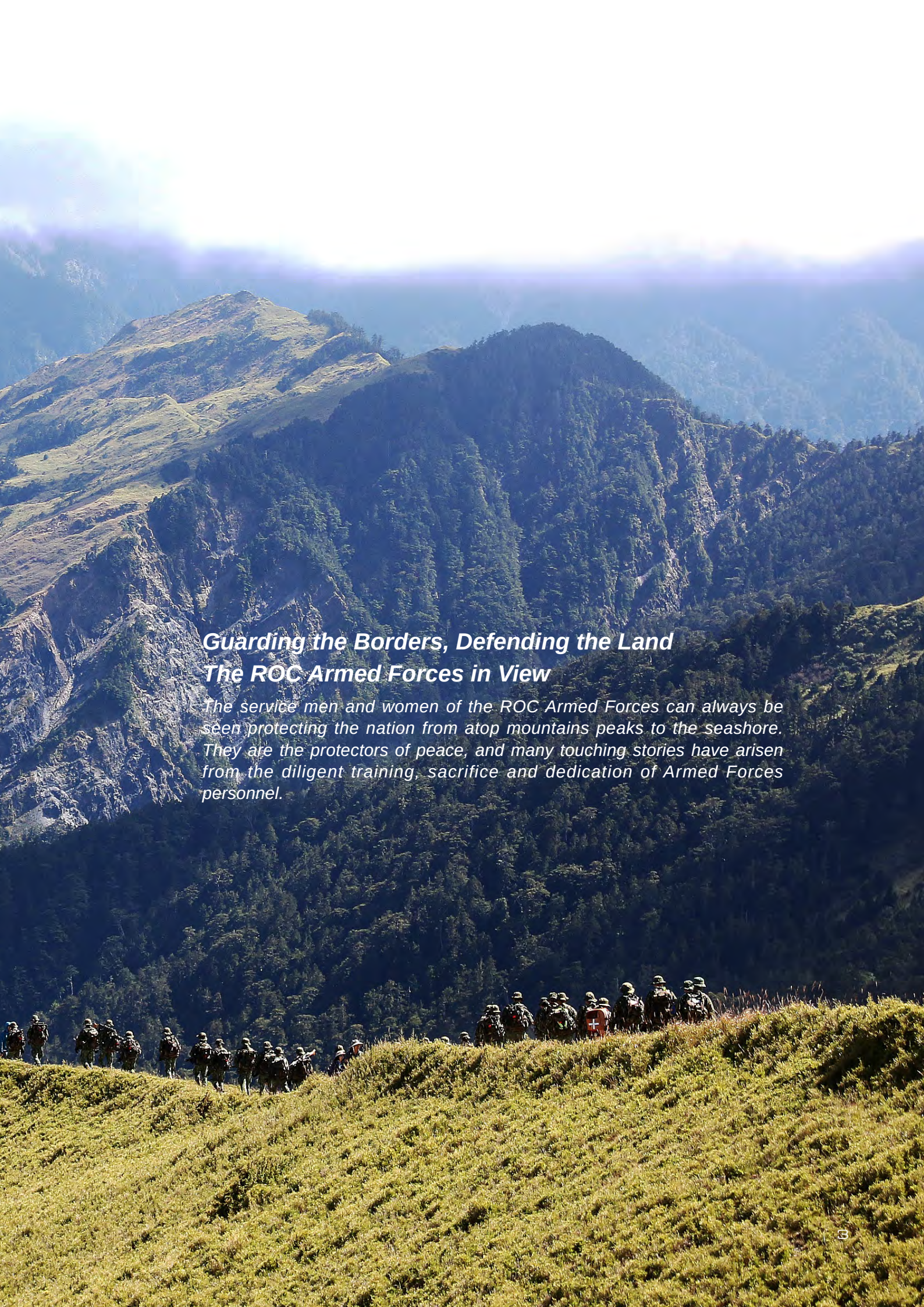

Guarding the Borders, Defending the Land
The ROC Armed Forces in View

The service men and women of the ROC Armed Forces can always be seen protecting the nation from atop mountains peaks to the seashore. They are the protectors of peace, and many touching stories have arisen from the diligent training, sacrifice and dedication of Armed Forces personnel.

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Foreword

For a long period of time, the ROC has played an important role in maintaining peace, stability and prosperity in the Asia-Pacific region. Although the ROC does not have formal diplomatic relations with neighboring countries, we have engaged in substantive exchange based on the principles of goodwill, good faith and mutual benefit to build a stable security environment and have actively made a significant contribution to peace and stability, not just regionally, but globally.

In view of the overall development of the situation in the Asia-Pacific region recently, there are some obvious causes for concern. North Korea is developing nuclear weapons and ballistic missiles at an astonishing speed, increasing tension on the Korean Peninsula. Disputes surrounding the sovereignty of islands and reefs in the South China Sea and disagreements over freedom of navigation have sparked a regional military contest; the PLA Navy and Air Force have conducted multiple long-distance missions in 2017, crossing the first island chain through the Miyako Strait and Bashi Channel, and have even carried out various exercises in the Western Pacific, representing a severe threat to security in the Taiwan Strait.

We recognize the fact that the ROC cannot match the PRC's national defense budget and military development. The speed and extent of its increase in military strength far exceed predictions. Facing a worsening security threat, we must adjust defensive concepts and force buildup and readiness strategies with foresight. This year, we presented the military strategy of "resolute defense and multi-domain deterrence", which was tested in the 33rd Han Kuang Exercise. We have reviewed and formulated our thinking on the development of asymmetric combat capability to deter reckless military advance by the PRC with concrete and pragmatic actions.

In terms of force restructuring, the Information, Communications and Electronic Force (ICEF) has been established to strengthen protection of infrastructure and information security. The air-defense missiles of the Air Force and artillery units have been integrated into the Air Defense and Missile Command, greatly increasing operational command efficiency. Also, the commissioning of P-3C anti-submarine and maritime patrol aircraft allows the Air Force to carry out longer duration and more wide-ranging anti-submarine patrols to ensure homeland security.

As for self-reliant national defense, programs for indigenous warplanes and Navy vessels have both been officially launched. National security must be controlled in our own hands. Fully

committed to overcoming all difficulties, we have been encouraging armament technology R&D through government incentives and, through long-term national defense requirements, promoting the development of the defense industry, and thus gradually reducing the reliance on foreign acquisition.

The ROC Armed Forces cannot avert the impact of the low-fertility trend on the transition to a volunteer force. To build a volunteer force that is able to retain personnel long-term and have strong warfighting capabilities, we have simplified administrative affairs and increased allowances according to different skill sets, while renovating old barracks under the Xing An Program for higher living quality for service personnel. We have also provided incentives for further education to facilitate personnel reentering the work force upon leaving the military.

Besides diligently fulfilling our core mission of operational training, the Armed Forces have also assisted the people when they face danger and hardship through disaster rescue, emergency response, helping with the harvest and other activities. The annual Min An and Wan An drills are staged together with local governments to promote all-out defense education and consolidate overall national war resources.

Facing future national defense and security challenges, I will do my utmost to achieve the objectives of protecting national security and the well-being of the people. Externally, I will strive to continue to maintain good interaction with friendly countries and, internally, win the respect of the people, to give military personnel the dignity they deserve. The MND will build good relations with the Legislative Yuan and all citizens based on mutual trust and interaction to ensure that the ROC Armed Forces are outstanding, strong and can be relied on by the people.

Finally, this report describes the efforts of the Armed Forces over the last two years and future developments in a reader-friendly way to increase the public's understanding of our Armed Forces; it features more illustrations and statistics than previously, addresses every important issue and uses lively pictures and text to increase readability for military personnel and the general public, with the aim of cultivating mutual respect between the people and the Armed Forces.

Minister of National Defense

2017/12

Introduction

Article 30 of the *National Defense Act* stipulates that the Ministry of National Defense (MND) periodically publishes a national defense report to elaborate changes in the strategic environment and the effectiveness of national defense policies to the people. This year's is the 14th report released, with "Guarding the borders, defending the land -The ROC Armed Forces in view" as the theme. The report affirms the efforts of the Armed Forces to protect the ROC and its people and aims to remind citizens to have a sense of danger in peacetime, so they attach importance to national defense. As a guide for readers, this introduction is divided into 5 parts: Strategic Environment, National Defense Readiness, Self-reliant National Defense, National Defense Governance and The Honor of the Armed Forces. The report covers the period from May 2016 to November 2017.

Part 1: Strategic Environment

The global security environment at present is still characterized by uncertainty and complexity, while the Asia-Pacific security situation continues to be dominated by the US and the PRC. In addition, the search for coalitions among Asia-Pacific countries with respect to security issues, instability of the situation on the Korean Peninsula, rapid military reform of the PLA, arms race among countries in the region, and non-conventional security threats all affect strategic parity in the Asia-Pacific region and pose security challenges to the ROC. We must effectively leverage our geo-strategic advantage to engage in deeper cooperation with countries with which we share common interests and make a contribution to regional peace and stability through such efforts.

Part 2: National Defense Readiness

The Armed Forces optimize combat readiness in accordance with the *Constitution of the Republic of China (Taiwan),* the *National Defense Act* and their mission. National defense and military strategies are formulated in response to changes in the strategic environment and the enemy threat to guide the direction of force buildup and readiness efforts. With innovative/asymmetric thinking, steady organizational adjustment is continually carried out and joint operation exercises and training enhanced in order to establish reliable defense power.

Part 3: Self-reliant National Defense

Pursuant to the requirements of Article 22 of the *National Defense Act*, weapon R&D, production and life cycle support capabilities are actively established in combination with the technological capabilities of industry, academia and the R&D sector. In addition, the government provides incentives to the private sector for its participation in flagship projects, including production of indigenous aircraft and vessels, with the aim of achieving national defense industry revival and self-reliant national defense through the combination of such participation and the resources of various government agencies.

Part 4: National Defense Governance

Guided by the *2017 Quadrennial Defense Review*, the report elaborates the implementation of major policies, including volunteer military system, care of officers and service personnel, budget resources, weapons acquisition, military medicine, protecting human rights, active utilization of land managed by the military, national defense legal system, military cooperation and exchange, and international linkage. The aim is to promote excellent national defense governance and become a key force for maintaining regional security and stability with these efforts.

Part 5: The Honor of the Armed Forces

Inheriting an honorable history, the Armed Forces promote force buildup and readiness, implement all-out defense, consolidate a national consensus, carry out operations to protect the people, reassure the people and maintain social order. The military also actively nurtures talent and provides a career coaching service to retired/discharged personnel, so they can contribute to society after being honorably discharged.

國防

Part 1: Strategic Environment

The current global security environment is characterized by rapid change and great uncertainty. The international situation has become more complicated due to intertwined influences of political, economic and military security issues. The US continues to dominate regional security order with its great national power. Taiwan's security, however, is affected by the rapid military reform of the PRC, uncertainties on the Korean Peninsula, region-wide armaments modernization, growing unconventional security threats, and other factors. Situated in an important geostrategic location in the Asia Pacific region, we should pay attention to changes in the international security environment and expand our strategic value in order to make a contribution to peace and stability in the Taiwan Strait and the region.

Chapter 1 Security Situation

At the present stage, the regional security situation appears to be both cooperation and competition (coopetition) between the US and the PRC as each seeks alliances and strengthens strategic partnerships. The PRC has expanded its diplomatic and economic strategic influence, and expedited global and regional power projection capability through the "Silk Road Economic Belt and the 21st Century Maritime Silk Road" (One Belt One Road Initiative). The DPRK seeks to further develop nuclear weapons and upgrade its ballistic missile capability, triggering strategic competition between the big powers in the region and affecting regional security. Regional non-conventional security threats are also on the rise. The disputes over sovereignty in the East China Sea and South China Sea and competition over natural resources continue. These are all transnational issues. The ROC should take advantage of its geo-strategic position and work together with other countries to deal with challenges through regional security cooperation mechanisms.

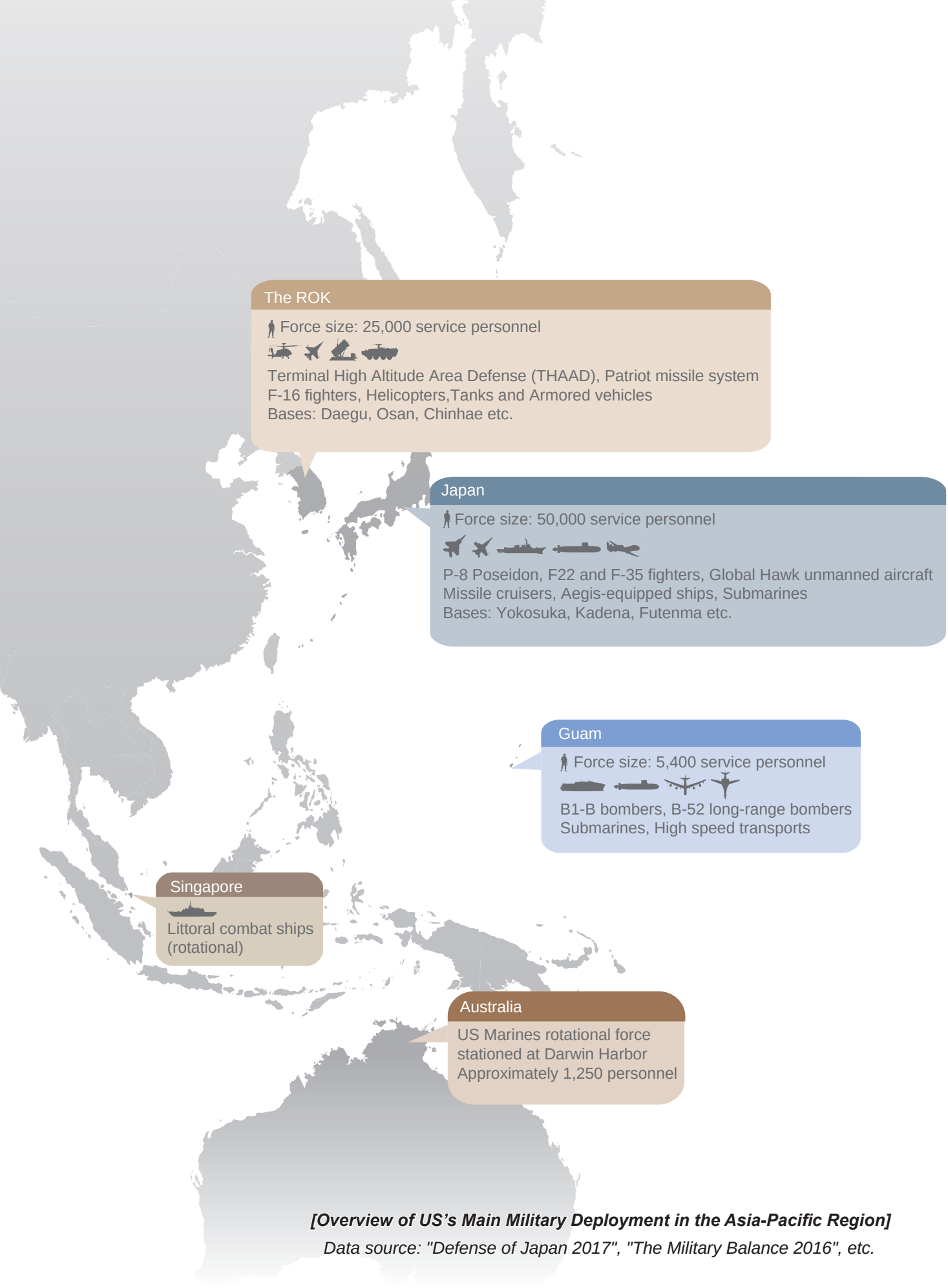
Section 1 Changes in the Asia-Pacific Security Situation

The main variables affecting the overall security situation in the Asia-Pacific region are the PRC's acceleration of its military modernization and growing military activities, and the DPRK's continuing development of nuclear weapons and ongoing missile tests. Also, since the US withdrew most of its troops from the Middle East, it has gradually turned its strategic focus and force deployment to the Asia-Pacific region. As countries of the region continue to acquire advanced armaments and increase their military power to protect their sovereign territory, the risk of potential conflict continues to challenge peace and stability.

I. Adjustment of the US's Asia-Pacific Strategy

Since taking office, US President Donald Trump has emphasized the principle of "America First." Though the US has withdrawn from the Trans-Pacific Partnership (TPP) and abandoned the previous administration's Asia-Pacific "rebalance" strategy, its focus on the region remains. The US maintains a large military presence, and continues to consolidate relations with traditional allies, such as Japan and the ROK, and strengthen security cooperation consensus, with focus on dealing with the North Korean issue and managing the coopetition between the US and the PRC.

The US Defense Department's report *Military and Security Developments Involving the People's Republic of China* issued in June, 2017 stated "the United States will continue to monitor China's military modernization and it will continue to adapt its forces, posture, investments, and operational concepts to ensure the United States retains the ability to protect our allies and partners." In the future, the US military strategy for the Asia-Pacific region will be developed through joint exercises to build alliance-oriented mission concept, command



[Overview of US's Main Military Deployment in the Asia-Pacific Region]

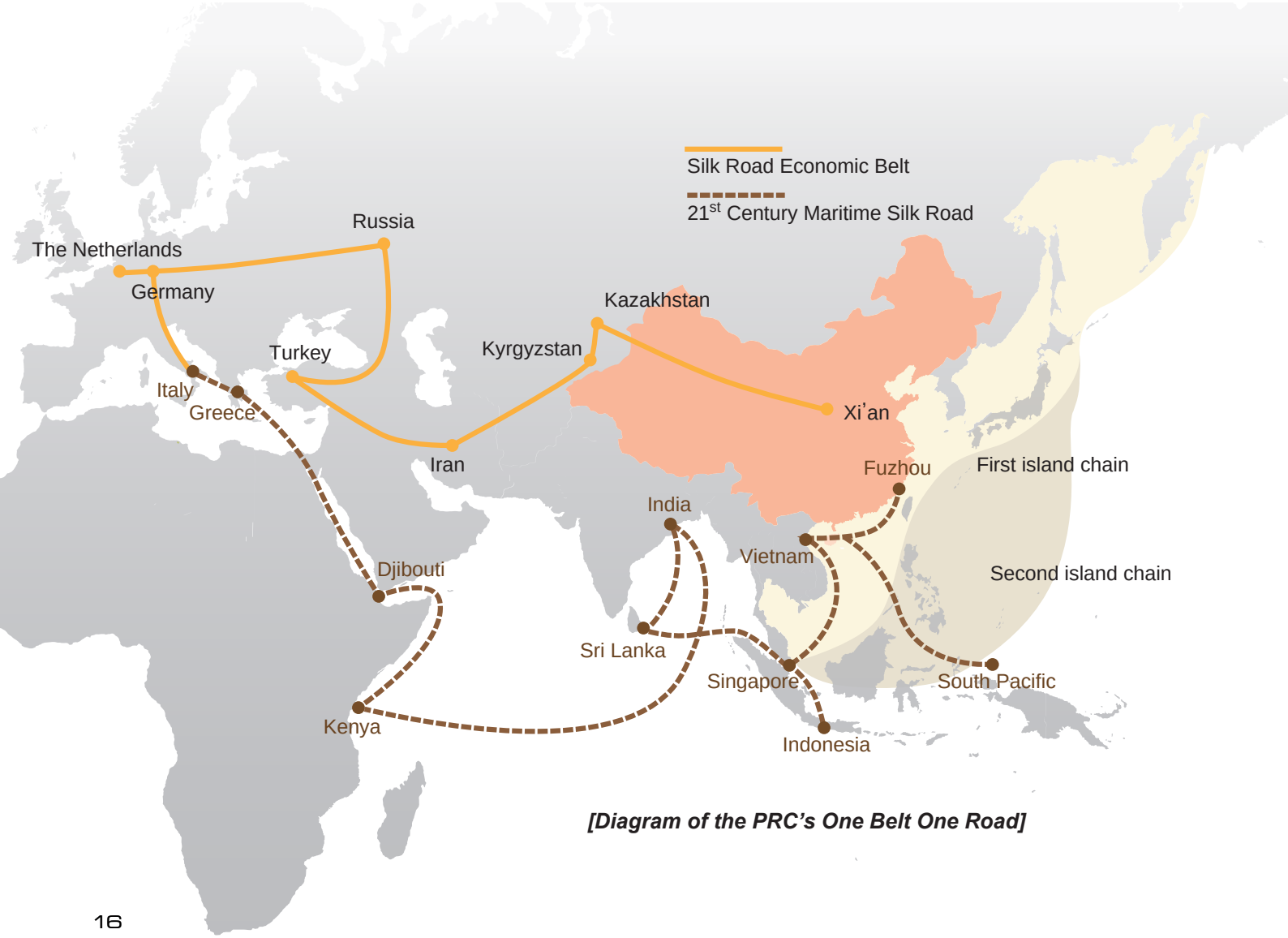
Data source: "Defense of Japan 2017", "The Military Balance 2016", etc.

and control, doctrinal development, and "operational interoperability" of communications and information networks. The US will also maintain navigation of its naval and air forces in certain areas to support its Asia-Pacific allies in maintaining regional peace and stability.

In November, President Trump attended the Asia-Pacific Economic Cooperation (APEC) Economic Leaders' Meeting and ASEAN Summit and made his first visit to 5 Asian countries during which he engaged in dialogue with leader. During his talk with Japan's Prime Minister Shinzo Abe, he put forward the strategic view of a Free and Open Indo-Pacific region, including the vast ocean area from the Pacific to the Indian Ocean and peripheral countries, with an aim to bring India into US's alliance system to share regional responsibility. However, related developments are ongoing.

