating with China: 2013-2015

Then, President Park Geun-hye was inaugurated in 2013, and she, also a conservative, continued keeping sanctions on North Korea in place, but pushed to improve cooperative relations with China at the same time. Meanwhile, South Korea signed the free trade agreement with China, and it entered into effect as scheduled. The country, taking issues of historical grievances with Japan, suspended negotiations on the Acquisition and Cross-Servicing Agreement (ACSA) and General Security of Military Information Agreement (GSOMIA) with Japan as a way to delay the progress of U.S.-Japan-ROK trilateral military cooperation. Furthermore, South Korea denied the deployment of THAAD by U.S. military by claiming to develop its own "Kill-Chain" and deploy Korean Air and Missile Defense (KAMD) system.[3] President Park even became the only head of state in the Western Bloc to present in China's World War II commemoration event in September 2015.

This honeymoon is short-lived. Kim Jong-un followed his father, Kim Jong-il, to adopt his "Military First Policy," in the form of brinkmanship, resulted in a rising number of missile and nuclear weapon tests. In February 2013 and January 2016, North Korea conducted two respective nuclear tests, which shocked the international community, and these tests generated suspicions that China didn't follow the U.N. Security Council Resolutions to the letter to sanction North Korea. Former U.S. Secretary of Defense Leon Panetta denounced China during his tenure for providing assistance to North Korea to develop missiles,[4] and the crisis of armament proliferation on the Korean Peninsula is likely to be out of control.

4. Building South Korea-U.S.-Japan bloc: 2016-

Facing the ineffective Pro-China policy, President Park Geun-hye decided to turn the tide. First, foreign ministers from South Korea and Japan met in Seoul to reach reconciliation on historical issues between the two countries on December 28, 2015. Concerning the issue of comfort women, Japan acknowledged the involvement of Japanese

imperial military during the wartime for which its government was deeply accountable. Shinzo Abe, in his capacity as Japanese Prime Minister, expressed "apology and attitude of introspection." Both countries agreed to set up a foundation established by South Korea and funded by Japanese government budget as a way of compensation.[5] The icy relations between the two countries began to melt, and it symbolized that the obstacles of U.S.-Japan- ROK trilateral military cooperation were removed.

North Korea conducted the fourth nuclear test on January 6, 2016, then on 13 of the month President Park announced that South Korea is going to discuss with the U.S. for deploying THAAD. In May 2016, South Korea and the U.S. agreed that South Korea provides land and relevant facilities, and the U.S. is responsible for the costs of deployment and operations. The progress of the negotiations between the two countries went well, and in July they announced the location of deployment is in Seongju County in South Korea. This decision is well supported by general public of South Korea, and according to local media polls, 53.6% of its people support the deployment of THAAD by US Forces Korea.[6]

However, it is quite disturbing that North Korea has conducted multiple launching tests of SLBMs (submarine-launched ballistic missile) in February, April, and August this year. This has shown its missile threats are gradually expanding across Northeast Asia, and posing an obvious challenge to the countries in the region.

Peninsula Strategic Structure

South Korea's approval for deployment of THAAD further tightened the bilateral relations between China and Russia. Xi Jinping and Vladimir Putin signed a "Joint Statement on Deepening Comprehensive Strategic Partnership Between the People's Republic of China and Russian Federation" on 8th May 2015, and "Joint Statement on Strengthening Global Strategic Stability" in June 2016 to actively strengthen bilateral cooperation. Both countries took the coherent stance on the issues of THAAD, conducted in September their first ever joint exercise in the South China Sea,[7] and thus have shown their strategic efforts to support North Korea. Concerning the U.S.-Japan-ROK's perspective, the reconciliation between Japan and South Korea paved the way for U.S. -Japan-ROK trilateral cooperation. This trend leads to a Northeast Asia posture in which U.S.-Japan-ROK takes one side opposed by China-Russia-DPRK taking another. However, Russia was economically sanctioned by the U.S. and the European Union because of its recent invasion to Crimea so as to seek opportunities of economic development in the Far East. Russia began to build up trade relations with South Korea and Japan, and by this way may slacken the solid ties of China-Russia-DPRK.