II . Rapid Growth in the PRC's Power

After coming to power in 2012, the PRC's leader Xi Jin-ping put forward "the Chinese Dream" and "Two Centennial Goals" as national strategic targets, aiming to build a "moderately prosperous society" by 2021, the year of the 100th anniversary of the founding



[Diagram of the PRC's One Belt One Road]

of the Communist Party of China, and "make China a prosperous, powerful, democratic, civilized, harmonious, beautiful and modernized socialist country" by 2049, the year of the 100th anniversary of the establishment of the PRC. In his report at the 19th National Congress of the Communist Party of China in October, 2017, Xi put forward "Thought on Socialism with Chinese Characteristics for a New Era," demanding that the PLA actively carry out modernization in 4 dimensions, namely military theory, force structure, military personnel and weapons and equipment, to fundamentally achieve national defense and armed forces modernization by 2035. In addition, Xi also aims to build world-class armed forces by the middle of this century, consolidate the leading position of the CPC and facilitate economic, diplomatic and international activities.

In recent years, through political and economic strategies such as Regional Comprehensive Economic Partnership (RCEP) and "One Belt One Road," the PRC has actively enhanced the security relationship with Russia and expanded the scale of military exercises, greatly expanding its political and security influence. In terms of military power, the PRC has allocated a large national defense budget over the years, actively expanded its military power, obtained advanced Navy and Air Force weapons purchased overseas and produced indigenously, developed cyber and Electronic Warfare (EW) capabilities and continues with ballistic missile production and deployment. Today, the PRC's Navy and Air Force have acquired long-range operation capability, pushing its military projection further into the area west of the second island chain and challenging regional security. It has also increased its ability to attack the ROC as well as raised the level of difficulty of military intervention by the international community, presenting a serious threat to our national defense and security.

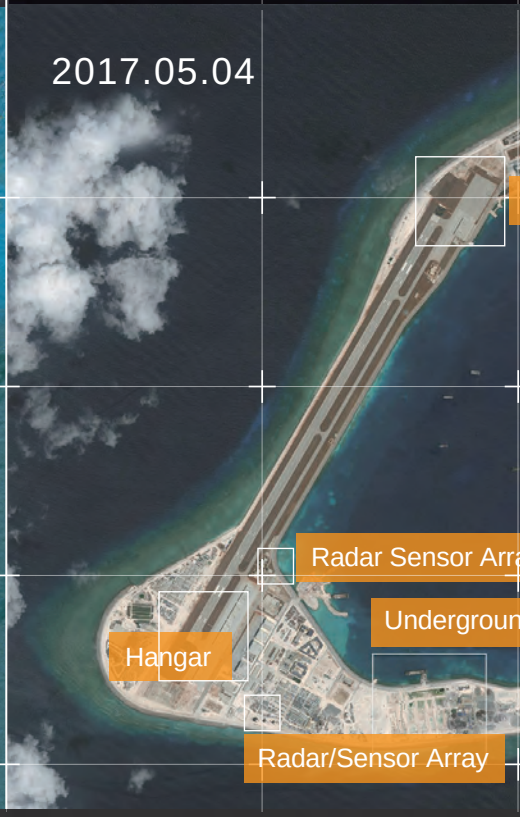
III .Disputes Over Island Sovereignty and Maritime Rights

There are numerous islands in the Asia-Pacific region and, with abundant minerals, natural gas, petroleum and fishery resources, countries are attaching increasing importance to maritime rights and are actively exploiting resources, a situation that is intensifying the competition over island sovereignty and exclusive economic zones. In particular, in the East China Sea and South China Sea, the exclusive economic zones of the nearby countries overlap as well as being located astride Western Pacific transportation lifelines, making the disputes difficult to resolve.

In terms of the East China Sea, following the so-called nationalization of the Diaoyutai Islands by Japan, the PRC announced the East China Sea Air Defense Identification Zone and adjusted the deployment of its naval and air forces, began regular East China Sea patrols and has frequently crossed the first island chain for exercises in the Western Pacific. For its part, Japan has established the 9th Air Wing at Naha, formed a Coast Observation Unit on Yonaguni Island and plans to station a garrison and missile force on Amami Ōshima and Miyako Island. The Japan Coast Guard has also added a Senkaku Islands Defense Force equipped with 12 1000-ton patrol boats.

Fiery Cross Reef

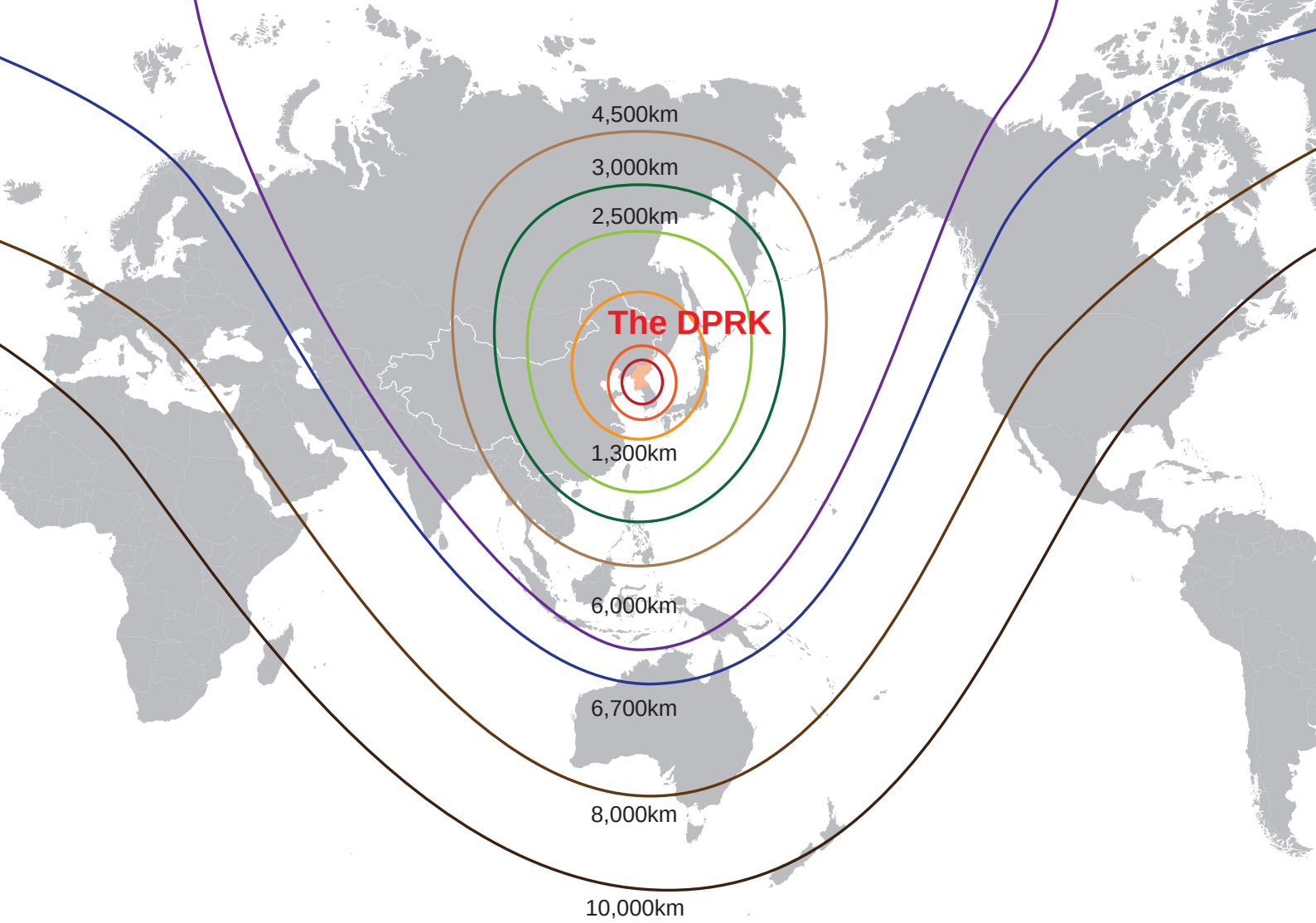
Subi Reef



Mischief Reef

[The Progress of the PRC's Militarization of South China Sea Islands and Reefs]

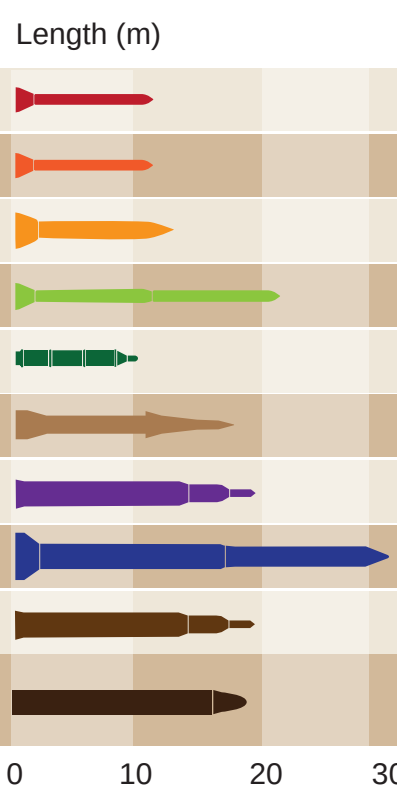
Photo source: CSIS Asia Maritime Transparency Initiative



As for the South China Sea, the ASEAN Ministerial Meeting (AMM) passed the framework of the Code of Conduct on the South China Sea (COC) in August 2017, the PRC continues to build islands by reclamation, militarize islands and reefs and continues its construction of infrastructure, such as runways and wharfs, and military deployment on many islands and reefs, including Fiery Cross Reef, Mischief Reef, Subi Reef and Johnson South Reef etc. in the Spratly Islands. In the future, each island and reef will be able to accommodate 20-26 aircrafts, warships up to 10,000 tons and anti-aircraft and anti-ship missile forces, which will intensively protect the PRC's rights at sea together with law enforcement vessels. Also, there has been friction between the US and the PRC when US Navy vessels carry out Freedom of Navigation Operations (FONOPs) inside a 12-nautical mile radius of the disputed islands and reefs.

IV . The Korean Peninsula Issue

Since coming to power in April 2012, the DPRK's leader Kim Jong-Un has continued the country's brinkmanship strategy and is continuing to develop and threaten to use nuclear weapons and enhance its intermediate and long range ballistic missiles. From February to November 2017, the DPRK staged 16 missile tests, claiming that the range of the Hwasong-15



Type	Manufacturing Country	Payload (Kg)	Range (Km)
Scud-B	Russia	1,000	300
Scud-C	Russia	700	500
Nodong	DPRK	700	1,300
Taepodong-1	DPRK	500	2,500
Musudan	Russia	650	3,000+
KN-17	DPRK	unknown	4,500
KN-08	DPRK	750-1000	6,000
Taepodong-2	DPRK	700-1000	6,700
KN-14	DPRK	750-1000	8,000~10,000
Hwasong-15 (claimed by NK)	DPRK	unknown	estimated 10,000+

[Diagram of the Range and Performance of the DPRK's Ballistic Missiles]

is capable of striking the whole mainland of the US The DPRK also carried out its sixth nuclear test on September 3, 2017, further increasing tension on the Korean Peninsula. Although large-scale military exercises and armed provocation and other means have put the country under severe economic pressure, the DPRK is accumulating key technology capabilities, such as ballistic missiles and nuclear weapon miniaturization, through its missile and nuclear weapon tests, seeking to increase its international bargaining chips to force the US to recognize it as a nuclear state and end the military exercises and economic sanctions against it.

The US, the ROK, Japan and the UN continue to handle the DPRK problem with caution and have actively adopted new diplomatic, security and economic sanctions, including limiting oil imports, banning textiles export and conducting military operations, such as launching interceptor missiles, flying B-1B strategic bombers across the Korean Peninsula and dispatching nuclear submarines to take part in combined military exercises.

President Trump reiterated in November 2017, that "the era of strategic patience is over." A final consensus was reached with the ROK's president Moon Jae-in on the revision of the *ROK-US Ballistic Missile Guidelines*, in which the 2 countries agree to remove the limit

Date	Type	Launch timing
0704	Hwasong-14	Independence Day of the United States
0728	Hwasong-14	The Day of Victory in the Great Fatherland Liberation War (Victory Day) in the DPRK (July 27)
0829	Hwasong-12	US-South Korea Ulchi-Freedom Guardian military exercises (August 21-31)
0903	Small hydrogen bomb	Day of the Foundation of the Republic, 9th BRICs Summit
0915	Hwasong-12	Security Council passes sanctions against the DPRK (September 11)
1129	Hwasong-15	After President Trump's first visit to Asia (November 3-14)

[The DPRK's Major Missile Tests and Nuclear Weapon Tests in 2017]

on warhead payload to force the DPRK to abandon its nuclear weapon and ballistic missile development programs.

The ROK has also deployed the Terminal High Altitude Area Defense (THAAD) system, established intelligence and command and control systems and expanded the range of radar detection to increase its early warning and defense capabilities. This move was met with strong opposition from the PRC, which believes that the THAAD system's radar range will be able to monitor its missile activities and exercises in the Northern Theater, Yellow Sea and Bohai Sea, seriously affecting its strategic interests, sending China-ROK relations into a nosedive. However, in October 2017, the ROK gave three commitments, namely that it will not add more THADD systems, that its existing position of not participating in the US anti-ballistic missile system will not change, and that South Korea-US-Japan security cooperation will not develop into a trilateral military alliance. Normal exchange was restored between the PRC and the ROK subsequently and the tension between the countries eased.

V . Non-conventional Security Threats

Of all non-conventional security threats, complex disasters and cyberattacks represent the biggest threats to Taiwan. The spread of terrorism is also an issue that cannot be ignored. Taiwan is situated in the Pacific Ring of Fire earthquake zone and on the periphery of the Pacific and, as such, is frequently affected by earthquakes and typhoons which pose a threat to Taiwan's national security on various levels. The threat to information network security

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3	

The focus of the US's Asia-Pacific strategy is dealing with the problem of the DPRK, the "coopetition" relationship with the PRC, and strengthening military cooperation with allies such as Japan and the ROK.

Photo source: US NAVY

has transformed from the theft of information in the past to active attack. In particular, critical infrastructure have become the targets; the result of the damage suffered can be incapacitation of the government, social disorder and holes in national defense, seriously threatening national security.

Terrorism is gradually spreading around the world. If an attack occurs in Taiwan, it could directly cause serious loss of life and property, create panic and undermine normal social and economic activities. Such security threats other than war are all international due to the linkage between countries that has resulted from globalization and need to be prevented and stopped through international security cooperation mechanisms.

Section 2 National Defense Situation of the Countries in the Region

In face of rapid changes in the international situation and new forms of threat, tension in the Asia-Pacific region continues to rise. The countries of the region have adjusted their defense strategies and accelerated national defense reform in response to military provocation and development of potential threats.

I. The United States

The 2017 Defense Posture Statement of the US Defense Department pointed out the 5 main threats faced by the US are Russia, the PRC, the DPRK, Iran and terrorist organizations. The US believes that threats to its own security and that of its allies, such as The Islamic State of Iraq and the Levant (ISIL) and the DPRK, should be dealt with on a priority basis. The policy towards the DPRK includes any option including military intervention.

The Trump administration's policy of "making America great again" is reflected in strategic planning and budget allocation; the annual national defense budget for 2017 was increased to US$619.2 billon; the total defense budget for 2018 is almost US$700 billion, of which US$ 626 billion is base budget and for Overseas Contingency Operations expenditure.

In US-China coopetition, complex problems are solved through various cooperation mechanisms to reduce the chance of military conflict or accident. In the South China Sea, US interests lie in maintaining Freedom of Navigation and legal commercial activities, and resolving territorial disputes peacefully. It will continue to carry out various missions within the scope of international law.

In response to the DPRK's successive missile and nuclear weapon tests and increased tension in northeast Asia, the US has strengthened its regional missile defense capability, has deployed THAAD in the ROK and has also carried out intensive military exercises with Japan and the ROK to prepare for military counter action.

II. Japan

The basic idea for guaranteeing Japan's security is building a "Dynamic Joint Defense Force" to ensure maritime and air security around Japan. In 2015, the Legislation for Peace and Security was passed to change the country's security legislation, expanding the scope of operations of the Japan Self-defense Force and enhancing the legal basis for conducting overseas missions. The legislative development allows Japan to exercise the right of limited collective self-defense.

Prime Minister Abe has also expressed the aim of amending the constitution to continue the normalization of the armed forces. When President Trump visited Japan in November 2017, Abe advocated the "Strategic Diamond," with Japan, the US, Australia and India forming a trade and security network to counter the PRC's "One belt One road" strategic initiative. From

2013, Japan's national defense budget has increased 5 years in a row and was JPY4899.6 billion (around US$44.5 billion) in 2017.

Through the 3 strategies of building a Dynamic Joint Defense Force, new legislation for peace and security, and strengthening the US-Japan alliance, Japan continues to consolidate the US-Japan alliance, strengthen Southwest Islands defense capability, improve the Self-Defense Force's joint operations capability and closely monitor the military situation in the DPRK and the PRC.

As the South China Sea is Japan's transportation lifeline, it has taken part in US-led freedom of navigation operations. In 2017, its helicopter carrier JS Izumo sailed into the South China Sea for 3 months of blue water training and conducted joint training with the US Navy to ensure freedom of navigation in the South China Sea. Japan also actively cooperates with peripheral countries through military and diplomatic cooperation, such as defense ministerial meetings, national defense staff meetings and signing of security or defense agreements, gradually strengthening strategic security cooperation with other countries.

III .The ROK

The ROK's *2016 Defense White Paper* emphasized that the objectives of its national defense policy are to "protect the nation from foreign military threat and attack," support the peaceful reunification of the Korean Peninsula," and "strive for regional and world peace". The DPRK's nuclear weapons, ballistic missiles, Weapons of Mass Destruction, cyber war and terrorist attacks were listed as the main threats.

Although President Moon Jae-in advocates dialogue and exchange with the DPRK, the ROK has formulated a three-tier defense plan comprising of the Kill Chain, the Korea Air and Missile Defense and the Korea Massive Punishment and Retaliation, in face of continuing missile tests by the DPRK, aiming to stop the missile provocation by the DPRK with a multi-tier method and show that they are not intimidated by the North's saber-rattling. The ROK continues to strengthen the US-South Korea military alliance and enhance strategic partnerships with peripheral countries. Its national defense policy is focused on innovative development of national defense matters, enhancement of joint operations effectiveness, encouragement of national defense industry development, assurance of sufficient national defense budget and effective management of it, development of information defense capability and promotion of innovative development of logistics supply. As a result, the ROK's military power has clearly increased. The 2017 national defense budget was KRW40.33337 trillion (around US$35.64 billion) and has grown continually since year 2000.

IV . India

The 2017 *Joint Doctrine Indian Armed Forces* pointed that its external security threats come in the form of border security, competition over natural resources, cross-border and non-state terrorist attacks and other non-conventional threats, while the internal threats are attacks from terrorist organizations and rebel groups, illegal immigration and ideological conflict, amongst others.

The eastern, central and western sections of the China-India border are disputed. In June 2017, in Arunachal Pradesh (called Zangnan by China), on the eastern section of the border, the scope of the dispute clearly enlarged. After the PRC completed the Qinghai-Tibet Railway and airport and highway construction in this area, India successively increased its forces here. Recently, a border dispute arose at Doklam. While Indian forces withdrew from the border of the disputed area on August 28, the dispute has not been settled. Also, the Kashmir border problem has caused friction between India and Pakistan for many years. In the year of the 70th anniversary of the founding of both countries, the outbreak of conflict that resulted in bloodshed added to the instability of the situation in that region.

In response to the security threats, India has strengthened its military power by purchasing foreign armaments and domestically manufactured weapons. It has enhanced military cooperation with the US, Japan etc., and taken part in naval and air force joint exercises in the Indian Ocean and the Western Pacific to increase military operation capability.

V. Australia

Australia has a long tradition of security cooperation with the US. In recent years, it has been more actively involved in ASEAN region security issues in hope of playing an active role in regional affairs. In terms of guarding against the military rise of the PRC and the issue of South China Sea sovereignty, it stands alongside the US. Australia's *2016 Defense White Paper* pointed out that the US's China strategy is the most important variable for Asia-Pacific regional security and the US is Australia's most important strategic partner.

The focus of Australia's military strategy is increasing its military power; it sees terrorism and cyber security threats as major challenges and looks to establish a stable international environment. As of 2016, the Australian Defense Force (ADF) had expanded to a total of 62,400 service personnel. The process of Navy modernization has been accelerated, with Navy and Air Force weaponry upgraded and ground operation equipment replaced. In terms of military cooperation, Australia frequently engages in military cooperation with the US, Japan, India and the countries of ASEAN.

VI. Southeast Asia

The countries of Southeast Asia have adopted a policy of relying on the PRC economically while counting on the US for security. However, the PRC's assertiveness with regard to sea and land territory in recent years has spurred these countries to engage in military cooperation through the ASEAN Defense Ministers Meeting (ADMM) and ASEAN Regional Forum (ARF) to deal with regional navigation security protection, humanitarian assistance, anti-terrorism and anti-piracy issues for protecting their national security and national interests.

On the back of economic growth, the countries of Southeast Asia have increased defense spending and more defense resources have been used in recent years to acquire advanced sea and air weapon systems from the US, Europe, Russia and the PRC to upgrade operational capability and speed up military modernization.