China's dilemma

1. Supporting North Korea

Even though China looks up on the strategic location of North Korea, it has shown contradictory attitudes towards the issue of the country. On the one hand, it doesn't want to see a failed North Korea's regime, leading to an uncontrollable security issue on its border; on the other hand, it is worried

THAAD missile test fire in 2013. (Source: US DoD)

that if it unconditionally supports North Korea that may obtain viable nuclear weapons as a result, its security interests will be damaged. Over the years, U.N. Security Council has passed resolutions 1718, 1874, 2087, and 2094 to enhance sanctions on North Korea. But China has been maintaining close trading relations with North Korea, and providing it with food and energy assistance for quite a longtime. Furthermore, China is opposed to imposing sanctions on North Korea that may have shaken its regime,[8] and doesn't fulfill its commitments as stipulated in the UNSC Resolutions. China even assists North Korea to develop armament, leading "Nuclearization" on the Korean Peninsula and destabilizing the security situations in the region. As U.S. Secretary of Defense Ash Carter mentioned, China bears great responsibility for North Korea's nuclear tests, and has an important responsibility to reverse it.[9]

2. Punishing South Korea

Regarding U.S. deployment of THAAD in South Korea, Chinese Foreign Ministry said, "it does directly damage China's strategic security interests, and impair global strategic stability." China begins to strength its clampdown on South Korea, including restricting its domestic shows and activities participated by South Korean entertainment celebrities, tightening processes of issuing visas, and increasing restrictions on importing South Korean products, etc., in order to force South Korea to change its policy for such deployment. In fact, there is no reason for China to oppose South Korea's deployment of defensive arms, and it was not the first example for major countries in the region to deploy their own surveillance radars. The "Kill-Chain" under South Korea's development with pre-emptive attack features is far more controversial than THAAD.[10] Therefore, it is obvious that China's concerns on issues of THAAD are more strategically centered than militarily. Currently, China has to contemplate whether it is going to impose economic sanctions on South Korea. If it does, the trading relations between the two will be damaged, and South Korea will be forced to enhance the U.S.-Japan-ROK trilateral cooperation.

3. U.S. Gains Strategic Interests

The North Korea's development of nuclear weapons leads to a most unfavorable consequence to Beijing, which on the contrary creates a favorable condition for the U.S. to realize its "Re-balance" policy. After seeing that North Korea didn't stop its nuclear and missile tests, South Korea and the U.S. considered that China was not exerting its influence on North Korea as it should have done, and thus justified their intention to deploy THAAD. THAAD's X-band radar circle-sector coverage is 1,000 km, and U.S. military has deployed two X-band radars (AN/TPY-2) to Japan in 2006 and 2013, respectively.[11] If THAAD is going to be deployed in South Korea, it can monitor the status of hostile forces within its radar coverage to a certain level, and will be beneficial to improving missile defense and maintaining security in Northeast Asia.

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2 Victor Cha, *The Impossible State: North Korea, Past and Future*(N.Y.: Harper-Collins, 2012), pp. 272-276, 294-297; Mark E. Manyin, Emma Chanlett-Avery, Mary Beth Nikitin, U.S.-South Korea Relations, CRS Report for Congress, U.S. Congressional Research Service, May 15, 2012, pp. 11.
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4 Missy Ryan, "China assisting North Korean missile program – Leon Panetta," Reuters, April 20, 2012.
5 "Japan-ROK summit phone call, Abe expresses apology and repentance," The Yonhap News, December 28, 2015; "Japan, S. Korea reach deal to resolve comfort women issue," Kyodo News, December 28, 2015.
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9 Paul Sonne, "Ash Carter says China shares responsibility for North Korea nuclear test," *The Wall Street Journal*, September 9, 2016.
10 Bruce Klingner, "South Korea Needs THAAD Missile Defense," *The Heritage Foundation Backgrounder No. 3024*, June 12, 2015.
11 "Joint Statement of The Security Consultative Committee: Toward a More Robust Alliance and Greater Shared Responsibilities," Japan Ministry of Foreign Affairs, October 3, 2013.

RIMPAC-2016

RIMPAC (Rim of the Pacific Exercise) is hosted by the U.S. Pacific Command biannually, and this year RIMPAC-2016, as the 25th in the series, was held in the waters off Hawaii and California from June 30 to August 4. A total of 27 countries, including Australia, Brazil, Canada, Chile, Colombia, Denmark, Malaysia, Mexico, China, etc., were invited and brought in their 45 vessels, 5 submarines, over 200 aircraft and 25,000 service personnel. Major drills included disaster relief, naval security cooperation, sea control operations, amphibious operations, anti-submarine warfare, air defense operations, live-firing, etc.

RIMPAC-2016 was executed by Commander, U.S. 3rd Fleet (C3F) RADM Nora W. Tyson as the Commander of the Joint Task Force, and other commanding positions were held by Canadian, Japanese, Australia and New Zealand ranking officers.

Three Phases Cover Complex battlefield Environment

RIMPAC takes place in three phases. "The Harbor Phase" as the first one, is designed to build personal relationships between individuals from participating nations and allow them to meet face-to-face for briefings, training and detailed planning. "The Force Integration Phase" as the second one, is aimed at enabling participating units to operate in a robust and multi-national command and control environment. This phase includes: live-fire gunnery and missile drills, maritime interdiction operations, anti-submarine warfare, amphibious operations, salvage operations, mine clearance operations, etc. "The Free Play Phase," as the third one, is used to test war fighting skills of participating countries, and examine how component commanders and their subordinate units respond to realistic battlefield scenarios, including land, surface, air and submarine threats that nations could face in the Pacific Rim.

Chinese Naval Vessels' Second Participation in RIMPAC

PLAN (People's Liberation Army Navy) began to be invited to RIMPAC by the U.S. from 2014, but it was limited to take part in anti-piracy and humanitarian assistance operations with others involved with operational and live-fire drills excluded. PLAN dispatched 5 surface vessels to the exercise, including 052C DDG (guided missile destroyer) Xian, 054A frigate Hengshui, hospital ship Hepingfangzhou, supply ship Gaoyouhu, and submarine rescue vessel Changxingdao. The scale of its participants is the third, next to the U.S. and Canada, and during the exercise its vessels had joined with U.S. vessels to conduct rescue drills for submarines.

Six combat ships from United States, Canada, Republic of Korea, Japan and Australia Navy participated in the RIMPAC 2016 multilateral exercises. (Source: US Navy)

Current Development of China's First Homemade Aircraft Carrier

According to the latest circulating information on Chinese websites, the flight deck and ski-ramp on China's first indigenous aircraft carrier were completed. It has shown that this vessel adopted the same ski-ramp design as that of Liaoning (CV-16) without catapults. Others suggested, even though the indigenous vessel adopted the same design with Liaoning (CV-16), it may have some modifications, such as smaller bridge, enlarged elevators, etc.

Lack of catapults will limit the capabilities of Chinese aircraft carrier. For instance, it cannot bring AEW&C (airborne early warning and control) aircraft onboard. And the fighters cannot be launched with maximum take-off weight because of the limitations of the ski-jump; therefore, they encountered either shorter range or fewer load of munitions.

However, developing catapults and catapultable fighters has more risks and takes more time. Therefore, in the short term, China may adopt the design of Liaoning (CV-16) as a more feasible way to build an aircraft carrier to operate in its green waters (between the first and the second island chains), which is escorted by land-based aircraft.

China's recent development of carrier-based fighters encountered a bottleneck condition. In April this year, a J-15 fighter doing a simulated carrier landing at an inland base (possibly Xincheng airbase), crashed on suspicion of a failure in its flight control system. The pilot ejected in low altitude , but died of serious injuries. It was said the crash was caused by a glitch in the software of the flight control system. Furthermore, China's indigenous ejection seat was not safely deployed in low altitudes.