The countries of the region are enhancing bilateral or multilateral relations to cope with the changing security environment. For example, with the US being Singapore's most important military and security partner, Prime Minister Lee Hsien Loong has also visited Myanmar, Mongolia, Laos, Japan, India and the PRC etc. in the past 2 years and expanded multi-lateral military cooperation, showing Singapore's attempt to maintain an important strategic role in regional security cooperation.

Following the "pragmatic diplomacy" of President Joko Widodo, Indonesia has gradually moved closer to the PRC while also enhancing cooperation with the countries of ASEAN, the US, Japan, Australia and New Zealand to increase its counter terrorism and contingency response capability in face of the frequent activities of extreme Muslim groups within its borders. As for the Philippines, although the disputes with the PRC over South China Sea islands and reefs led it to apply for arbitration to the Permanent Court of Arbitration and the decision was unfavorable for the PRC, leading to a freeze in relations between the 2 countries for a time, its economic cooperation with the PRC has been deepened and the dispute over the islands and reefs set aside for the time being since Rodrigo Rody Roa Duterte became president.

Section 3 Taiwan's Strategic Value

Taiwan is situated in a key geo-strategic position where land meets sea in the Asia-Pacific region. Security in the Taiwan Strait is vital for the security of international routes and global economic development, making it the key to regional security order and stability. For many years, the ROC has been an international model for its free economy, innovative information technology, humanitarian assistance/disaster relief, democracy and freedom. We share universal values and common strategic interests with the democratic countries of the world and have made a more concrete contribution to the international community.

I . The International Community's View of Security Across the Taiwan Strait

With the ROC's unique value and position, maintaining the existing peace and stability in the Taiwan Strait is in the interest of all parties in the region. The government of the ROC is committed to creating an environment for rational cross-strait dialogue and building a consistent, predictable and sustainable cross-strait relationship. The US and other members of the international community universally hope that the two sides can display their determination and take actions to maintain the peaceful status quo.

(1) The United States

Since the US committed itself to the defense of the ROC in 1950 to the enactment of the *Taiwan Relations Act* in 1979, the US has been the most important source of security support for the ROC and an important pillar of Taiwan Strait stability. The commitments of the US with respect to Taiwan's security and continuing arms sale have been one of the key factors in maintaining the cross-strait status quo. The US advocates that cross-strait disputes should be resolved peacefully and with agreement on both sides. After President Trump came to office, Secretary of State Rex Tillerson and other senior officials have stated openly on many occasions that the two sides should use constructive dialogue to avoid increasing tensions and damaging stability, opposing change in the cross-strait status quo by one side. The *2017 Military and Security Developments Involving the People's Republic of China* report had a special chapter on the Taiwan Strait security situation, showing that the US believes that cross-strait stability has a big impact on the security situation in the Asia-Pacific region.

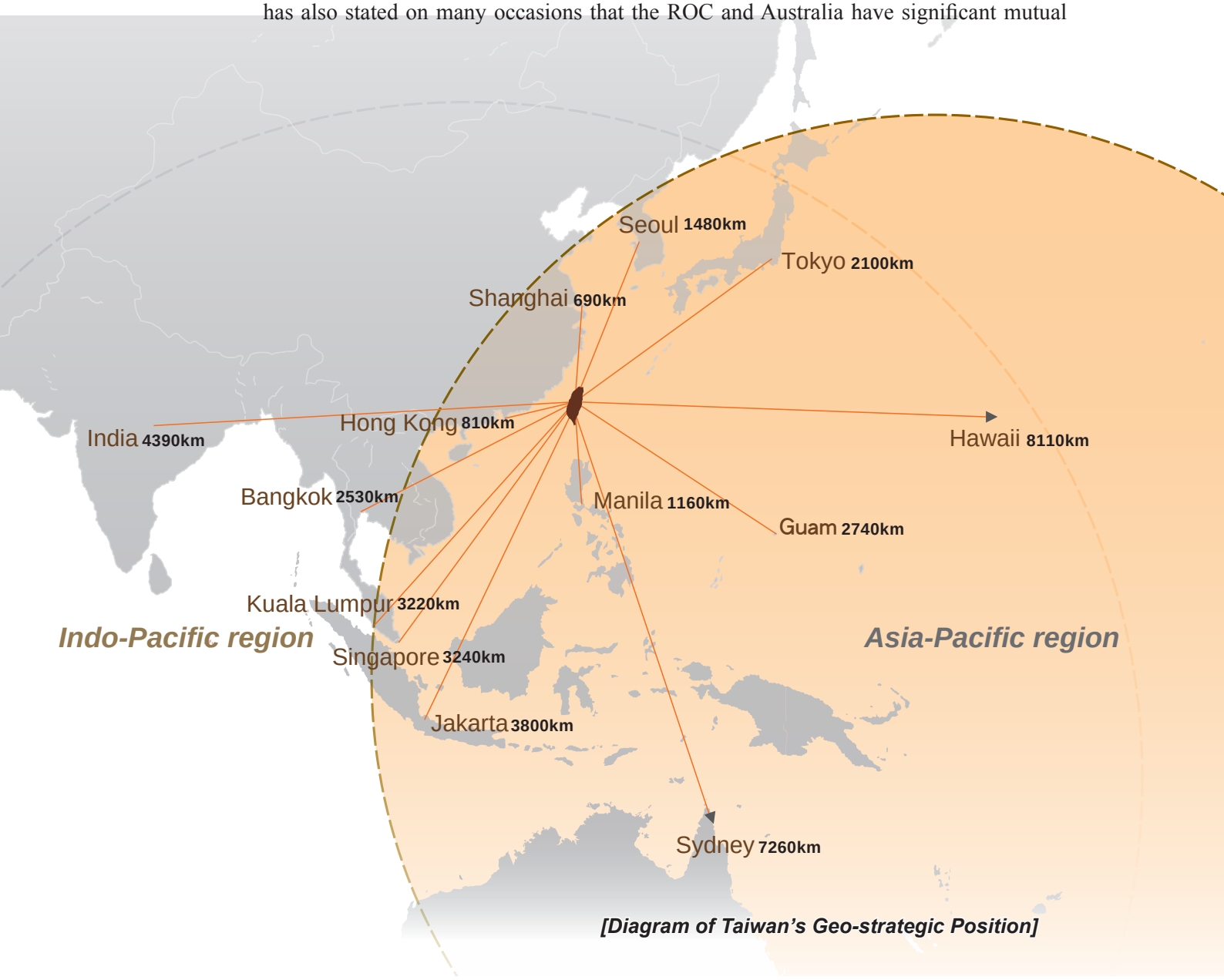
(2) Japan

Japan is a resource-poor, export-oriented trading nation that depends on import of crude oil, industrial materials and other materials and export of various industrial products by sea and air. The maritime shipping must sail through and around the Taiwan Strait. Therefore, security in the Taiwan Strait is vital for Japan's economic security and development. Japanese officials have stated publicly on many occasions that cross-strait peace and stability in the Taiwan Strait are vital for the region and the world. In

the *Defense of Japan 2017*, published in August, 2107, the military power of the PRC and the ROC was assessed, concluding that the PRC's missiles pose a grave threat to the ROC, and showing the high level of concern of Japan about security in the Taiwan Strait.

(3) Australia

Asia countries account for over 80% of Australia's national trade volume and 8 of the top 10 recipients of its exports are Asian economies, accounting for 89% of total exports. Australia attempts to further its interests through regional stability with political and diplomatic actions and bilateral and multilateral mechanisms. The Australian government has also stated on many occasions that the ROC and Australia have significant mutual



[Diagram of Taiwan's Geo-strategic Position]

economic interests and expressed its hope of peaceful resolution of cross-strait issues.

(4) European Union

The ROC shares common values with the EU in terms of democracy, rule of law and human rights. The European Parliament has, on many occasions, passed resolutions to support Taiwan's participation in international organizations and assist us in getting more opportunities to make a contribution to regional security matters. It has expressed support many times for peaceful resolution of the Taiwan Strait problem, constructive dialogue, and its opposition to resolution by force or threat of any kind.

President Tsai Ing-wen Hosted the P-3C Maritime Patrol Aircraft Commissioning Ceremony

II. Taiwan's Contribution to Maintaining Regional Peace and Stability

On the basis of the values of freedom, democracy, human rights and rule of law, the ROC has enhanced exchange and dialogue with the US, Japan and other strategic partners with which it shares similar beliefs. The ROC has also expanded security cooperation in the areas of international anti-terrorism, disaster relief and non-proliferation to contribute our power to maintain regional peace and stability.

(1) Geo-strategic Value

Located in a central position with regard to the South China Sea, East China Sea and Western Pacific at the hub of transportation routes in the Asia-Pacific region, Taiwan has irreplaceable geo-strategic importance. The Indo-Pacific strategic vision proposed by

the US and Japan further highlights its geo-political importance. As the PRC's military strength increases and force projection capabilities continually expands, the ROC has developed dynamic monitoring and early warning capabilities that can help protect international maritime and air navigation security in the surrounding area. Its superior strategic position and value make it an indispensable security partner in the region.

(2) Free Economy and Innovation Drives Economic Momentum

Taiwan's economy is free and open and performs outstandingly in terms of innovation. In the *2017 IMD World Competitiveness Yearbook*, the ROC ranked 14th overall, 2nd for number of R&D personnel and 3rd for the high-tech industry's share of manufacturing exports. These excellent achievements illustrate Taiwan's R&D advantages and innovation capabilities that drive economic development.

(3) Abiding by Nuclear Non-Proliferation Rules

Based on the idea of maintaining peace, the ROC supports containing terrorist activities and respects the international nuclear weapon non-proliferation rules of not producing, developing, obtaining, storing or using nuclear weapons, and only developing defensive weapon systems.

(4) Cyber Security

As information technology has rapidly developed, protecting information and cyber security are new issues facing many countries. After developing for many years, Taiwan's IT industry has world-class information security personnel, hardware technology and cyber security protection experience. Recently, the ROC came in an impressive 2nd place in the 2017 DEFCON CTF, showing the world its remarkable capabilities of information security. In the future, the ROC can continue to enhance information security cooperation with regional and advanced countries to stop malicious damage caused by international hackers, make a joint response to information security events, and build a better and secure information security environment.

(5) Active Participation in International Humanitarian Assistance and Disaster Relief Operations

In recent years, various natural disasters have seriously threatened people's lives and property around the world as climate change continues. The ROC has used the disaster relief and medical capabilities of the Armed Forces in its participation in multiple international humanitarian assistance tasks, fulfilling its responsibilities as a global citizen and obligation to provide humanitarian assistance. The ROC has received international praise for its efforts.

(6) Firm Adherence to the Universal Values of Freedom, Democracy and Human Rights

The end of martial law, direct presidential elections and other major democratic reforms have made the ROC a politically free, diverse democratic society, and led to it being internationally praised as a " model of success in Asia." The ROC continues to uphold the universal values of democracy, freedom and peace and cooperates with other democratic countries such as the US and Japan to bring the soft power of democracy into play, for achieving permanent peace and prosperity in the region.

All-out Effort to Maintain Stability in the Taiwan Strait

Taiwan is situated in a key geo-strategic position in the Asia-Pacific region where land meets sea. For many years, we have made a concerted effort to maintain peace in the Taiwan Strait, making a substantial contribution to regional stability.

Chapter 2 National Defense Challenges

The biggest security challenge faced by the ROC is the military threat from the PRC. The PRC has committed a large national defense budget to accelerating the modernization of national defense and the armed forces. It also continues to increase the operational capabilities of its Navy, Air Force, Rocket Force, and Strategic Support Force and has promoted force structure reforms that have greatly enhanced its force projection capability, seriously threatening our national security. In addition, as the ROC faces competition between great powers in the region, rapidly widening gap in cross-strait military balance and increasing complexity of non-conventional threats, force buildup and readiness present a challenge to Taiwan's national defense and security.

Section 1 Military Threat from the PRC

The PRC's military power continues to grow rapidly and it has adjusted its military strategy. It has also made significant progress in terms of military reform, joint operations, weapons R&D and manufacture, overseas base construction and force exercises and training. The military threat posed to Taiwan is constantly growing.

I. The PRC's Military Strategy

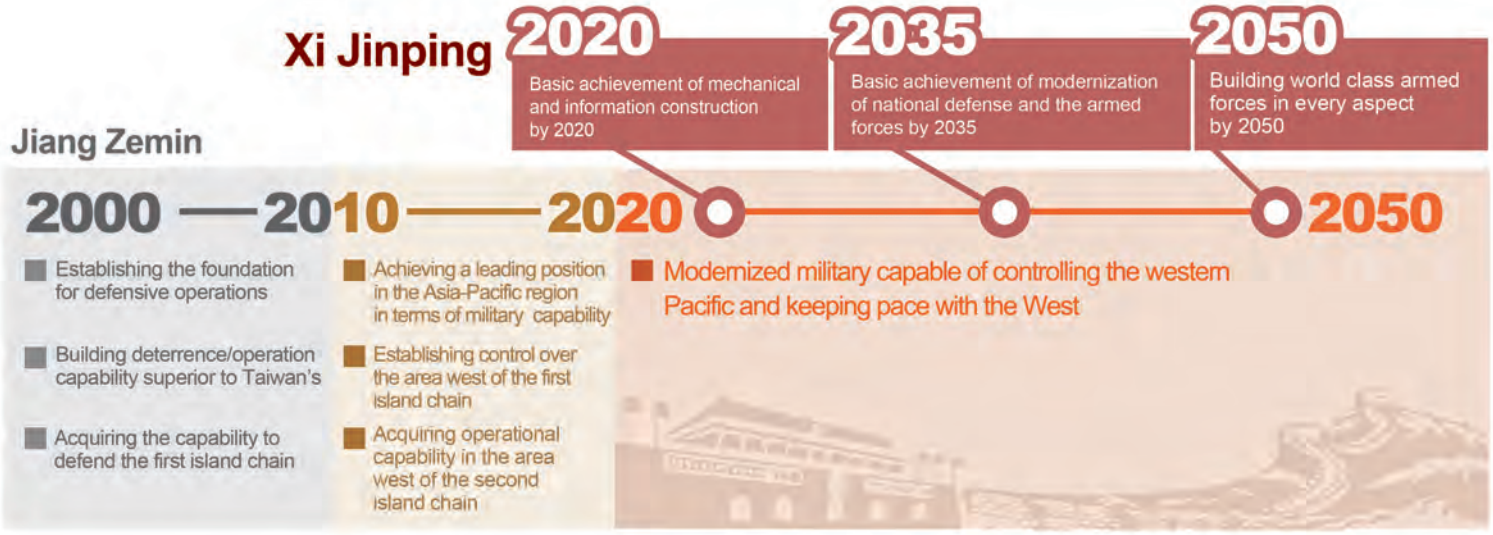
According to the military strategy of "active defense", the PRC's original "Three Steps" military development strategy consisting of three stages, namely 2000-2010, 2010-2020 and 2020-2050 has been modified. This strategy has been adjusted to "solid achievement of mechanical and information infrastructure construction by 2020," "solid achievement of modernization of national defense and armed forces by 2035," and "building world-class armed forces in every aspect by the middle of this century." In the event of an attack by an enemy, a powerful counterattack will be immediately launched, expressing the firm determination to protect the PRC's national sovereignty, security and development interests.

On the basis of the "near sea defense" capability, the PLA Navy is now pursuing a "far sea escort" capability. The Air Force and Rocket Force have seen big progress in terms of weapons and equipment and military technology, with battle space extending to the electromagnetic spectrum, cyber space and space to give the PRC offensive operation capability. The military strategy of "passive counterattack" based on "active defense" is being gradually abandoned and the concepts of "preemptive" and "initiative" actions are now emphasized to steadfastly defend national interests.

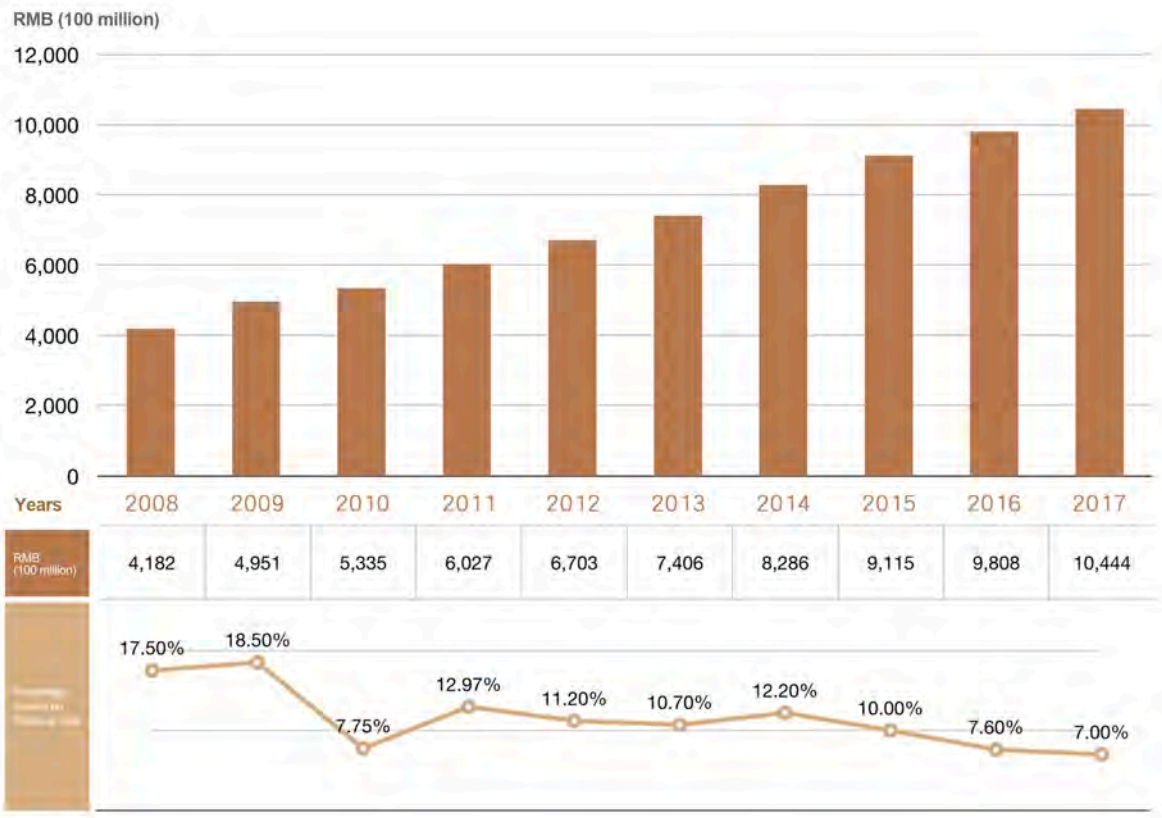
II. Modernization of the PRC's Military Power

(1) National Defense Budget Allocation

In 2017, the PRC' defense budget was RMB 1,044.4397 billion (around US$157.3



[Diagram of the PRC's "Three Steps" Military Strategy]



[The PRC's 2008-2017 National Defense Budget Statistics]

billion), up by RMB68.327 billion on 2016 and accounting for 1.32% of its GDP. It's the first time the budget has exceeded RMB 1 trillion. The PRC's defense budget is second to the US and highest in Asia and the figure does not include funding for national defense technology research projects, arms sales revenue, weapons procurement expenditure and national defense industry revenue from foreign sources.

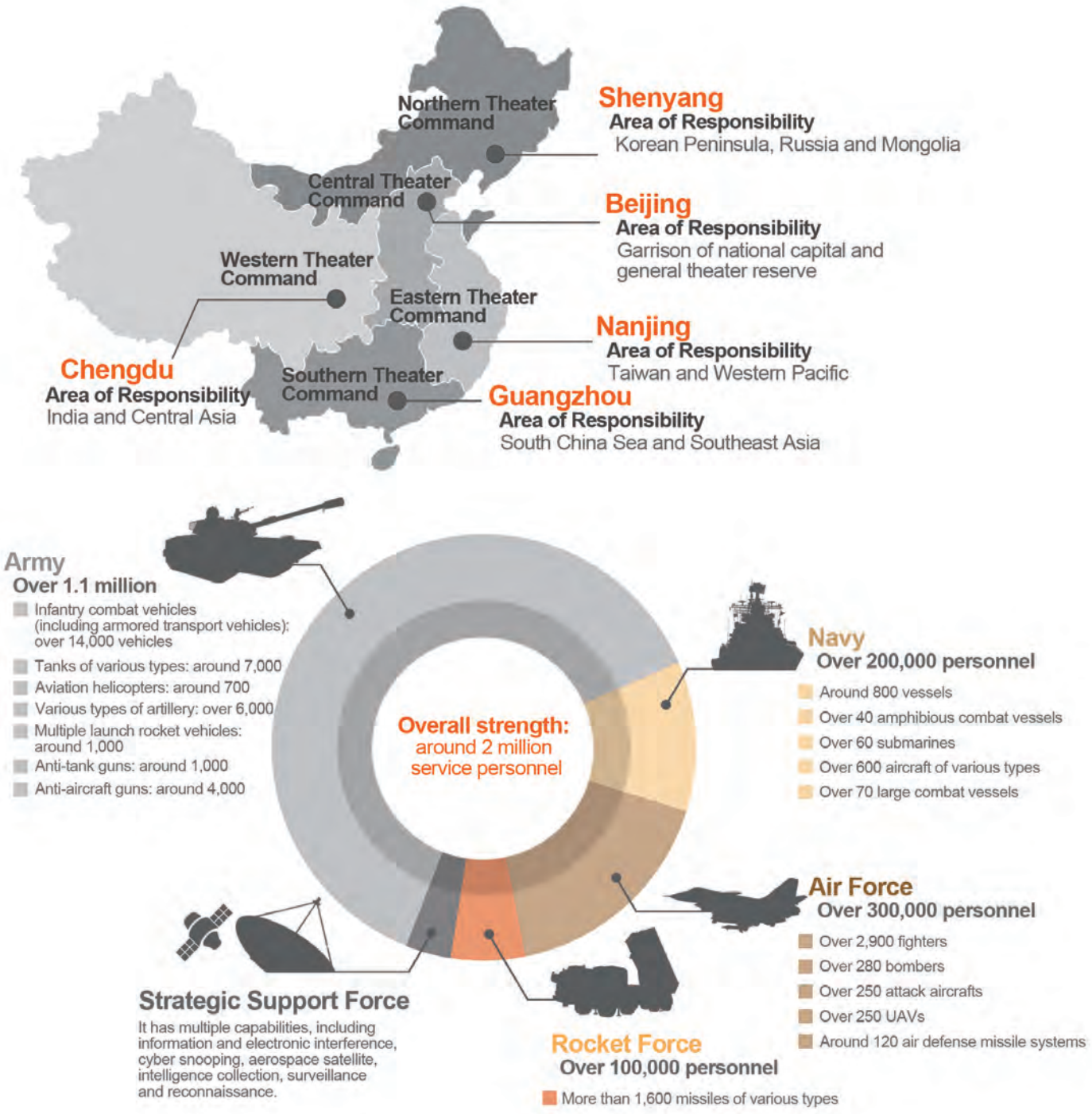
Although the PRC claims that the budget will be mainly used to modernize weapons and equipment, improve the work environment of lower level service personnel and the compensation and benefits of military personnel, and promote defense and force structural reform, a budget of this size can barely support around 2 million personnel, and is unlikely to be enough to also cover the cost of the Chinese People's Armed Police Force and pay the pensions of retired service personnel. When other requirements such as military procurement expenditure are taken into account, the actual budget required will be even larger. It is widely estimated that actual national defense expenditure will be double the figure announced, will account for around 4% of GDP, and be hidden in the budgets for projects of non-military departments.

(2) Overview of the PRC's Military Reforms

According to the *Resolution on Deepening the Reform of National Defense* and the Military released by the Central Military Commission in 2016, the PRC follows the principle that "the CMC takes charge of the overall administration of the PLA, theater command centers are in charge of operational activities, and headquarters of each service are in charge of establishment." The model of "reform with simultaneous adjustment" was adopted to complete the stage mission of troop cuts of 300,000 in 2017. The PRC aims to obtain the desired results of reform in 2020 and build a modern military force that can win in informatized warfare. It remains to be seen if PLA reform can achieve these objectives as there are many challenges to be overcome.

1. Army

The PLA Ground Force has reduced non-combat organizations and units, improved the reserve force, integrated different military academies, border and coastal defense forces, streamlined the command system, adjusted skill configuration, improved structure and system, upgraded technological command and control, shortened information processes and enhanced command and control effectiveness. The original 18 Group Armies have been merged into 13. Army construction will move towards "digitalization, aviationization, special operations and unmanned operation," increasing operational capabilities characterized by "precision, three-dimension, cross-theater, multifunction, and sustainability".



[Illustration of the PRC's Military Capabilities and Threat]

2. Navy

The PLA Navy has pursued a strategic transformation of "near sea defense and far sea escort" and diversification of operational capabilities. The North Sea Fleet, East China Sea Fleet and South China Sea Fleet are now under the command of the Northern, Eastern and Southern Theater Commands, respectively. The post of Commander of the Southern Theater has been filled by a Navy admiral for the first time. Also, the completion of construction on Spratly islands and reefs and the PLA overseas base in Djibouti means that the security and defense missions of the Marine Corps have increased. The original 77th Motorized Infantry Brigade of the Northern Theater's 26th Group Army has been transferred to the Marine Corps and the unit has been upgraded to corps level to increase overall utilization.

3. Air Force

In accordance with the adjustment of theater delineation, "local command post" has been upgraded to corps-level "base" under each theater command. Flight division-level units have been dissolved and flight regiments upgraded to brigade level, and a "Theater-Base-Brigade" structure established. The 15th Airborne Corps has been renamed the Airborne Force, while transfer of theater Air Force combat forces continues and stations adjusted in line with theater battle orientation and the joint operations command system to improve joint operations effectiveness.

4. Rocket Force

The Rocket Force has been upgraded from branch to service level. Force transfer, garrison and codename adjustment have been carried out in line with the principle of "theater command in charge of military operations" and the main battle units expanded. Meanwhile, the medium, long range and intercontinental ballistic missile forces continue to be enhanced, cross-theater maneuver and logistics maintenance have been simplified, upgrade of information capabilities have been speeded up, and both nuclear and conventional missile capability is being actively improved to increase strategic deterrence and precise strike capabilities.

5. Strategic Support Force

The aerospace, cyber warfare, electronic countermeasure and other units originally subordinated to the 4 CMC Departments have been merged to form the Strategic Support Force with the 2 main missions of aerospace operations and cyber, information and electronic warfare. The Strategic Support Force is in charge of conducting related assessment and establishment of satellite launch sites, monitoring and control management bases, spacecraft tracking ship bases, units of intelligence, reconnaissance and electronic warfare, cyber operation and other corps-level units to provide operational support.

III. The PRC's Weapons R&D and Manufacture and Export

(1) Weapons Procurement, Research and Manufacture

In 2000, the PRC was the world's largest arms importer, accounting for 7.1% of the world market. However, imports from 2012 to 2016 accounted for 4.5% of the global market; the PRC ranked 4th in the world, behind India, Saudi Arabia, and the United Arab Emirates, showing that the PRC's weapon production capability has increased. Nevertheless, the PRC still needs to purchase certain armaments and weapons, including precision missiles, vessel gas turbines, tank diesel engines, aerial tankers, fighter engines and long-range surface-to-air missiles from countries such as Russia, France and Ukraine.

(2) Armament Exports

In 2017, the Stockholm International Peace Research Institute (SIPRI) reported that the PRC's armaments exports from 2012 to 2016 were worth RMB60.4 billion (around NT$265.7 billion), up by 74% on the previous 5 years and accounting for 6.2% of the global armament market, only behind the US and Russia in 3rd place and surpassing Germany and France. The main importers of the PRC's armaments are Pakistan, Bangladesh, Myanmar and Algeria.

The armament exports include the SH-1 truck-mounted howitzer, VT-4 main battle tank, S20 and S26 submarine, P18N and C28A corvette, L-15 fighter trainer, JF-17 fighter, HQ 9 surface-to-air missile, CH-4B UAV, and Pterosaur reconnaissance-strike-integrated UAV. Also, the satellite launch centers and Long March series carrier rockets continue to support satellite launch for related countries, effectively increasing the PRC's international aerospace industry's competitiveness and regional influence.

IV. The PRC's Operational Capabilities and Readiness

After the 19th National Congress of the Communist Party of China, the mission requirement of the PLA will gradually move from increasing the capability to win a local war "under informationized condition" to development of multi-domain operational capabilities. The PRC will follow the existing plan to expand operational scenarios and drills for an attack against Taiwan. The PLA Ground Force has successively received the new-type light tanks, helicopters, the Navy 10,000-ton destroyers and the first domestically-made carrier, and the Air Force stealth fighters, surface-to-air missiles, and the Rocket Force new-type missiles. In addition, the PRC will also deploy new-type reconnaissance and navigation satellites, improve new-type unmanned vehicles and other main and auxiliary battle equipment to meet the mission requirements of each service for increasing strategic deterrence, suppressive strike, anti-ballistic missile and strategic lift capabilities in order to acquire multi-domain operational capability.

(1) The PLA Ground Force (PLAGF)

The performance of the electronic and fire control systems of various types of armored vehicle continues to be improved, with the focus in the Eastern and Central Theater Commands on re-equipping units with amphibious armored vehicles to increase sea-crossing, island landing and amphibious landing operation capabilities. Aviation forces have been expanded in each theater with deployment of Z-10, Z-19 attack helicopters, Z-8 and Mi-171 transport helicopters. Meanwhile, the PLAGF has also improved the Z-9 utility helicopter's operational functions to enhance force maneuver and strike effectiveness and strengthen command, control, reconnaissance, all weather operations capabilities, and three-dimensional warfare capabilities of sea-crossing and island-landing operations. The main Group Army artillery units have undertaken conversion to long-range multiple rocket, self-propelled and amphibious howitzers, and developed rocket-assisted projectiles with a range of more than 200 kilometers, increasing their mobile operation capabilities and short-medium-long range precise strike capability. The PLAGF has also undertaken conversion to Hong Qi 16A and 17 mobile surface-to-air weapons to enhance the air defense capability for vital areas.

(2) Navy

In the last 2 years, almost 40 main and auxiliary warships of various types have been delivered to the Navy, including Type 054A corvettes, Type 056 light corvettes, Type 052C/D guided missile destroyers, ocean comprehensive supply vessels, tank landing vessels, amphibious dock landing vessels, minesweepers, and oceanographic comprehensive survey ships. In particular, the PRC's first domestically-made aircraft carrier was officially launched at Dalian Shipyard in Liaoning on April 26 2017. On June 28 the same year, the first Type 055 10,000-ton destroyer, that can carry 112 vertical launch systems for anti-ship, anti-aircraft or cruise missiles according to mission, was launched at Jiangnan Shipyard on Changxing Island, Shanghai. This shows the fact that the Navy continues to equip itself with new warships equipped with anti-aircraft, anti-ship and anti-submarine weapons and is rapidly replacing old vessels to meet its strategic requirements for "near sea defense and far sea escort."

(3) Air Force

The PLA Air Force has successively received domestically-made J-20, J-11, J-10, Y-20 and Russian-made SU-35 fighters, moving from "homeland air defense" to implementation of "both offensive and defensive capabilities." Indigenous HQ 9, 16, 17 and 22 surface-to-air missiles have been deployed on a priority basis for Beijing, Yangtze Delta, the East China Sea and the Taiwan Strait, building a "far-middle-near and high-middle-low" dense air defense network. It continues to establish beyond-visual-range radar systems with early warning function and convert to automatic radar intelligence processing and transmissions systems for utilization of C2 in operations.

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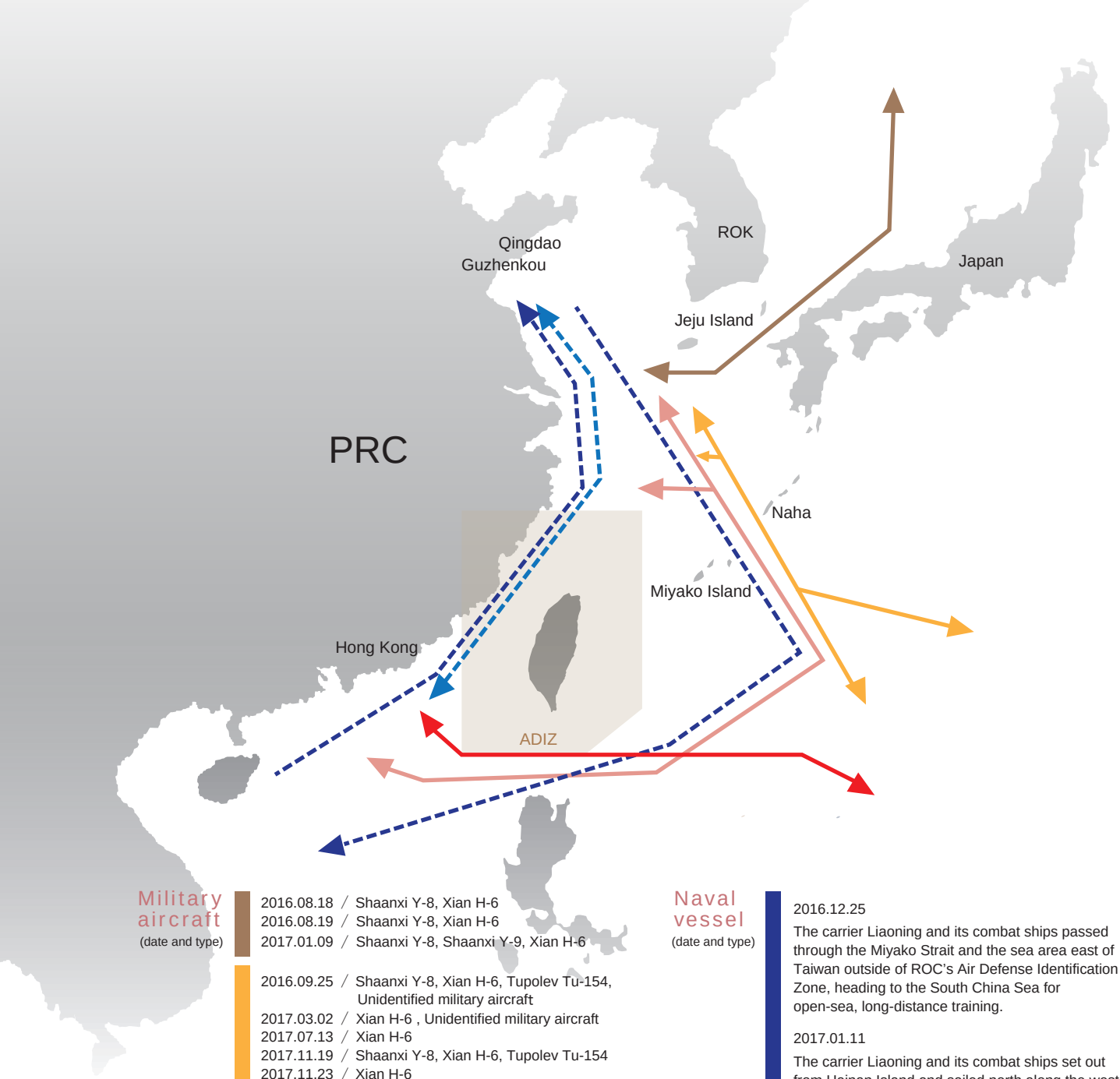
3	

The PRC's arms exports go mainly to Pakistan, Bangladesh, Myanmar and Algeria and rank 3rd in the world behind the US and Russia; arms export is used to rapidly increase the PRC's competitiveness in the international arms market and regional influence.

The Air Force has also received Y-20 transport aircrafts and converted to mechanized airborne weapons and heavy drop equipment for satisfying multi-domain mobility and air assault capability requirements.

(4) Rocket Force

It has promoted weapons and equipment self-reliance and innovation and developed new missiles through R&D and key technology breakthrough toward the direction of "intelligentized, automated and miniaturized" missiles. The destructive power and precision of the short, medium and long-range missiles that are currently in service have been improved and tested. In particular, the Dong Feng 21D and Dong Feng 26 anti-ship ballistic missiles and Dong Feng 10 cruise missile have a strike range that covers the second island chain, meaning that the PLA is approaching the objective of "maintaining



Military aircraft (date and type)

2016.08.18 / Shaanxi Y-8, Xian H-6
2016.08.19 / Shaanxi Y-8, Xian H-6
2017.01.09 / Shaanxi Y-8, Shaanxi Y-9, Xian H-6

2016.09.25 / Shaanxi Y-8, Xian H-6, Tupolev Tu-154, Unidentified military aircraft
2017.03.02 / Xian H-6 , Unidentified military aircraft
2017.07.13 / Xian H-6
2017.11.19 / Shaanxi Y-8, Xian H-6, Tupolev Tu-154
2017.11.23 / Xian H-6
2017.12.07 / Xian H-6
2017.12.09 / Shaanxi Y-8, Xian H-6,Sukhoi SU-30

2016.10.27 / Shaanxi Y-8, Shaanxi Y-9
2016.11.25 / Shaanxi Y-8, Xian H-6, Tupolev Tu-154,Sukhoi SU-30
2016.12.10 / Shaanxi Y-8, Xian H-6, Tupolev Tu-154,Sukhoi SU-30
2017.03.02 / Shaanxi Y-8
2017.07.13 / Xian H-6
2017.07.20 / Shaanxi Y-8, Xian H-6
2017.07.24 / Xian H-6
2017.08.09 / Shaanxi Y-8
2017.08.12 / Shaanxi Y-8, Xian H-6, KJ200,Sukhoi SU-30
2017.08.13 / Shaanxi Y-8
2017.08.14 / Shaanxi Y-8
2017.11.18 / Tupolev Tu-154
2017.11.23 / Shaanxi Y-8
2017.12.07 / Shaanxi Y-8
2017.12.11 / Shaanxi Y-8, Xian H-6, Tupolev Tu-154, Unidentified military aircraft

2017.11.22 / Xian H-6, Ilyushin Il-78, Tupolev Tu-154, Shaanxi Y-8, Sukhoi Su-30

Naval vessel (date and type)

2016.12.25
The carrier Liaoning and its combat ships passed through the Miyako Strait and the sea area east of Taiwan outside of ROC's Air Defense Identification Zone, heading to the South China Sea for open-sea, long-distance training.

2017.01.11
The carrier Liaoning and its combat ships set out from Hainan Island and sailed north along the west side of the Strait Central Line, leaving the Taiwan Strait on Jan. 12.

2017.07.01
The carrier Liaoning and its combat ships sailed south along the west side of Strait Central Line and left the Taiwan Strait on July 2 on the way to Hong Kong where it was open to visitors from July 8 to 18 to mark 20-year anniversary of the handover of Hong Kong.

2017.07.12
The carrier Liaoning and its combat ships sailed north along the west side of the Strait Central Line back to Shandong, leaving the Taiwan Strait on July 13.

Data time: From August 18,2016 to December 11, 2017
Data source: Ministry of National Defense ROC., Japan Ministry of Defense

[Diagram of Cross-theater Training Routes of the PRC's Naval Vessels and Military Aircrafts]

both nuclear and conventional strike capability for multi-domain deterrence and operational capabilities."

(5) Strategic Support Force

In recent years, the heavy-lift rocket launch Long March-5 (payload of 25 tons), medium-lift rocket launch Long March-7 (payload of 13 tons), small-lift rocket launch (Long March- 6 and 11) and other small-lift solid-propellant rockets have been developed and tested for establishment of a complete space transportation system. In addition, PLA continues to deploy satellites that can be utilized to support military operations, such as reconnaissance, communications, navigation and meteorology, effectively increasing joint operations support effectiveness.

V. The PRC's Major Exercises

(1) Joint Exercises

Joint operations is the focus of PLA training and exercises, which are carried out to strengthen preparedness for military struggles in the Taiwan Strait, East China Sea, South China Sea and Yellow Sea, and to enhance military control ability, and optimize the command and control mechanism and force structure, with the aim of creating a multi-dimensional joint operations system. In response to the restructuring of the Joint Staff Department and reorganization of three services (PLA Ground Force, Navy, and Air Force) and the Rocket Force, the "separation of training and combat" model is adopted for training of cadres involving simulation and subsequent field maneuvers to rapidly improve the chain of command and horizontal communication, increase the effectiveness of cross-theater joint operations and boost "multi-domain, multi-dimensional, long-range, precision strike" integrated operational capability.

(2) Ground Force Exercises

Long-range, cross-theater drills such as Huoli (Firepower) and Kuayue (Stride) exercises were conducted by PLAGF and Air Force forces as force-on-force exercises to test actual combat capability under informationized conditions. In response to potential regional conflicts, the Army has strengthened its operational capability under extreme weather conditions and enhanced its operational capability in terms of "precision, three-dimension, multi-domain, multifunction and sustainability."

(3) Navy Exercises

All branches of the PLAN, including ships, submarines, aviation units, shore-based missile forces and Marine Corps follow "training through operations" in combination with exercises simulating confrontation with the opposing force, in order to test the Navy's reconnaissance, early warning, joint assault, multi-dimensional protection and

precision strike capabilities. PLA Marines are dispatched from the Southern Theater to Xinjiang for long-distance, cross-theater exercises and to the Gobi Desert for extreme weather training to increase long-range mobility and multi-domain operation capability. These efforts are designed to develop multi-domain mobility and overseas deployment capability in preparation for diverse military missions in the future.

(4) Air Force Exercises

With "realistic combat training" as the objective, Hong Jian (Red Sword) maneuvers are conducted, and competitions including Lan Dun (Blue Shield) air defense and anti-missile exercise, Jin Tou Kui (Golden Helmet) free air combat and Jin Fei Biao (Golden Dart) air penetration and air assault competition are held. Forces are also randomly selected for dispatch on a rotational basis to plateaus and island airfields for training to increase their multi-domain operation capability. Operational patrols in the East China Sea and South China Sea are also carried out on a regular basis to lay down a solid foundation of cross-island chain operation capability. Meanwhile, indigenous transport aircraft and helicopters have been delivered to the airborne troops, who are sent for plateau and frigid zone on-site training. The Air Force aims to reach the objective of "equal emphasis on deterrence and operational capabilities for multi-domain response" with these efforts.

(5) Rocket Force Exercises

According to the requirements of "possessing both nuclear and conventional military power for multi-domain deterrence and operation capabilities," the PRC has tested its "multi-domain attack" and "precision strike" capabilities through the Tian Jian series of exercises in coordination with theater and Navy exercises and adoption of the model of "synchronous live-fire testing of multiple missiles at different sites".

(6) Electromagnetic Spectrum Warfare

The electromagnetic spectrum warfare has become the 6th operational domain after "ground, air, sea, space and cyberspace" domains. Guided by Xi Jinping's goal of "Building a Strong Force through Science and Technology" and the objective of "winning a local war in a complex electromagnetic environment," electronic warfare capability is being upgraded across the board. At present, the PLA has gained "partial information dominance" in terms of offensive capability and electromagnetic spectrum control capability and can exert effective deterrence when a powerful enemy intervenes.