J-15s have begun to carry PL-8 and PL-12 air-to-air missiles onboard the Liaoning (CV-16), but possibly cannot carry heavier payloads such as supersonic anti-ship missiles. In addition, it was rumored that the J-31 has the potential to be carrier-based. But several months ago, J-31's engine was said to suffer from insufficient thrust, which may lead to re-design the aircraft from scratch to accommodate a more powerful engine, such as WS-15 turbofan. By this token, the commissioning of the J-31 will be delayed, and the time for China to acquire a comparable and fully functional conventional aircraft carrier with that of the U.S. will be further put off till 2030.

Just like Russian Aircraft Carrier Admiral Kuzetsov and Liaoning aircraft carrier (CV-16), China's first home-made aircraft carrier adopted the same ski-ramp design for taking off. (Source: UK MOD)

Japanese Defense Budget Reaches All Time High

On 20 August 2016, the Japan Ministry of Defense (MOD) issued the "Defense Programs and Budget of Japan: Overview of FY2017 Budget Request," with contents including budget numbers and applications of equipment acquisitions, investment on armament R&D, and personnel's upkeep cost for the Ministry and Japan Self-Defense Forces (JSDF) in 2017.

Japanese Defense Budget Grown Non-stop for 5 years; Reaches JPY 4,900 billion in 2017

Japanese defense budget started to go up in 2013, and has grown four times until 2016. It reaches JPY 4,970 billion (approx. USD 49 billion) for FY 2017, and is the highest cap over the past two decades. According to the "Defense Programs and Budget of Japan: Overview of the FY2017 Budget Request," the purpose for Japan to raise its defense budget is to deal with potential threats to Japanese national security by global and neighboring security situations, allow Japan to do more contributions to international peace, and ascertain Japan's superiority in R&D for cutting-edge armament technologies.

Improve Land-Sea-Air Operational Capabilities; Enhance Space Warfare and Information and Electronic Warfare Capabilities

In 2017, aside from acquiring new tanks and armored vehicles continuously, upgrading its Aegis vessels, building new submarines and minesweepers, improving its fighters, purchasing long-range air defense and anti-ship missiles, JSDF will strengthen its offensive and defensive capabilities in space warfare, such as deploying commercial communications and meteorology satellites with X-band radars as its assets in space warfare supportive network. In addition, it will develop new offensive and defensive measures for electronic warfare (EW) and cyber warfare, and improve its EW protection and cyber attack capabilities for its central command and control mechanism.

Enhance Command and Control Efficiency; Establish Shared Cloud-based System

Currently, JSDF has a dispersed cloud-based networking system and Japan MOD will build a shared cloud-based system to enhance forces-wide operational efficiency, flexibility and sturdiness.

Apply Advanced and Matured Technologies; Develop Cutting-edge Armaments

Japan MOD is planning to invest JPY 2.1 billion (USD 20.7 million) in preliminary studies in 2017 for electro-magnetic guns so as to instill in JSDF with the civil electro-magnetic technologies developed over the years. Moreover, seeing the progress of civilian unmanned aerial vehicles (UAV) and artificial intelligence (AI), Japan MOD is going to bring in commercial off-the-shelf (COTS) technologies to develop UAVs and military AI equipment so as to shorten R&D time span, lower R&D cost, and accelerate their deployment.

Fiscal Year	Budget (JPY)	Growth Rate
2013	4,680 billion	0.8%
2014	4,780 billion	2.2%
2015	4,820 billion	0.8%
2016	4,860 billion	0.8%
2017	4,970 billion	2.3%