(7) Non-military Operations

In line with the official implementation of the *Counterterrorism Law* of the PRC, counter-terrorism has been included in national security strategy, with an emphasis on maintaining internal stability, emergency response and increasing the effectiveness of

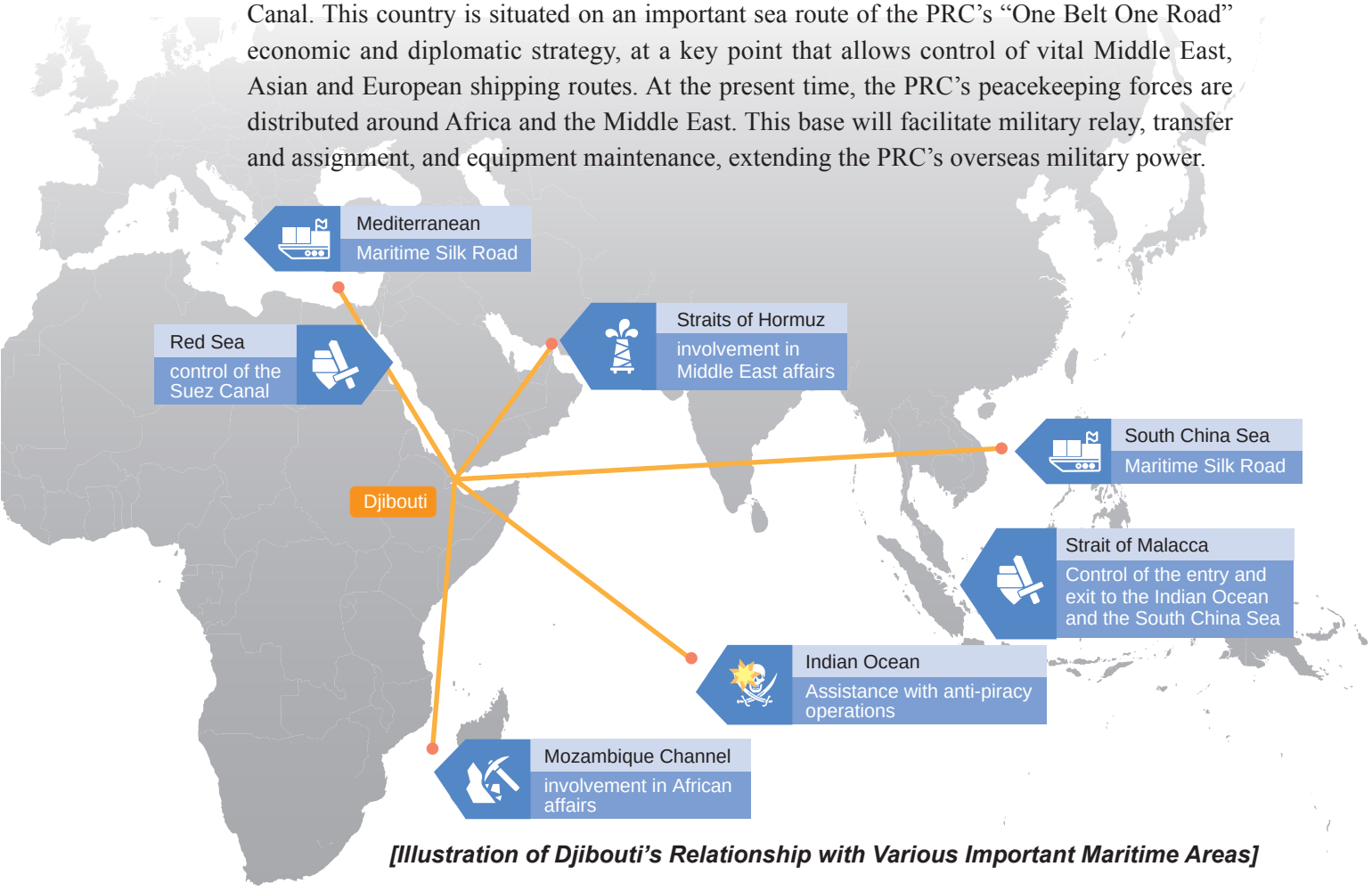
anti-terrorism operations. Meanwhile, non-military operations are also being enhanced to ensure social stability during major festivals. The joint counter-terrorism mechanism of the PRC-led Shanghai Cooperation Organization (SCO) has also enhanced the PLA's ability to carry out diverse missions.

(8) Multi-lateral Exercises

In 2016, the PRC took part in RIMPAC 2016, the second time it participated in these multi-national military exercises. In addition to RIMPAC, the PLA continues to engage in joint military exercises and international military competitions with the UK, Russia, Israel, ASEAN, etc., to expand the overseas arms sales market and military exchange and cooperation.

VI. The PRC's Overseas Bases

On July 11, 2017, the Commander of the PLA Navy attended the PLA Support Base in Djibouti Establishment and Force Departure Ceremony and his presence attracted international attention. Djibouti is situated where the Gulf of Aden and Red Sea meet, at the eastern exit of the Red Sea, which links the Mediterranean and the Indian Ocean via the Suez Canal. This country is situated on an important sea route of the PRC's "One Belt One Road" economic and diplomatic strategy, at a key point that allows control of vital Middle East, Asian and European shipping routes. At the present time, the PRC's peacekeeping forces are distributed around Africa and the Middle East. This base will facilitate military relay, transfer and assignment, and equipment maintenance, extending the PRC's overseas military power.



[Illustration of Djibouti's Relationship with Various Important Maritime Areas]

The PRC also leases ports such as Gwadar Port in Pakistan, Hambantota Port in Sri Lanka and Chittagong Port in Bangladesh and is actively carrying out construction to increase its influence in the Indian Ocean region.

VII.The PRC's Participation in International Peacekeeping Operations

Since April 1990, the PRC has dispatched over 30,000 military service personnel and police to take part in UN peacekeeping operations. In 2017, the PRC was involved in peacekeeping operations in 11 countries (regions) including Lebanon, sending more peacekeepers than any other permanent member of the UN Security Council. In December 2014, a standard infantry battalion was dispatched on a peacekeeping mission for the first time. In March 2017, a peacekeeping police force formed by members of the Public Security Border Police Group was sent to Libya on a peacekeeping mission. In May, 2017, a helicopter division was sent on peacekeeping duties for the first time to Sudan. These peace-keeping missions illustrate that the PRC flexibly sends military or police personnel on peacekeeping missions according to requirements and operational capability to increase its international influence.

Also, the PRC has continued to send Navy ships on a rotating basis to the Gulf of Aden for escort duty and anti-piracy missions to hone the Navy's open sea operation capability. The PRC has also expanded its international humanitarian assistance, foreign visits, exchange and cooperation to mold the image of a great power that is rising peacefully and responsibly.

VIII.The PRC's Civil-Military Integration

Civil-military integration involves merging national defense infrastructure into national economic infrastructure to form a high-benefit, low-cost development model featuring comprehensiveness and depth and diversity of both defense and economic infrastructure, with the aim of laying down a shared, compatible technological foundation through integration of military-civil resources.

The PRC established the "Civil-Military Integration Technology and Equipment Special Committee" in 2014, promoting civil-military integration of equipment technology development and two-way transfer. In March 2015, the Civil-Military Integration Technology Assessment Center was established to oversee and guide civil-military technology transfer and technology industry transformation. In June 2017, the First Plenary Session of the Central Civil-Military Integration Development Committee announced the establishment of provincial (region, city) organizations, which are in charge of civil-military integrated development for integration of economic and military resources, effective sharing of resources and support for the objective of civil-military integration.

IX.The PRC's Military Capability aginst Taiwan

(1) Joint Intelligence, Surveillance and Reconnaissance Capabilities

The PLA continues to develop command, control, communications, intelligence, surveillance, reconnaissance, navigation and targeting capabilities; its surveillance and

reconnaissance scope already includes all the area west of the second island chain and it has actively developed global reconnaissance capability. It already possesses the capability to support all kinds of military action in the region.

(2) Strike Capability of the Rocket Force

The PLA Rocket Force is moving in the direction of munitions interoperability and striking diversity, with the aim of achieving strategic nuclear deterrence, nuclear counterstrike and precision strike capabilities of conventional weapons. The ranges of the deployed medium and short-range strategic ballistic and cruise missiles cover all of main island Taiwan, while emphasizing long-range anti-ship ballistic missile R&D and manufacture and deployment in order to build adversary force resistance capability.

(3) Integrated Air Operation Capability

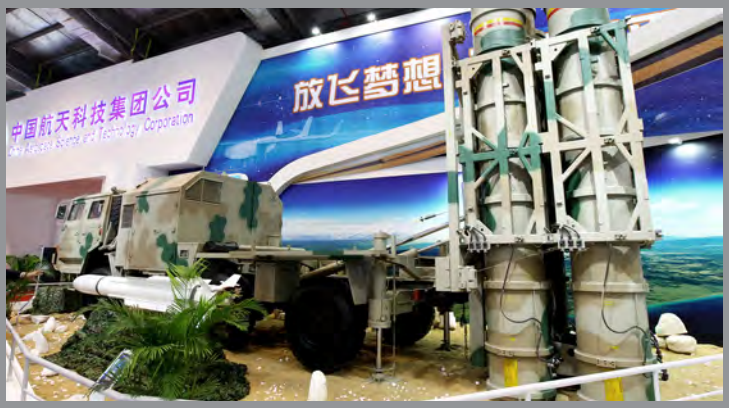
The combat radius and long-distance support capability of the PLA Air Force's main and auxiliary aircraft has been substantially upgraded. New unmanned aerial combat vehicles and advanced long-range precision weapons have come into service, new SAM systems have also been deployed and multi-service joint exercises have been conducted. The PLAAF now possesses multi-layer firepower, joint air defense and anti-missile capabilities and the ability to achieve air supremacy in the area west of the first island chain.

(4) Integrated Maritime Operation Capabilities

The focus of the PLA Navy is delivery of new-type large corvettes, landing ships and fast combat support ships and other main and auxiliary battleships to ensure that the strategy of "near sea defense and far sea escort" can be implemented in future. Also, the nuclear-powered ballistic missile submarines can launch JL-2 intercontinental ballistic missiles, which represent formidable nuclear counter-strike capability. The PLA Navy has also conducted cross-theater, long-distance open-sea training missions to strengthen coordinated warfare operation capabilities, giving the Navy the ability to launch nuclear counter-strike, resist adversary forces and block and control the Taiwan Strait.

(5) Integrated Ground Operation Capabilities

The PLAGF is accelerating its efforts on mechanization, organizational adjustment for independent functioning of brigades and "realistic" exercises. Aviation units has successively received various types of indigenous helicopters and have carried out more exercises of various types with special forces to increase integrated ground strike, protection, command and communication capability. Also, various army branches have become familiar with landing operation tactics through joint landing drills. At present, the PRC possesses the triphibious landing operation capabilities to take Taiwan's offshore islands.



Surface-to-air missile system

Multiple rocket launcher

KJ-2000 AWACS aircraft

Navy joint exercise

Photo source: US NAVY

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1.2.3.4The combat radius and long-range support capability of the PLA Air Force gives it the capability to achieve air supremacy in the area west of the first island chain. Cross-theater, long-distance open sea training missions have strengthened coordinated operation capability of the Navy's fleet. Through different exercises, the PLAGF has enhanced its ground attack, protection, command and communications capabilities, aiming to achieve anti-access/ area-denial.

5.Recently, the PLA has conducted regular air and naval training in the East China Sea and South China Sea. The ROC Armed Forces have kept abreast of the movements of the PLA aircraft/vessel throughout their activities according to regulations, kept the military on alert and monitored their actions.

(6) Strategic Support Operation Capabilities

The PLA's electronic counter measure forces simulate the electronic environment in a cross-strait war and are working hard to formulate electronic warfare tactics to ensure electromagnetic dominance throughout different stages of operations. In response to information protection technology developments of other countries, the cyber warfare units have acquired electronic capabilities to carry out soft and hard kill missions that target Taiwan's electromagnetic parameters, surveillance reconnaissance, command and control systems for surveillance, obstruction and interference activities.

Section 2 Effect of the Security Environment on ROC's National Defense

Non-conventional security issues such as the economic and political situation in the Asia-Pacific region, coopetition between superpowers, cross-strait military power imbalance, natural disaster, cyber secret theft and attack, and terrorist attack all pose a serious threat to Taiwan's security and affect our national defense policy and the direction of force buildup efforts.

I. Taiwan's Role in US-China Coopetition in the Asia-Pacific Region

In face of 2 great powers, the US and the PRC, a delicate situation in which the countries in the region want to have close economic and trade relations with the PRC while, at the same time, hope that the US can be involved to protect regional security, has gradually arisen in recent years. The "coopetition" between the US and the PRC affects the trilateral US-China-Taiwan relationship, which involves complex issues relating to cross-strait relations, Taiwan-US relations and arms sales to Taiwan. Geographically, the ROC has an important geo-strategic position in the Asia-Pacific region and occupies a key location in terms of Sea Lines of Communication (SLOCs). It has a democratic system, prosperous economy, stable society and appropriately sized and high-quality defense and maritime patrol power. Facing the US-China "coopetition" in the Asia-Pacific region, the ROC can help protect Asia-Pacific security stability by providing strategic early warning for the Western Pacific first island chain. We can work with international cooperation mechanisms in the areas of counter proliferation, crime-fighting, counter-terrorism actions, and port and container surveillance. We can also assist with security maintenance and sea rescue operations involving the main SLOCs around Taiwan and also take part in regional disaster prevention and relief and humanitarian aid missions.

II. Force Buildup and Readiness in Face of the Cross-Strait Military Power Imbalance

The PRC's national power continues to grow and a large budget has been allocated for national defense and military modernization, increasing the cross-strait military power gap. Based on the thinking of avoiding being dragged into an arms race while also considering the national fiscal situation, the ROC needs to integrate its limited national defense resources and invest in priority force buildup and readiness campaigns, with new military strategic thinking and refined tactics. We also need to continue to enhance key defensive capabilities and build operational capability characterized by high mobility, small quantity, high quality, high

effectiveness and high precision strike to deter the enemy from reckless advance in order to ensure national security.

III. New Missions to Counter Non-Conventional Security Threats

Non-conventional security issues present the ROC with various challenges and have made the mission of the Armed Forces more complex. The ROC is often faced by earthquakes, powerful typhoons, torrential rain and major disaster caused by public safety accidents. The Armed Forces are always on hand to provide timely assistance, providing assistance with rescue and recovery. Facing cyber security threats, the Armed Forces must, in combination with the government's actions to protect information security, prevent hackers from intruding into our national security network and sabotaging our command, control, communications and intelligence systems. We also need to strengthen electromagnetic dominance capability. In addition, as worldwide terrorist attacks become more frequent by the day, we need to be more vigilant, enhance international counterterrorism intelligence exchange and integrate the resources of government agencies to strengthen counter-terrorism response capability. As illegal activities at sea such as illegal fishing, drug smuggling, and illegal entry are dramatically increasing in frequency, we need to make an extra effort to protect the security of our peripheral sea area, display our determination to enforce the law in our jurisdiction and conduct regular joint fishery protection operations with the ROC Coast Guard to ensure the security of economic activities in our exclusive economic zone.

國防

Part 2: National Defense Readiness

The ROC Armed Forces are loyal to the country and its people, and diligently optimize operational readiness in accordance with the *Constitution*. Facing a changing strategic environment and enemy threats, national defense and military strategies are adjusted promptly based on new developments. The ROC Armed Forces have applied innovative thinking and have continuously enhanced joint operations capabilities to ensure strong defensive military power and national security.

Chapter 3 Mission of the Armed Forces

The *National Defense Act* stipulates that the objective of the ROC Armed Forces is to defend the security of the country and its people and help maintain world peace. As they belong to the nation and all of its people, the ROC Armed Forces strictly conform to mandatory rules as a nationalized military, and must obey the *Constitution* and be loyal to the country. In protecting national security and the wellbeing of the population, they fulfill their responsibility to defend the country and its people.

Section 1 Reinforcing National Security

National security is the basis for long-term survival and development of the country, while national defense is the core of national security. In accordance with the national security guidance of the President, the MND directs the Armed Forces in force buildup and readiness efforts, and actively promotes national defense and reinforces national security to provide the people with a safe and worry-free living environment.

I . The Relationship Between National Defense and National Security

(1) National Defense is the Core of National Security

In an ever more complex security environment, the scope of national security has widened to include the political, economic, social, environmental, technological and cultural aspects, however, national defense and military security remain at its core. National defense capabilities are the strongest support in coping with conventional and non-conventional security challenges.

(2) National Defense as a Guarantee of National Security

The nation's economic activities, technological development and civil infrastructure construction can only be effectively carried out with the guarantee of national security. As Taiwan is surrounded by sea, it must rely on national defense and use its military forces, at sea and in the air, to ensure its maritime sovereignty and rights and the safety of its fishermen as it manages maritime activities and actively pursues sustainable utilization of marine resources. As climate change accelerates, sea levels continue to rise, resulting in flooding that seriously affects civil facilities and the ecological environment. Meanwhile, threats from earthquakes, tsunamis, infectious diseases and other non-conventional threats are also increasing, requiring the Armed Forces to conduct non-military operations to provide assistance. With the scope of "national security" becoming wider, and facing a complex and uncertain security situation, the Armed Forces must effectively enhance force buildup and readiness and carry out national defense reform to ensure sustainable national development and allow the people to live and work in peace.

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In peacetime, the Army is ready to carry out contingency operations, assist with protecting critical infrastructure, support anti-terrorism operations and proactively assist with local disaster prevention and relief. In the event of war, the Army will conduct joint operations with the Navy and Air Force to defend the homeland.

II . Mission of the Armed Forces

The objective of ROC national defense is to build military strength, assist with disaster prevention and relief, ensure the security of the country and its people and maintain global peace. The steadfast determination of the Armed Forces to defend the nation, along with its diligent force buildup and readiness efforts, are an effective deterrent to potential enemy attack and reckless aggression, given the high costs of warfare. The Armed Forces aim to defeat the enemy's mission through effective utilization of our integrated warfighting capabilities.

(1) Army

In peacetime, the Army is responsible for protecting Taiwan proper and its outlying islands. The main focus of this protection is building basic warfighting and contingency response capabilities, carrying out contingency operations, and protecting critical infrastructure. When required, the Army also supports anti-terrorism operations and proactively assists with local disaster prevention and relief. During wartime, the Army will conduct joint operations with the Navy and Air Force to defend the homeland.

(2) Navy

In peacetime, the Navy conducts reconnaissance patrols over the Taiwan Strait, maintains maritime security and proactively assists with fishery protection and disaster prevention and relief. In wartime, it will, together with the Army and Air Force, take countermeasures against an enemy's sea blockade or invasion to safeguard Taiwan's shipping routes, gain maritime superiority and provide favorable conditions for joint homeland defense operations.

(3) Air Force

In peacetime, the Air Force conducts reconnaissance patrols over the Taiwan Strait, maintains airspace security and proactively assists with local disaster prevention and relief. In wartime, all effort will be made to gain air superiority to facilitate joint operations missions with the Army and Navy.

Section 2 Building Strong National Defense

In accordance with the President's national security concept and the Executive Yuan's national defense policy guidance, assessment of the internal and external strategic environments, and review of national defense and security threats and challenges, we formulate forward-looking national defense and military strategies to serve as the basis for the Armed Forces' current capability buildup, future joint capability development, and various defense reforms. Our overall aim is to build strong national defense and ensure national security.

I. National Defense Strategy

The current and future strategic environment and security challenges require innovative thinking, pragmatic reform and effective use of resources to optimize force buildup and combat readiness. The ROC's national defense strategic objectives at present include:

(1) Defending National Security

Deterring and defending against any hostile military action against the ROC are the priority tasks of national defense readiness. In particular, should the country come under military attack, its entire defense force must be used to defend the territorial integrity and sovereignty and protect the lives and property of the people.

(2) Establishment of Professional Armed Forces

The operational capabilities of the Armed Forces depend on highly professional manpower and a highly effective organizational system. To respond to continuing changes in the domestic and external environment, and build a force with high-tech and innovative capabilities, the Armed Forces must pragmatically implement improvements and reforms to raise the level of overall manpower quality and organizational effectiveness and build Armed Forces that are professional, sophisticated and resilient to meet and overcome future challenges.

(3) Achieving National Defense Self-Reliance

National defense development requires the buttress of a strong economy. In order to lay the foundation for self-reliance, national defense and economic development must complement each other. Combining the resources of government agencies and private sector capabilities, the Armed Forces are enhancing the development and application of defense technology and promoting indigenous development of weapons and equipment. The effort is expected to drive the growth of the defense industry and simultaneously satisfy defense needs and create economic benefit.

(4) Protecting the People's Well-Being

Facing the various non-conventional security threats that have arisen in recent years, the Armed Forces should play a key role as a frontline relief provider to reassure the public. Also,

Blade that dominates the sea
Great Wall on the Sea

The Navy protects maritime security and patrols the Taiwan Strait to safeguard Taiwan's shipping routes, achieve maritime superiority and thus create favorable conditions for defense operations.

Elite Warriors
Eagles that Dominate the Skies

The Air Force patrols the Taiwan Strait and protects airspace, making every effort to achieve air superiority, and engages in joint operations missions with the Army and Navy.

2016 9/10

Inspecting the Army Amphibious Battalion

- The dignity of the Armed Forces is built on relentless effort
- Promoting innovative military thinking and culture

2016 9/12

Inspecting the ROC Marines

- Upgrading uniforms and personal equipment within 3 years
- Speeding up renovation of old barracks

2017 5/25

Inspecting the 33rd Han Kuang Joint Field Training Exercise

- Absolutely first-rate military capable of "disaster relief in peacetime and warfighting in wartime"
- All-out effort to increase indigenous weapons R&D capabilities and achieve self-reliance

2017 6/29

Ceremony to Mark the Establishment of the Information, Communications and Electronic Warfare Force Command (ICEFCOM)

- The creation of the ICEFCOM was an important reform by the Armed Forces, and an innovative move in terms of military strategy.
- Resolutely defending the physical & cyber homeland to the end; steadfastly guarding the digital border

2017 7/20

Inspecting the ROC Army Aviation and Special Forces Command

- Overcoming difficulties to complete the mission are the core values of the Armed Forces
- The supreme commander-in-chief provides full support to the Armed Forces and the current government attaches unprecedented importance to them

2017 10/10

National Day Speech

- Resolute defense & multi-domain deterrence to protect the ROC's 23 million people
- Emphasizing quality over quantity to build stronger and more resilient warfighting capabilities
- Reforming the retirement scheme to incentivize retention in the military
- Actively building the defense industry for achievement of self-reliance in national defense

2017 10/23

Meeting Representatives from a US Think-Tank

- Increasing self-defense capability
- Promoting the development of the defense industry
- Enhancing national defense capability
- Increasing the size of the military budget
- Improving morale of the Armed Forces

2017 12/1

P3-C Commissioning Ceremony

- Countering the submarine threat to achieve sea control
- Expressing the determination to firmly support the Armed Forces and national defense
- The Armed Forces will be strengthened by steady progress in national defense self-reliance
- Strong Armed Forces mean a strong ROC

[President Tsai Ing-wen's National Defense Concepts and Guidance]

as maritime rights are vital national interests closely connected to the wellbeing of the people, the Armed Forces help protect our maritime rights according to government policy.

(5) Promoting Regional Stability

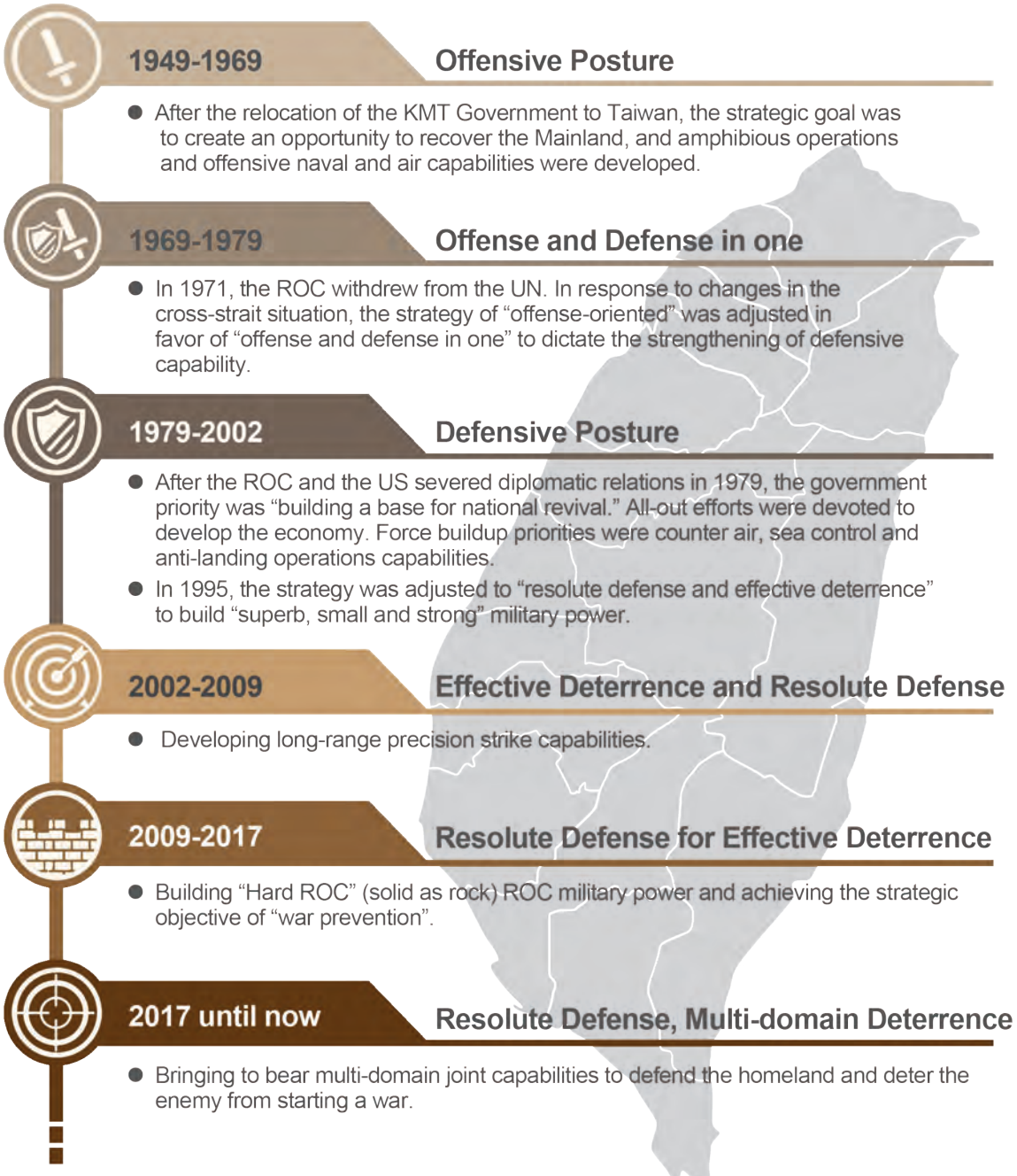
In the era of globalization, national security, international politics and regional affairs are interconnected and cannot be handled separately. As well as establishing strong national defense capability to fulfill the aim of self-defense, the Armed Forces should also play the role of "staunch guardian of peace" internationally, making every effort to promote cross-strait peace and stability in the Asia-Pacific region.

II . Military Strategy

Military strategy is the art of building and using military force. It guides the force buildup and readiness effort and how forces are to be employed. It is the basis for all military operations. The ROC's military strategy is adjusted in accordance with national interests, national objectives and other factors including international situation, potential threats, technological capability, national resources, terrain advantages/disadvantages and types of warfare. Guided by the national defense strategy, the military strategy is formulated to achieve the primary objective—the defense of national security. In line with the military strategy, the Armed Forces develop joint operations capabilities for resolute defense, incorporate all national resources into national defense, create favorable operational conditions, and adopt measures of multi-domain deterrence to achieve strategic endurance and ensure homeland security.

(1) Resolute Defense to Ensure Homeland Security

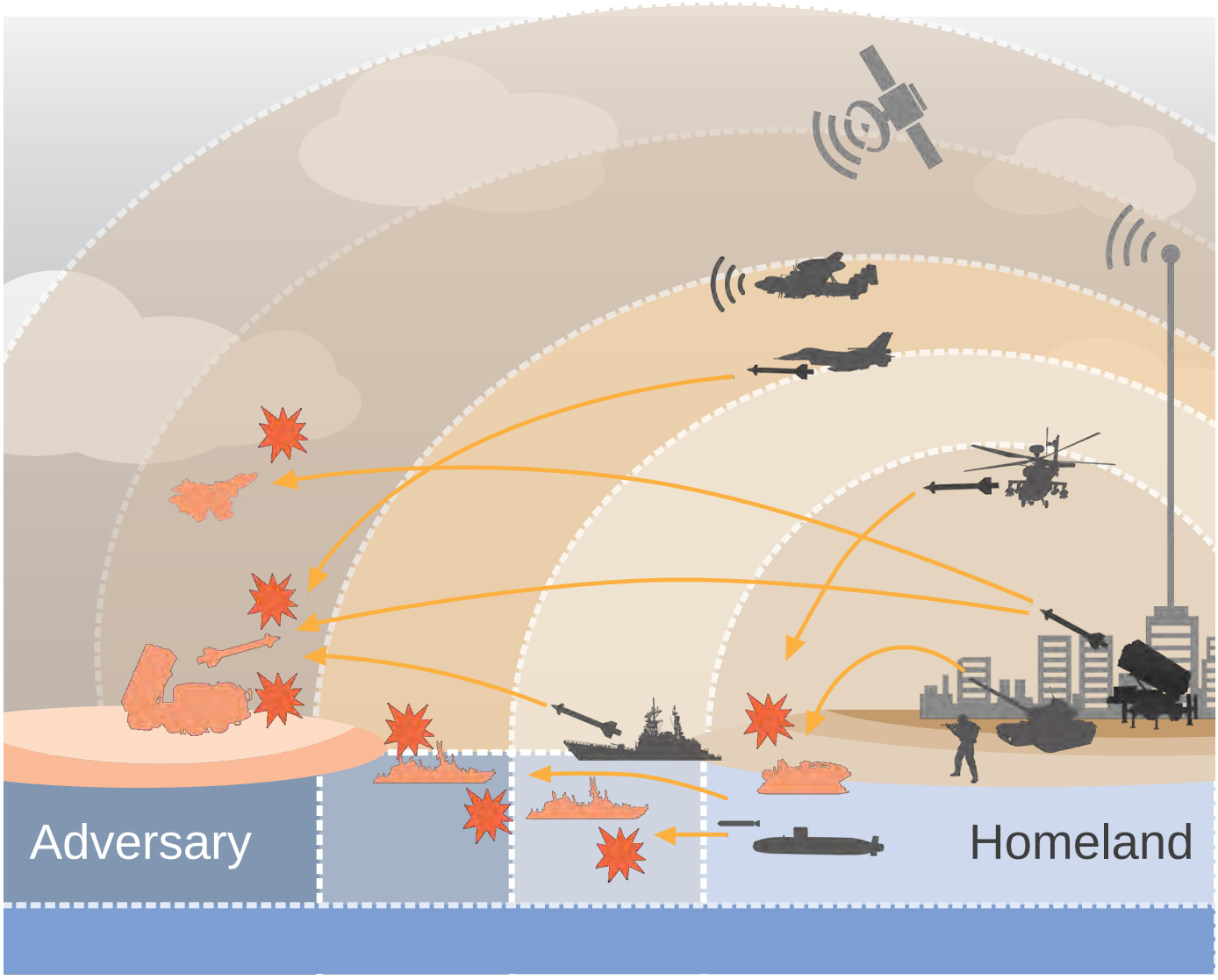
The Armed Forces have been enhancing information, communications and electronic warfare capabilities, securing command and control systems and critical infrastructure, and improving force preservation measures. The aim is to increase joint counterattack and defensive operations capabilities. Meanwhile, they have used all-out defensive power and the natural advantages of the Taiwan Strait to build multi-layered defense in depth for operational sustainability and to achieve "strategic endurance."



[The Evolution of ROC Military Strategy]

(2) Multi-Domain Deterrence with Joint Operations Capabilities

In order to achieve the objective of resolute defense through the means of multi-domain deterrence, "innovative-asymmetric" thinking is adopted to maximize joint warfighting effectiveness and thus create multiple dilemmas for the enemy, thus deterring it from imprudently starting a war. If the enemy still attempts to invade, the Armed Forces will implement the force concept of "preservation of warfighting capability, pursuing decisive victory in the littoral area, and annihilating the enemy in the beach area," and conduct multi-layered interception and joint firepower strikes to erode the enemy's operational force, break up the attack and block enemy landing forces.



[Diagram on Strategic Deployment of Resolute Defense for Multi-domain Deterrence]

Chapter 4 Development of Warfighting Capabilities

Considering future spectrums of war and assessment of PRC military development and threats, the Armed Forces have set capability development targets with limited national defense resources based on joint operational needs. We have actively built reliable deterrent capabilities through continuous improvement of joint operations effectiveness, adjustment of organizational structure, upgrades of weapons and equipment and development of asymmetric capabilities.

Section 1 National Defense Organization and Armed Forces Units

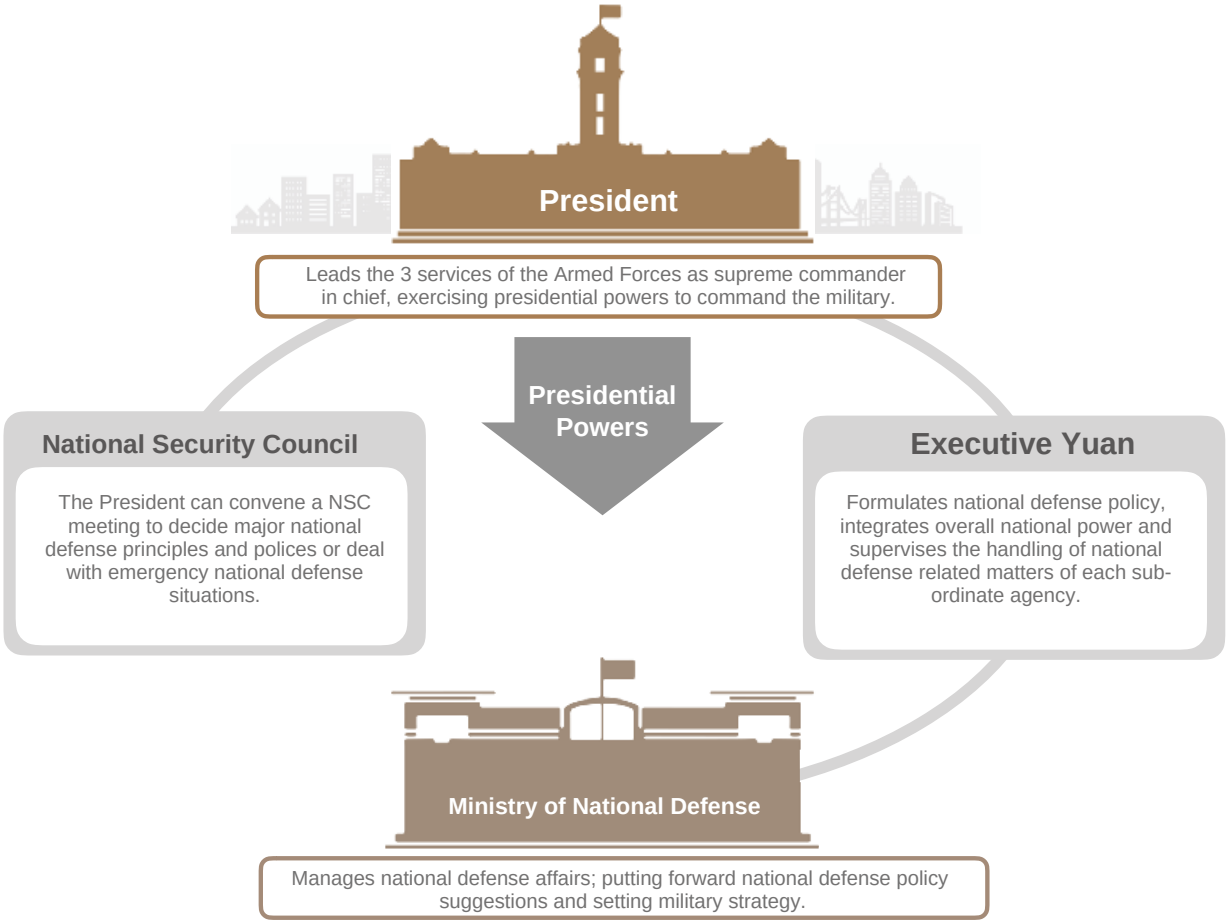
To implement the democratic concept of "civilian control of the military", the President of the ROC is the supreme commander in chief of the Armed Forces while a civilian fills the post of Minister of National Defense. The MND is the ROC's highest authority in national defense and military affairs and manages Armed Forces units at all levels. The organization and forces of the military respond to changes in the strategic security situation and are guided by the military strategy. Major organizational adjustments are carried out to keep up to date and adapt to the future spectrum of war.

I . National Defense Organization

(1) National Defense System and Responsibilities

The structure and responsibilities of the national defense system of the ROC are as follows:

1. President: leads the 3 services of the Armed Forces as supreme commander in chief, exercising presidential powers to command the military and delegate the authority to the Minister of National Defense, who then orders the Chief of the General Staff to execute the President's commands.
2. National Security Council: the President can convene a NSC meeting to decide major principles and polices regarding national security or deal with emergency national defense situations.
3. Executive Yuan: formulates national defense policy, integrates overall national power and supervises the handling of national defense related matters of each subordinate agency.
4. Ministry of National Defense: in charge of national defense affairs; should bring into play professional functions with respect to military policy, military command and armaments, putting forward national defense policy suggestions and setting military

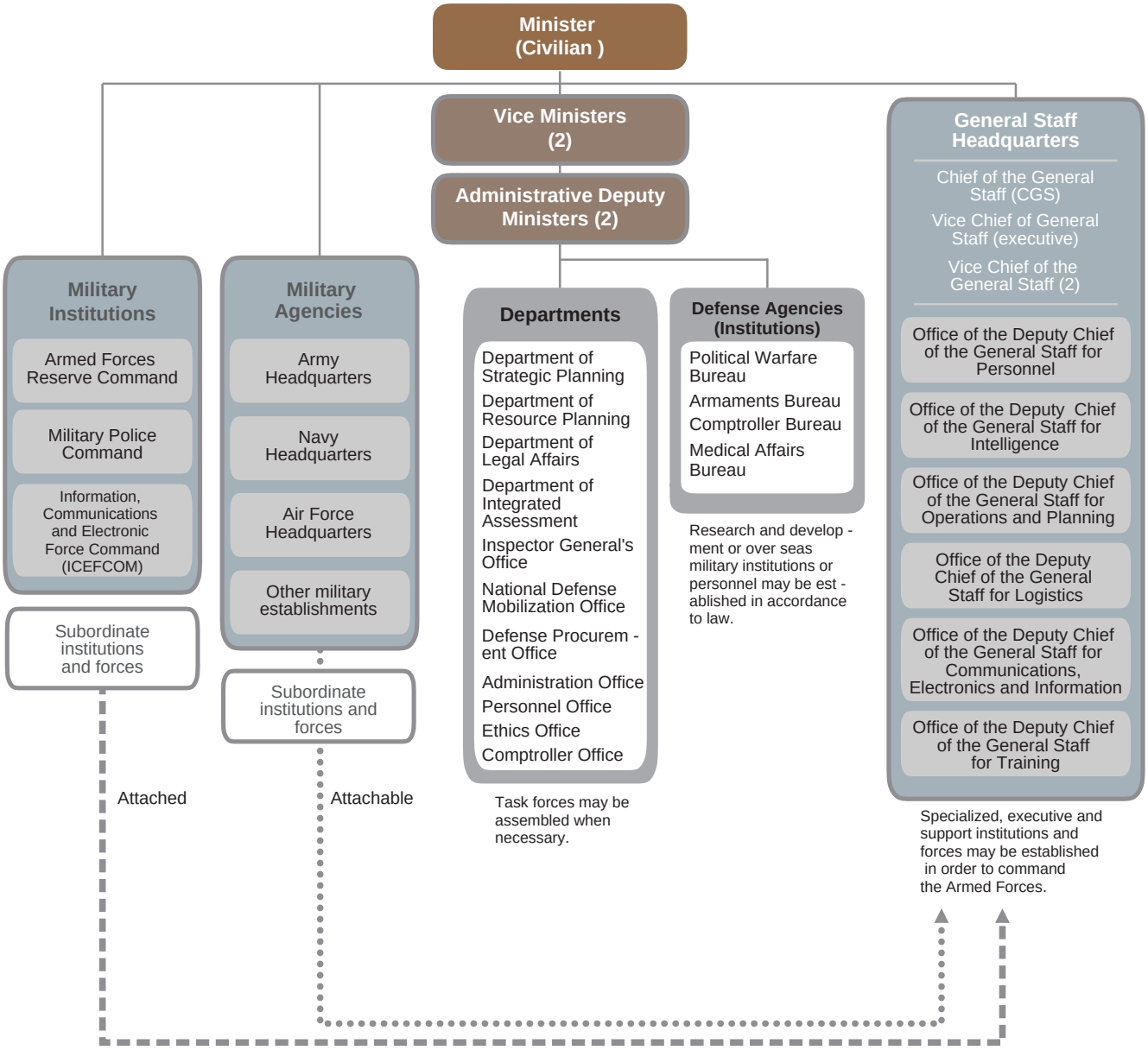


[National Defense System and Responsibilities]

strategy based on national defense requirements.

(2) Organizational System

The *National Defense Act* establishes 3 organizational systems, each with its specific area of responsibility, namely military policy, military command and armaments. The military policy system under the MND is in charge of national defense strategy, force buildup, resources and manpower planning and allocation, integrated assessment of strategy and other matters relating to national defense and supervision of national defense policy implementation. The military command system is in charge of putting forward concepts about military strategy and force buildup and readiness requirements, offering suggestions for allocation of defense and military resources, supervising armament readiness efforts, force training, preparing and implementing operational plans and other force command matters. It has also set up a joint operations command mechanism, managing both peacetime and wartime operations. The armaments system



[Ministry of National Defense Organization Chart]

is responsible for weapons and equipment acquisition policy, defense technology development, military-civilian technology exchange, armaments exchange and cooperation and integrated logistics policy planning and suggestions, and providing decision making advice and review opinions, and other matters related to armament readiness.

II . Force Structure

(1) 10-Year Force Build-up Program (1993-1996)

Following the withdrawal of the KMT government to Taiwan in 1949, the force size and structure was urgently in need of adjustment and integration. With the target of restructuring into “rational organizational framework of three forces and developing basic operational capability”, the need to replace or merge ineffective forces was reviewed to streamline the organization and build military power that was small (force), sophisticated (high quality weapons) and strong (operational capability). This program, launched in 1993, brought total force size down from over 490,000 service personnel to over 450,000.