Chart for Japanese Defense Budgets from 2013 to 2017

HK 32 Exercise Verifies ROC Armed Forces' Operational Concepts

The Han-Kuang 32 exercise of FY2016 was held from August 22 to 26 this year. This live fire exercise of 5 days and 4 nights included the following drills: rapid-protection and counter-contingency maneuvers for critical installations at Taichung Harbor on August 23; closure drill of Hsuehshan Tunnel during the wee hours of August 24; multiple live-fire drills in various locations on August 25, including anti-landing drill in Kinmen Island, amphibious landing and anti-landing drill(Lian-Xing Drill) at Chialutang Beach in Pingtung by the 8th Army, and airborne and anti-airborne drills at Chang Long Farm in Pingtung. At the Lian-Yung Drill held in Baoli Mountain, in addition to various tanks, armored vehicles and weapon systems conducting live-firing rounds, AH-64E Apache Guardian and UH-60M Black Hawk helicopters debuted in the drill with the former demonstrating formidable and precision firepower on ground targets.

In this exercise, defensive operations for the Hsuehshan Tunnel were practiced for the first time with both north and south bound lanes closed for the drill. The 6th Army assigned engineering and combat units to the exit end of the tunnel in Yilan to practice interdiction combat and setting up barriers.

Aircraft of the ROC Air Force were also scattered to other air bases during the exercise. Naval vessels conducted emergency departure and mobile operational drills from Suao Naval Base. Two minehunters sailed out first to conduct minesweeping operations and create secured sea lanes, and then within the shortest time possible, various destroyers, frigates, corvettes and fast combat support ships departed in their wake to be ready for relevant operations.

Supply in wartime and force preservation drills for attack helicopters were done by Aviation and Special Operations Command of the ROC Army with an eye to sustaining our forces from the first wave of hostile missile attack and preserving our counter-attack capabilities in the future.

During the exercise, China's cyber-attacks on us were simulated. The simulated hacker attacks were inflicted on our governmental network and information systems, nodes of military and political significance, and critical infrastructure, with intentions to cripple our operations of finance, transportation, utilities and military command and control. Our military, in collaboration with information security agencies, law enforcement units and even civilian computer experts, conducted cyber protection drills to exert our comprehensive potential of cyber defense operations.

Lian-Xing amphibious landing and anti-landing drill at Chialutang Beach. (Source: Military News Agency)

2016 Defense Forum on Regional Security

On September 6, the Department of Integrated Assessment (DIA) of the Ministry of National Defense (MND) held the 10th Defense Forum on Regional Security. With the theme of East Asia Regional Security & R.O.C. Self-Reliant Defense Policy, the forum brought together experts from six countries, namely the United States, Japan, South Korea, India, Indonesia and Singapore, as well as scholars from Taiwan, to share and exchange their perspectives.

On the Opening Ceremony, Admiral His-Min Lee, Vice Minister of National Defense (Policy) gave the opening remarks. Admiral Lee stated that the security dilemma of East China Sea, Taiwan Strait and South China Sea should cause security challenges in the Asia-Pacific region, and it is important that regional countries should carry on more security cooperation.

The forum consisted of three sessions, and the topics and the presenters are listed as following:

Session I: The Future of East Asia Regional Security	
South Korea's THAAD Deploy and East Asian Security	Dr. Park Byung Kwang (ROK)
South China Sea Disputes under Regional Powers' Competition	Mr. Evan A. Laksmana (Indonesia)
Challenges Facing the Republic of China (Taiwan) in the South China Sea	Mr. Ian Easton (US)
Session II: PRC's Intention in Regional Strategy & Military Reform	
PRC's Strategic Intention in South China Sea	Dr. Joel Wuthnow (US)
The PLA's Peripheral Strategy after Military Reform and Its Implication to India and the Region	Dr. Jagannath P. Panda (India)
East Asia Regional Security and R.O.C. Independent Defense Capability	Mr. Kazumine Akimoto (Japan)
Session III: R.O.C. Self-Reliant Defense Capabilities Development	
Opportunities & Challenges of "Indigenous Defense Submarine"	CAPT Chang-Wei Chen (ROC)
Review & Development of "Indigenous Defense Fighter"	Col. Chih-Hsiang Chen (ROC)
Singapore's Three-Generation Quest for a Self-Reliant Defense Posture	Dr. Fook-Weng Loo (Singapore)

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