(2) Armed Forces Jing-shi Streamlining Program (1997-2001)

In 1997, the Armed Forces Jing-shi Streamlining Program was launched in line with the Executive Yuan’s organizational restructuring program. The force restructuring objective was to “build Armed Forces that have the concept of joint operations.” Taking into account mission types, organizational function, force buildup and readiness, education and training, management support and other factors, the Armed Forces achieved the goal of force transformation by reviewing and slimming down the senior ranks and strengthening basic echelons, reducing the force size from over 450,000 to over 380,000 service personnel.

(3) Armed Forces Jing-jin Streamlining Program (2004-2010)

In response to changes in the international situation, rapid growth in the PRC’s military power, and the ROC’s limited national defense resources and other factors, we continued to strengthen operational capabilities and create a national defense organization characterized by “unified national defense authorities” and “civilian control of the military" based on the concept of “revolution of military affairs” and in line with the implementing of the *National Defense Act* and the *Organization Act of the Ministry of National Defense*. With the full support of the Legislative Yuan and the Executive Yuan, we successfully acquired new-generation weapons such as the Patriot missile system and fixed wing anti-submarine aircraft, greatly increasing national defense operation capability. Force size was reduced from over 380,000 to over 270,000.

(4) ROC Armed Forces Jing-cui Refining Program (2011-2014)

The program was a continuous effort to further enhance strong defense forces with “suitable quantity, high quality and strong operational capability.” The strategic objective was to deny the enemy from landing and establishing footholds. “Disaster prevention and relief” was also identified as one of the central tasks of the Armed Forces. The promotion of a volunteer military system was on-going. The force restructuring efforts at

this stage, therefore, aimed to flatten command hierarchy, increase command speed and facilitate logistics support. High-level staff units were streamlined. Outdated equipment was de-commissioned. Administration and logistics tasks were outsourced. 6 command headquarters were merged and became the Army, Navy and Air Force headquarters. National defense organization was developed in the direction of "small but high-quality, small but powerful and small but sophisticated" and the joint operations capability of three services was strengthened. Force size was further reduced from over 270,000 to over 210,000.

(5) Adjustment of Organization and Force Structure

In order to implement the military strategy of "resolute defense, multi-domain deterrence," national defense organization and force structure have been adjusted, taking into account multiple factors such as enemy threat, overall national resource allocation, human resource supply and demand, new weapons and equipment acquisition and military modernization trends around the world. These adjustments will continue to move in the direction of organizational rationalization, structure clarification, reduction in personnel number and flexibility of adjustment, with the aim of building strong professional, technological and all-out Armed Forces.

1. On July 1, 2017, the ICEFCOM was established to integrate the information, communications and electronic capabilities of the Army, Navy and Air Force. In peacetime, its mission is to protect the various information communications and electronic systems of the Armed Forces, defend national defense information networks and support national-level cyber defense. In wartime, the ICEFCOM's mission will be to ensure the effective operation of the Armed Forces' command and control networks, information security, and intelligence, surveillance and reconnaissance systems to protect homeland security.
2. The Air Force created the ROCAF Air Defense and Missile Command on September 1, 2017 by merging the Air Defense Artillery Command and the Air Defense Missile Command after taking into account the enemy threat and operational requirements. The new Command integrates and employs air defense and missile capabilities and is responsible for joint air defense operations; its establishment unifies the C2 of air defense, effecting an integrated approach to air defense operations.

10-Year Force Build-up Program (1993-1996)

- Force size was reduced from over 490,000 to over 450,000 service personnel, accounting for 2.1-2.3% of the population; for every 100 people around 2 -3 were military service personnel.

Armed Forces Jing-shi Streamlining Program (1997-2001)

- Force size was reduced to over 380,000 service personnel, around 1.7% of the national population; around 2 out of every 100 people were in the military.

Armed Forces Jing-jin Streamlining Program (2004-2010)

- Force size reduced to over 270,000 service personnel, around 1.2% of the national population; around 1 to 2 out of every 100 people was in the military.

ROC Armed Forces Jing-cui Refining Program (2011-2014)

- Force size reduced to over 210,000 service personnel, around 0.9% of the national population; around 1 out of every 100 people was in the military.

Force Restructuring

- ICEFCOM was established on July 1, 2017.
- The ROCAF Air Defense and Missile Command was established on September 1, 2017.

[The ROC's Force Size as a Proportion of Population]

III. Weapons and equipment

The Armed Forces have acquired weapons and equipment over the years according to careful evaluation of the enemy threat for defense operations to ensure national security. An introduction to the tri-service main battle weapons, indigenous defense equipment and apparatus for individual soldiers at present follows below:

ARMY

M60A3 Tank

The tank supports infantry and homeland defense operations. It is a fully armored and tracked with cross-country maneuverability and armor-protected firepower to produce shock power. The M60A3 tank is a decisive piece of battle equipment for ground forces.

AH-1W Attack Helicopter

The AH-1W helicopter conducts anti-assault and anti-infiltration operations. It can track various air and ground targets simultaneously and engage targets with precision in all kinds of weather.

AH-64E Attack Helicopter

The AH-64E helicopter performs anti-assault and anti-infiltration operations. Possessing Longbow radar and Integrated Helmet and Display Sighting System, it can scan and track various air and ground targets simultaneously and engage targets with precision in all kinds of weather.

UH-60M Utility Helicopter

It is responsible for local combat readiness and disaster prevention and relief operations and supports multiple operations such as attack helicopter fuel and ammunition replenishment, fast transfer of force, transport of various supplies, medical evacuation and air infiltration and assault. With the distinctive feature of all-weather and “multiple mission payload”.

M998 Avenger Air Defense System

The system is responsible for field air defense to protect ground units during zone defense operations. It is a self-propelled, low-altitude air defense system that can carry out fire procedure whilst moving and cover ground forces as a mobile air defense point.

NAVY

Keelung-class Guided Missile Destroyer

It is responsible for reconnaissance patrols in the waters around Taiwan. Possessing powerful air defense, anti-surface, anti-submarine and battlefield management capabilities, it can serve as the flagship of a Surface Action Group and control an important sea area to prevent enemy encroachment. It can also act as backup when the Operations Center and Operational Control Center are put out of action.

Kangding-class Guided Missile Frigate

It is responsible for sea frontier defense and joint surface interdiction operations. Capable of carrying out air defense, anti-submarine, escort and anti-blockade operations, it has a stealth hull design that avoids complex shapes and angles, achieving a stealth effect by reducing the reflection of radar waves.

Chiyang-class Guided Missile Frigate

It is responsible for open-sea anti-submarine operations and reconnaissance patrols in the waters around Taiwan. Geared for anti-submarine operations, it is equipped with a Wujin III warfare system, Standard missiles, 5-inch gun and close-in weapons system, and can effectively carry out reconnaissance patrols and defense operations.

Jianlong-class Submarine

Its missions are submariner training and fleet anti-submarine warfare training. Jianlong-class submarines can also carry out surveillance, minelaying and special operation. The shipboard combat system and 6 torpedo tubes can fire torpedoes to effectively destroy enemy targets on the surface and underwater.

Yongjing-class Minehunter

It is responsible for anti-blockade and mine hunting operations. Made wholly of fiberglass, it is not magnetic, with low radar cross section and low cruising noise. Equipped with a mine disposal equipment (unmanned vehicle), it can detect and clear various types of mine.

AAV7 (RAM/RS) Amphibious Assault Vehicle

It is responsible for amphibious operations and the body is made from welded aluminum alloy. It is capable of resisting attack and floating and is an excellent personnel and supplies transport vehicle.

AIR FORCE

F-16 Fighter

It is responsible for air and ground attack and other combat readiness missions. As a light multi-function fighter carrying M61 Vulcan cannon, air to air, air to ground and Harpoon missiles, and various bombs, it can effectively conduct air to ground and anti-surface operations.

Mirage 2000-5 Fighter

It is responsible for high-altitude interception. The aircraft configuration comprises a large delta wing without tail, and a single engine. It is equipped with two 30mm cannons and carries air-to-air missiles for high-altitude interception operations.

AWACS E-2K Airborne Early Warning Aircraft

It is responsible for reconnaissance and operational command and control missions. As a shipborne early warning aircraft with foldable wings, it is equipped with various kinds of advanced devices and radar and is an effective platform for coordinated engagements.

EC225 Helicopter

It undertakes disaster relief and search and rescue operations. This helicopter is a medium-/long-range Dustoff equipped with various types of rescue equipment that effectively enhances its rescue capability.

C-130 Transport Aircraft

It is responsible for transport of personnel (92 troops or 64 paratroopers) and freight (maximum load of 19,870 kg). As a medium-size transport plane, it can make short take-offs and landings and is the most widely used transport aircraft in the world today.

P-3C Anti-submarine Aircraft

It is responsible for submarine detection, maritime patrol and anti-submarine operations. It can carry various anti-submarine weapons such as AGM-84 Harpoon missiles, AGM-65 Maverick missiles, MK-46 torpedoes, and depth charges for effective anti-submarine warfare.

Patriot Missile Defense System

It is responsible for tactical ballistic missile defense as a land-based long-range air defense system. It works with the existing air defense systems of the Armed Forces to form a comprehensive air defense network. Able to intercept incoming aircraft and missiles, it effectively maintains maritime and air security in the Taiwan Strait.

Indigenous Equipment

CM11 Tank

It is responsible for supporting infantry and anti-landing operations. Its main gun has a 2D stabilizer and it is equipped with a new type of fire control system, laser rangefinder, and thermal imager. The CM11 is a main battle tank that can fire when moving and has night combat capability.

CM32/CM33 Armored Vehicle

It is responsible for local defense reinforcement missions. With its armor, it increases the ground combat capability of mechanized infantry units. Able to fight under fire of the enemy, it can destroy targets on the landing ship line and grounding line, including ships, mechanized fishing boats, light armored vehicles and crew-served weapons. Its high mobility allows it to undertake front line surveillance and vigilance missions for mechanized infantry and armored forces.

Field Air Defense Phased Array Radar

It is responsible for local field air defense early warning and fire allocation missions. It comprises “phased array radar” and “engagement control” sub-systems and can undertake surveillance and tracking against fixed- & rotor-wing aircraft. It can detect enemy targets, provide early warning and prioritize them based on threat levels, increasing engagement preparation time and integrated field air defense effectiveness.

Panshi Fast Combat Support Ship

It is responsible for resupply of fuel and ammunition and material transportation. As a mobile sea replenishment vessel, it can simultaneously replenish one ship on either side while cruising. It also has a pair of cranes on the bow deck and amidships, respectively, that are used to load and unload cargo.

Chengkung-class Guided Missile Frigate

It is responsible for reconnaissance patrols in the waters around Taiwan. As a highly mobile ship with great maneuverability, it is equipped with sophisticated and accurate systems for reinforcement of first line defense on the coastal frontier with its capability and advanced weapons and equipment.

Jinjiang-class Patrol Vessel

It is responsible for inshore patrol missions in the waters around Taiwan. Equipped with Hsiungfeng II and III missiles, it has increased its anti-surface operational capability and can effectively carry out reconnaissance patrols and vigilance operations, and provide early warning and support.

Kuanghua VI-class Missile Motorboat

It is responsible for ASuW missions. As a highly mobile vessel, it has outstanding stealth, seakeeping, range and combat capability and good speed. It is equipped with Hsiungfeng II missiles. In terms of tactical use, it is an attack vessel for inshore operations.

Tuojiang-class Corvette

It is responsible for near-shore patrol missions in the waters around Taiwan. As a highly effective combat ship, it features high maneuverability, powerful strike, good stealth, and long-range anti-ship missiles.

Indigenous Equipment

Albatross Unmanned Aerial Vehicle

It is responsible for sea surveillance, target identification and tactical reconnaissance missions, monitoring unidentified vessels in the waters around Taiwan.

Cardinal Unmanned Aerial Vehicle

It is responsible for supporting and enhancing company/platoon level reconnaissance capability for accurate real-time target locations.

AIDC F-CK-1 Chingkuo Fighter

It is responsible for air and ground attack and other readiness missions. As the first Air Force defensive fighter using a fly-by-wire control system, it is equipped with an M61A2 cannon and carries air-to-air missiles and various bombs for effective air and ground attack.

Tienchien -II Surface-to-air Missile

It is responsible for local and field air defense missions. The Tien Chien-II is a short-range air defense missile featuring high maneuverability, high hit rate and flexible employment. It can intercept cruise missiles, UAV, low flying helicopters, fighter-bombers and is capable of effectively defending territorial air security.

Thunderbolt-2000 MLRS System

It is responsible for anti-landing operations. Equipped with advanced computer equipment, it operates with integrated positioning and beam systems, fire-control computer system and digital voice radio communications system. A large number of missiles can be launched from one or multiple carriages in a short period of time. The carriage can swiftly change its position after missile launch.

National Defense

Tienkung Missile System

It is responsible for low-medium altitude defense in the Taiwan Strait. As a land-based long-range air defense system with long-range engagement, all-airspace and all-weather operational capability, long missile range, high hit rate and easy logistics maintenance, it can effectively maintain territorial air security over the Taiwan Strait.

Indigenous Equipment

Truck-mounted Antelope I Air Defense System

It is responsible for air defense of critical points. As a short-range anti-aircraft missile system characterized by high maneuverability, high hit rate and flexible utilization, it can intercept low-flying helicopters, fighters and bombers, effectively guarding the territorial airspace over the Taiwan Strait.

Hsiungfeng III Anti-ship Missile

It is carried by navy ships for anti-ship operations. Possessing a ramjet engine propulsion system, it can counter electronic warfare jamming and penetrate an enemy ship's defense network. It is an important sea frontier defense weapon.

Ground Force Soldier Apparatus for Combat Operations

The apparatus is designed to meet the camouflage and protection needs of exercises and training and on the battlefield, with adjustable sizing to fit the wearer. The apparatus is modular, flexible and designed for system integration to increase practical usefulness.

Section 2 Creating Asymmetric Advantage

The ROC will not engage in an arms race with the PRC in the face of its huge military threat, but will apply asymmetric capability to achieve relative advantage for our Armed Forces and ensure that the "resolute defense, multi-domain deterrence" military strategy is implemented.

I . The Concept of Asymmetric Warfare

Asymmetric warfare is a warfare concept that employs asymmetric measures, unequal strengths, and non-conventional means in operations. The concept of asymmetric warfare is to evade the enemy's strength while using suitable military tactics and weapons to attack against their weaknesses in order to influence the result of battles so that the war develops in a favorable direction.

The ROC's Armed Forces actively develop innovative/asymmetric capabilities. In wartime, we will take advantage of favorable timing and space to strike the enemy's center of gravity and critical weakness to disrupt their battle tempo and paralyze their capabilities for achieving partial advantage with the aim of "small taking on large, weak striking strong."

Based on the military strategy of "resolute defense, multi-domain deterrence", the Armed Forces have deliberated over and are strengthening innovative/ asymmetric capability and will utilize equipment and tactics that the PLA cannot easily predict or prevent. Weapons system development will proceed in the direction of "mobility, stealth, fast speed, low cost, abundance, minimum damage, and high effectiveness." This will be the focus of future military investment, and the priority of armaments acquisition will be reviewed to build multi-layered defense and deterrence capability, thus preventing a military invasion of the ROC by the PRC.

II . Planning Asymmetric Force Buildup

Future force buildup planning must break free from the traditional concept of building equal military power and concentrate use of national defense resources and technology on key capabilities to build a substantive deterrent force and effective counter-attack capability. The specific directions of force buildup will be:

(1) Focusing on the development of precision strike weapons to increase overall combat efficiency.

(2) Acquiring information, communications and electronic countermeasure equipment and reviewing the employment of innovative tactics to gain battlefield superiority in information operations and electronic warfare.

(3) The Army will continue to acquire high performance anti-armor missiles and portable short-range air defense missiles to enhance littoral attack-repelling capability.

(4) Continuing to acquire light, fast and multiple-purpose high performance warships.

(5) Acquiring new smart mines and fast minelayers to raise overall minelaying effectiveness to effectively delay and retard an enemy's operations.

(6) Developing unmanned aerial vehicles to increase joint intelligence, surveillance and reconnaissance effectiveness and create an advantageous situation for joint air defense operations.

Section 3 Joint Operations Capabilities

Following the principle of "retire the old, retain the good" for equipment and "primarily domestic manufacture, secondarily foreign procurement" of armaments, and with an emphasis on joint operations, we are gradually enhancing the traditional capabilities of defense operations. Meanwhile, the strengthening of joint operations and inter-service personnel exchanges continues. Peacetime and wartime joint operations mechanisms have been implemented with available financial resources to increase the effectiveness of tri-service joint operations and ensure that overall operational capability does not decline.

I . Air Defense and Strike

We are establishing multi-domain protection and all-weather air operation capabilities so as to achieve "early reconnaissance and warning, flexible command and control, long-distance precision engagement and joint multi-layered interception". The main aspects of the enhancement are as follows:

(1) Keep pushing forward the indigenous aircraft program and replace old trainers with new advanced trainer jets, coupled with the procurement of next-generation fighters down the road to increase capability availability.

(2) Upgrade F-16 and IDF performance to increase our air defense combat capability.

(3) Further enhance electronic warfare capability to support joint operations in a complex electromagnetic environment.

(4) Integrate deployment of the Intelligence Early Warning System and Early Warning Radar and establish a common operational picture to increase early warning capability.

(5) Purchase additional mobile radar systems, supported by electronic warfare protective equipment, to increase operational effectiveness of early warning, reconnaissance, identification, tracking, information transmission and countermeasures.

(6) Bring up and integrate various precision weapons system requirements on a priority basis and continue to acquire air-fired long-range precision munitions through procurement to retard the enemy's offensive capabilities.

II . Maritime and Anti-Submarine Operations

We are building a "highly effective, high quality, rapid-deployment, and long-range strike" capability, and developing sea control capabilities characterized by stealth, high-speed, long-range, precision strike, high-survivability and multi-purpose capability. This will enable us to protect our islands' sovereignty and maritime rights, while ensuring security in the Taiwan Strait. The main aspects of the enhancement are as follows:

(1) Continue to promote the indigenous shipbuilding program, and build new-generation missile frigates, light and fast warships and main battleships in the coming years to enhance the fleet's overall sea control capability.

(2) Acquire new-generation diesel-electric submarines to enhance underwater capability.

(3) Upgrade the aging main warships such as Kangding, Chengkung and Keelung class warships in the coming years to maintain sea control capabilities.

(4) Increase surface reconnaissance range and monitoring capability, and overall sea control operational effectiveness.

(5) Acquire mobile anti-ship missiles and radar vehicles, taking advantage of mobility to increase survivability and conduct surprise attacks to effectively cover and support the sea control operations of our surface task force.

III.Ground and Amphibious Operations

Buildup of ground troops is directed at achieving characteristics of "long-range, precision and mobility" and aims to achieve the objectives of becoming "three-dimensional, digitalized and automated." The main aspects of the enhancement are as follows:

(1) The Armed Forces continue to integrate ground forces' command, control, communication and information systems, building a networked operation platform to increase the effectiveness of command and control of the ground force.

(2) Artillery units are converting to new guns and a multi-function radar observation system and acquiring fire command and control vehicles, coupled with precision munitions, precision rockets and other highly effective munitions, to enhance artillery firepower and targeting capability so as to facilitate birth (beachhead and anti-wave) operations.

(3) Main battle tank performance is being improved and new field air defense systems are being established to supplement strike force manpower and equipment and increase coastal and beach counterattack capability.

(4) We are acquiring new amphibious transport docks and supplementing equipment which the AAV7 Amphibious Assault Vehicle lacks to facilitate amphibious fast response by the Marines and conduct support operations and supply missions to outlying islands.

(5) Military police units continue their conversion to the CM32/33 Fighting Vehicle and highly effective anti-armor weapons, and are enhancing urban warfare as well as special operations capability.

IV. Intelligence, Surveillance, and Reconnaissance Capabilities

The Armed Forces' various radar and intelligence interception systems, intelligence collection techniques and tactical ballistic missile warning systems are used to monitor the force deployment and activities of the enemy, and collect important strategy-related information regarding the political, economic and public sentiment status of the enemy. 3 services of the Armed Forces use new forces and armaments, such as UAVs and various low-speed

aircraft, to carry out joint intelligence, surveillance and reconnaissance and coastal patrol missions, effectively increasing early warning capability. We are constantly enhancing our reconnaissance, target identification, and intelligence transmission, processing and control to effectively monitor military activities that pose a threat.

V. Information, Communications, and Electronic Warfare

To ensure the effective operation of the C2 networks, information security and intelligence, surveillance and reconnaissance systems and acquisition of national-level contingency operation capabilities to assist with the protection of key national information infrastructure facilities, the focuses of the enhancement are as follows:

(1) To build on the foundation laid by the former ICEFCOM, various information, communications and electronic units were integrated to form the Information, Communications and Electronic Warfare Command. Through recruitment, training, equipment acquisition, and collaboration with external information security communities, the Command has integrated and utilized information and cyber security capabilities within the nation.

(2) Information and electronic warfare capabilities will continue to be enhanced, gradually adjusting the information and electronic warfare command system and echelons of the unit. Supported by a hardened, mobile and flexible information and communications infrastructure, we will maximize information, communications and electronic effectiveness to gain dominance in electronic warfare.

(3) The military has continued to adjust operation mission assignments based on the structure of the ICEF. Meanwhile, various types of information and electronic operation equipment are being acquired to achieve national level cyber-security incident response and management capability.

Section 4 Sustainable Operation Capabilities

Under threat of a sudden enemy attack, the Armed Forces are always seeking to build an operational force with high survivability in the event of surprise missile attack. To ensure optimized performance of subsequent operations, we will retain the integrity of the combat force through force preservation, complete logistical support, military morale and rapid mobilization.

I . Logistics Maintenance & Repair

(1) In order to ensure the availability of various weapons and equipment, a life cycle management system has been implemented to closely monitor equipment maintenance cycles, and overall planning of old equipment replacement is carried out to reduce the workload of maintenance.

(2) Maintenance and repair capabilities have been developed and acquired in response to the commissioning of various kinds of new weapons and equipment in recent years, with respect to logistics readiness, life cycle management, overall logistics support, and other aspects. Current campaigns include industrial cooperation, technology transfer of existing tri-service capabilities, certified production (trial production) by state-owned private companies and defense resources release to the private sector.

(3) In line with the follow-up fleet maintenance requirements of new helicopter forces, the *Guidelines for Mutual Support for Repair and Maintenance Operation of Helicopters* have been issued. An integrated repair and maintenance information platform and inter-service equipment workshop will be set up to enhance repair and maintenance support capabilities and lower maintenance costs.

II . Military Morale

In order to further cultivate personnel patriotism, the MND uses various channels to disseminate educational materials, articles and news reports through education programs for schools, military forces, reservists and all-out defense activities and runs various related art and promotional campaigns. The overall aim is to instill military personnel with firm belief, promote martial morality, increase cohesion and nurture military morale.

(1) Strengthening Morality Education

Martial morality courses are taught at the stages of basic, further and advanced education, with military academies as the starting point, to enhance the understanding of the concept of martial morality of cadres at every level. Also, every level of the military uses the Juguang Day televised education, psychological capabilities training, monthly meetings and academic lectures to strengthen martial morality education, nurture correct military values and establish correct understanding with multiple means. The aim is to mold the ROC military into strong elite forces that practice martial morality, are highly disciplined and win a high level of affirmation from the people.

Meticulous attention to detail Unheralded giants

Through a careful inspection process, professional logistics & maintenance personnel record the gaps in between engine blades and minute wear and tear to ensure optimized performance of weapons systems.

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1.2.3 We are establishing a reserve force that can be promptly mobilized and ready for operations. In peacetime, mobilization readiness is carried out properly. In the event of war, reserve forces can be quickly assembled. The reserve forces are validated through major annual exercises to ensure they have defense operations capability.

(2) Cohering Defense Awareness

The military promotion campaign mainly targets military personnel, while reservists and dependents are also included. By using various promotion channels and new media platforms to promote government policies and report defense policy implementation and related events, we combine political ambience and latest news in the presentation of mission characteristics and policy requirements, with the aim of cultivating the concept of all-out defense, enhancing mutual trust and forming consensus.

(3) Enhancing Security Measures

The PRC has engaged in intelligence gathering directed against the ROC in various ways in recent years. According to the analysis of cases of the Armed Forces members being recruited and used by the PRC's intelligence units, the PRC's main infiltration

methods are recruiting overseas-based Taiwanese business people, drawing in former acquaintances in the military, and targeting personnel in intelligence units, highly sensitive units and retired service personnel with coercion or temptation means. This situation highlights the increasing importance of counterintelligence. The mental defenses of service personnel, their families and reservists are strengthened through a comprehensive security group reporting mechanism.

(4) Strengthening the Strategic Communication Mechanism

Strategic communication is a major task for both national security and defense. The Public Opinion Analysis Center was established to gain the acceptance and support of the domestic public and the international community, keep abreast of the characteristics of modern warfare and information dissemination trends, and flexibly utilize the media to enhance the strategic communication mechanism. Through its links with government and civilian statistics organizations, the Center works to understand the issues that society is concerned about and strives to gain support and acceptance through various dissemination channels. Also, the Media News Center's equipment is being supplemented and a psychological warfare information surveillance system and psychological information platform are being established. The communication objectives are identified through policy promotion discourse and the inter-agency mechanism to counter the PRC's Three Wars and create an ROC-friendly environment.

III. Reserve Mobilization

With the aim of creating a reserve force that can be mobilized in a timely way and promptly get ready for operations, mobilization readiness work is properly carried out during peacetime. The reserve force can be quickly organized in wartime as part of the order of battle for defense operations in accordance with the objectives of simplifying operations, rapid force formation and fast combat recovery.

(1) Reserve Mobilization Policy

In line with the transformation of the military service system, the one year of compulsory military service is to be replaced by 4 months of military training; after completion of training, conscripts will be organized and managed as reservists. In response to the yearly increase in the proportion of conscripts assigned to reserve forces after 4 months of training, education recall courses will be adjusted to be more intensive in training. Effectiveness of training will be tested by participation of reserve forces in major annual exercises to ensure that reserve forces have substantive operational capability.

(2) Trial of Part-Time Volunteer Military Service

To allow the military expertise of discharged or retired military personnel to continue to be utilized by the Armed Forces, from 2017 the "reservist voluntarily part-time service" (Reserve Warrior) program has been implemented on a trial basis; it allows former service personnel who are in a full-time civilian job to return to camp for 2 days a month to maintain their familiarity with weapons operation, allowing them to immediately use their abilities in event of war. The number of participants will be increased year by year in accordance with verified trial results.

(3) Mobilization Information System

In 2017, a QR-Code call-up enquiry system was launched to increase the speed and effectiveness of mobilization, allowing reservists to check muster-call related information in advance to increase the recall force reporting rate. Also, in line with information technology developments, reservist "hometown reporting" can now be completed electronically for "simplified administration and public convenience."

(4) Manpower Mobilization Organization and Management

After their 4 months of military training are completed, conscripts will be organized and managed as reservists in line with the military specialty requirements of reserve units to supplement reserve manpower and increase operational quality. Following the principles of "young combatants and senior skilled personnel" and "last out, first in", reservists listed as discharged within 8 years will be brought in for duty on a priority basis to ensure the operation capability of reserve force.

(5) Materials Mobilization Preparedness

In order to integrate national resources to support military operations, the military will work with the relevant departments, county and city governments and supervising agencies for establishment of a resource integration platform to facilitate mobilization and preparedness that follows the process of "determining required items for operation, conducting detailed survey of such requirements, collecting, compiling and managing survey results, establishing preliminary understanding on supply and demand, setting reasonable procurement and requisition prices, carrying out regular requisition and procurement exercises and allocating wartime budget." At present, a total of 341 items in 67 sub-groups within 10 main categories are classified and managed, facilitating rapid mobilization in support of defensive operations in wartime.

Section 5 Exercises and Training

In addition to continuing to improve individual physical fitness and basic military training, the Armed Forces have also integrated reliable operational capabilities of military services, special forces, logistics support and new services to enhance the overall capabilities of joint operations. Meanwhile, annual major exercises and base open days are used as an opportunity to display the results of Armed Forces training and increase citizen participation in and support for national defense affairs, with the aim of enhancing all-out defense education and raising the level of overall operational capability.

I. Joint Exercises and Training

In order to achieve all-dimensional readiness for the defense of Taiwan and Penghu and enhance operation of the joint operations command system, the Armed Forces follow the principles of "refined and realistic, strict and hard" and "practice command first, then train actual troops". With a tri-service joint operations framework, attack and defense gaming through computer-aided command post exercises and "live exercises" are carried out to build reliable national defense military power.

(1) Hankuang Exercises

For the 2017 Han Kuang Exercises, the Armed Forces conducted virtual exercises via the computers at command posts in May. The joint theater war game simulation system was used to carry out 24-hour continual gaming in accordance with engagement processes such as operation schedule. The focuses were force preservation, joint utilization of intelligence, surveillance and reconnaissance information, joint counter blockade and anti-landing operations. The aim was strengthening the operation decision-making abilities of commanders of all levels and operational capabilities of staff.

As for live exercises, live-fire exercises were conducted in the Penghu area for joint anti-landing operations, simulating the attacking force moving from exercise to operations using the principles of "short time, small scale and small force". Using the "full-force, full equipment, partial live fire operation" model, 5 days and 4 nights of continuous attack-defense confrontation exercises were staged, implementing "island all-out defense operations" by utilizing civil and material resources in accordance with the concept of "all-out defense operations."

(2) Lianyong Exercise

Every 2 years, the Combined Armored Brigade of the ground force enters the joint training base for further training after branch base training. Simulation of real combat scenarios increases the intensity of joint operations training and live-fire attack capabilities. Integration of the entire firepower allows all cadres to understand the characteristics and constraints of each service. This helps improve their performance in terms of taking concerted action during joint operations, and thus strengthens the forces' integrated operational capability of ground and air strike and increases the effectiveness of joint operations.

(3) Lianxing Exercise

Marine forces that have completed annual amphibious base training and Navy, Air Force and ROC Army Aviation and Special Forces Command forces form the joint amphibious task force. Joint amphibious operation exercises are carried out against an opposing force. In coordination with readiness mission training, anti-landing operation exercises are conducted in subordinate operation areas to increase the Navy's amphibious landing capability and its defensive capability in these areas.

(4) Lianyun Exercise

The Army Airborne Special Service Company and Special Forces that have completed training, together with required air force transport aircraft and aviation helicopters, form the Joint Airborne Task Force. In order to increase the operational capabilities of joint homeland defense, airborne infiltration and special operations of airborne assault are carried out to test the effectiveness of Special Forces air assault, anti-assault and anti-airborne operations training.

(5) Lianxin Exercise

This exercise brings together Kinmen, Matsu, Penghu, Dongyin and Wuqiu command units and integrates local personnel operations within the framework of outlying island defense operations, a naval support group opening a safe lane for joint air and sea live fire exercises, with the aim of verifying the readiness of troops and effectiveness of land-air and land-sea joint operation trainings.

(6) Lianxiang Exercise

This live exercise simulates a surprise attack against important military facilities by an enemy to temper and test the Armed Forces' joint command mechanism, information and electronics integrated capability and contingency operation capability of the joint air defense force, to ensure a high level of joint air defense engagement capability.

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Through various annual exercises, the effectiveness of joint operations of the Armed Forces is improved, increasing overall operational capability.

II . Military Training

The military's new forces have been commissioned in succession and multiple conversion programs have been carried out according to plan. The effort to build innovative/asymmetric operation capability continues. The training of each force simulates real battlefield scenarios and uses an adversarial "realistic combat" training model. Fitness, combat skill, base and joint operations training continue to be enhanced. In particular, the training focuses on weapons firing capability, rapid force and firepower projection, joint electronic and information warfare, cyber warfare and joint operations, with the aim of acquiring the ability to "be capable to fight after training and win". Skills refresher training is also provided to inactive service personnel to ensure the capability of mobilized reserve forces.

(1) Fitness and Combat Skill Training

In response to changes in the volunteer military system and to enhance the training of volunteer service personnel, force fitness and combat skill training focuses on combat fitness, general shooting, combat shooting and mixed martial arts. Random testing is carried out by the service HQ every year at company level with a target average pass rate of 85% as the training objective. The Armed Force Cup sports competition has also been reinstated, increasing unit cohesion, stimulating the will to win and consolidating force unity through sporting competitions. The Armed Forces also try to mold a positive force atmosphere and improve the fitness of officers and other ranks through autonomous training and friendly competitions, and increased military-civilian exchange.

(2) Military Training of Regular Forces

To give service personnel practical skills and exercise experience, since 2017 "military training of regular service" has been divided into stage one initial entry training and stage 2 specialty training to increase the intensity of military training and participation in important exercises and strengthen marching, shooting and encampment training courses. The aim is to increase the basic combat capability of the Armed Forces and expand the operational capability of the reserve force.

(3) Station Unit Training

Strengthening general training at military bases of each branch is at the core of training. The focus of station unit training is skills and team training so that military personnel possess "expertise in one field and knowledge and ability in many others." With actual combat orientation, "strict, hard, realistic" training is provided for continued enhancement of different combat training and courses, such as fitness and combat skills of military personnel, tactical marching, and combat shooting, to raise the overall combat capability of forces.

(4) Base Testing

Each of the services has a dedicated testing center and verifies the results of its station unit training in high-quality training venues with complete scenarios, vigorous training and fair testing, in order to evaluate whether its force possesses the capability to carry out readiness missions. Meanwhile, the ROC military also plans to upgrade multifunction training grounds in the southern and northern Army testing centers and the integrated firing range of the joint training base to increase forces' operational capability by using training venues that simulate actual combat conditions.

(5) Military Doctrine

With reference to the advanced concepts of the US military and in accordance with the joint operation command framework, the Armed Forces have developed 1,110 doctrines in 3 categories to assist force buildup and meet readiness requirements, and to act as an important reference for force operational plans and training. In 2017, 155 doctrines were revised as a result of collecting and sorting the conclusions of combat training and exercises and the commissioning of new forces. In the future, we will continue to borrow from the training strengths of allies, refine the meaning of doctrines and nurture the compliance habits of military personnel. This will ensure that full synergy of manpower and existing weapons and systems will be optimized, thus raising the level of professional skills and knowledge of military personnel.

III. Reserve Force Mobilization and Training

(1) Reserve Force Training

In order to improve the command capability of cadre and combat skills of soldiers, 5-7 days of muster-call training is given on a biennial basis, focusing on skills refresher training, shooting practice, combat training, team training and disaster prevention and relief.

(2) Testing Mobilization Effectiveness

In order to test mobilization effectiveness, operational capabilities such as reserve force organization, combat training, materials and vehicle/aircraft mobilization and homeland defense were tested based on the scenario of the Han Kuang Exercises according to exercise sequence, in conjunction with live exercises of Tongxin (manpower mobilization) and Tzuchiang (physical resource mobilization), with the aim of increasing integrated operation capability of mobilized reserve force.

Formidable Force with Great Firepower

Firepower, mobility, protection and shock power form the comprehensive combat capability of armored forces. Joint garrison forces will deal a mortal blow to an attacking enemy with such power to ensure the security of the homeland.

Riding the Waves
Showing Our Naval Power

The ROC Navy tests combat effectiveness with various fleet exercises, showing its determination to maintain peace in the Taiwan Strait.

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Elite Marines
Always the Vanguard

The Marine Corps Amphibious Armor Group's role is to advance fearlessly as the vanguard of the landing force.

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Part 3: Self-reliant National Defense

To develop the weapons systems and equipment needed for future operations, in accordance with the regulations of Article 22 of the *National Defense Act* and in combination with civilian industrial, academic and technology research capabilities, the MND actively develops weaponry R&D, production and full life-cycle support capabilities to increase national defense self-reliant technological capability; overseas purchase is also used to carry out industrial cooperation and technology transfer to move towards the objectives of revitalizing the national defense industry and national defense self-reliance.

Chapter 5 National Defense Technology

The core concept of national defense self-reliance is establishing self-reliant national technological capability, that is to say that R&D and design, manufacture, testing and logistics support capabilities must be possessed to achieve substantive national defense self-reliance. Looking ahead to national defense requirements, with respect to indicator projects such as the indigenous aircraft and navy ship programs, according to requirements, the MND guides the participation of private sector companies in combination with inter-agency resources to drive the development of the national defense industry and create a military-civilian mutually-beneficial win-win cycle.

Section 1 National Defense Technology Development

National defense technology must foresee technology trends and joint operations requirements, and follow a target-oriented schedule to gradually achieve key technology breakthroughs and develop advanced technology to boost national defense self-reliant R&D capability.

I . Foreseeing Long-term Requirements

Foreseeing national defense development trends, combining, short-mid-long-term requirements and stocktaking gaps in current technological capability, each stage of national defense planning is conducted. Seven categories of required items, namely, joint information and electronic warfare, joint contingency operational capability, joint air defense operational capability, joint interception operational capability, joint homeland defense operational capability, innovative/asymmetric warfare capability and advanced technology operational capability guide national defense technology development. The aim is to ensure that national defense technology is target-oriented and is a continuation of policy.

II . Key Technology Breakthrough

(1) After assessing readiness level, advanced, sensitive and hard-to-obtain national defense key technology is developed in a systematic and focused way. Through overseas purchase and industrial cooperation, joint R&D, technical cooperation and technology transfer, the technology level of readiness weapon system development has been raised and the risk of system development lowered.

(2) Industrial, government, academic and research resources are integrated to develop system components and parts to gradually move towards achieving key project full self-manufacture capability; also, with regard to non-key items sold on the market, goods in stock are bought while giving consideration to cost to avoid waste of R&D resources and reduce R&D costs. In 2017, 11 key technology R&D projects were carried out,

including information system, C4ISR system and future weapons systems, with a budget of NT$489.73 million.

III. Development of Advanced Technology

(1) In accordance with Armed Forces buildup ideas and the mid-term and long-term planning of the national defense technology guide, “basic research” and “application research” are carried out through annual national defense technology academic cooperation plans to nurture technology R&D capabilities; also, to build advanced military technology advantages and meet future operational requirements, investment in key module and self-manufacturing technological capability development key technology R&D work is carried out through periodic key technology projects.

(2) In accordance with the Five-year Force Buildup Plan, weapon system development projects such as “display and confirmation,” “engineering development” and “combat system development” are being carried out according to technological readiness level.

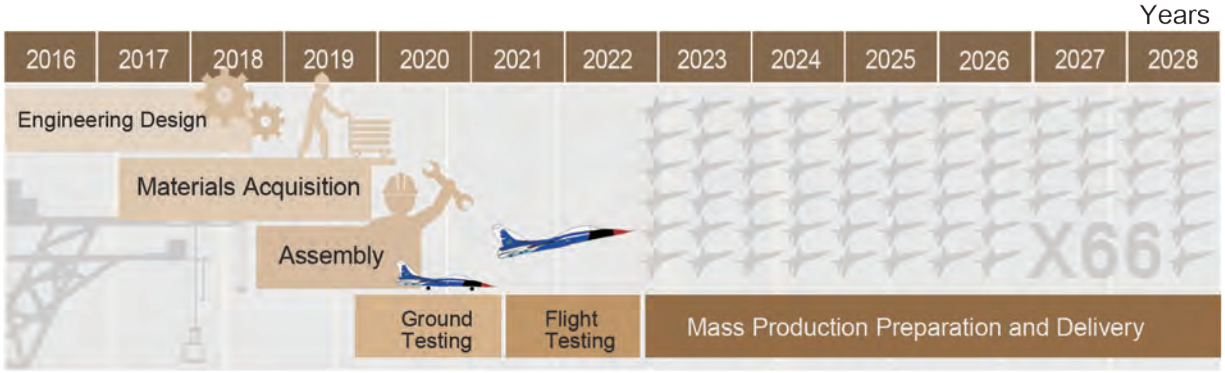
Section 2 Self-development and Self-manufacture of Weapons

In accordance with National Defense Technology Planning, the MND conducts weapons system self-development and self-manufacture to build R&D, design, manufacturing, testing and full life-cycle support full-timeline, self-development and self-manufacture capabilities; the current focus is on aerospace, navy ships and information security.

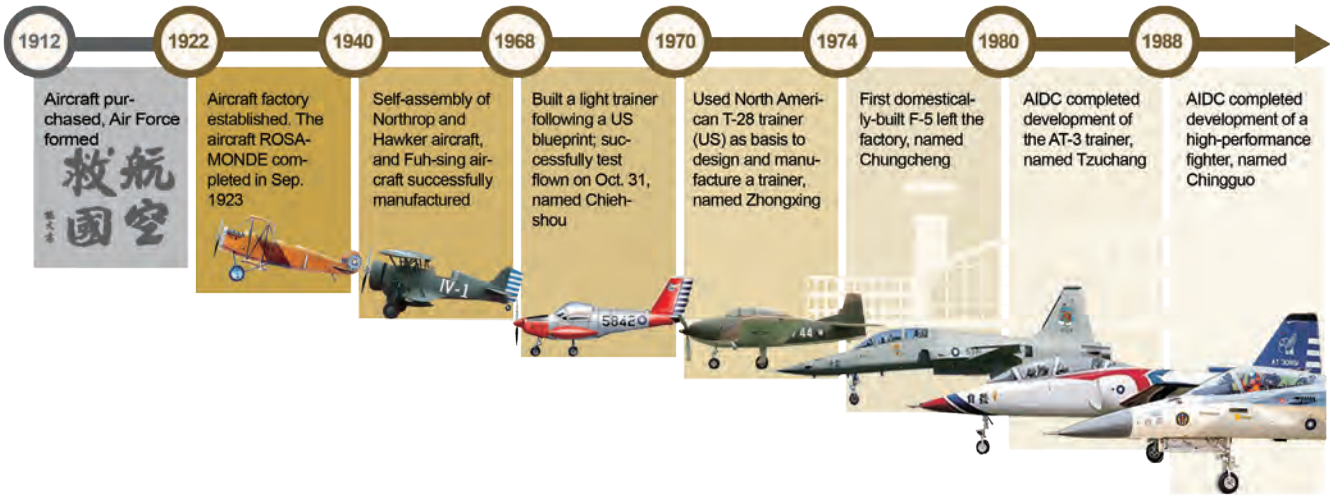
I. Indigenous Military Aircraft

(1) To build combat power that will meet the requirements of future joint air defense operations, it is planned to upgrade the performance of existing fighters on the basis of the National Chung-shan Science and Technology Research Institute's R&D; also, integrating domestic and foreign systems manufacturers, new advanced trainers are being developed and key component parallel R&D carried out to concentrate research and manufacturing capabilities; an engine research plan has been formulated and program established, continuing to launch fighter key technology R&D work according to the national defense technology planning schedule.

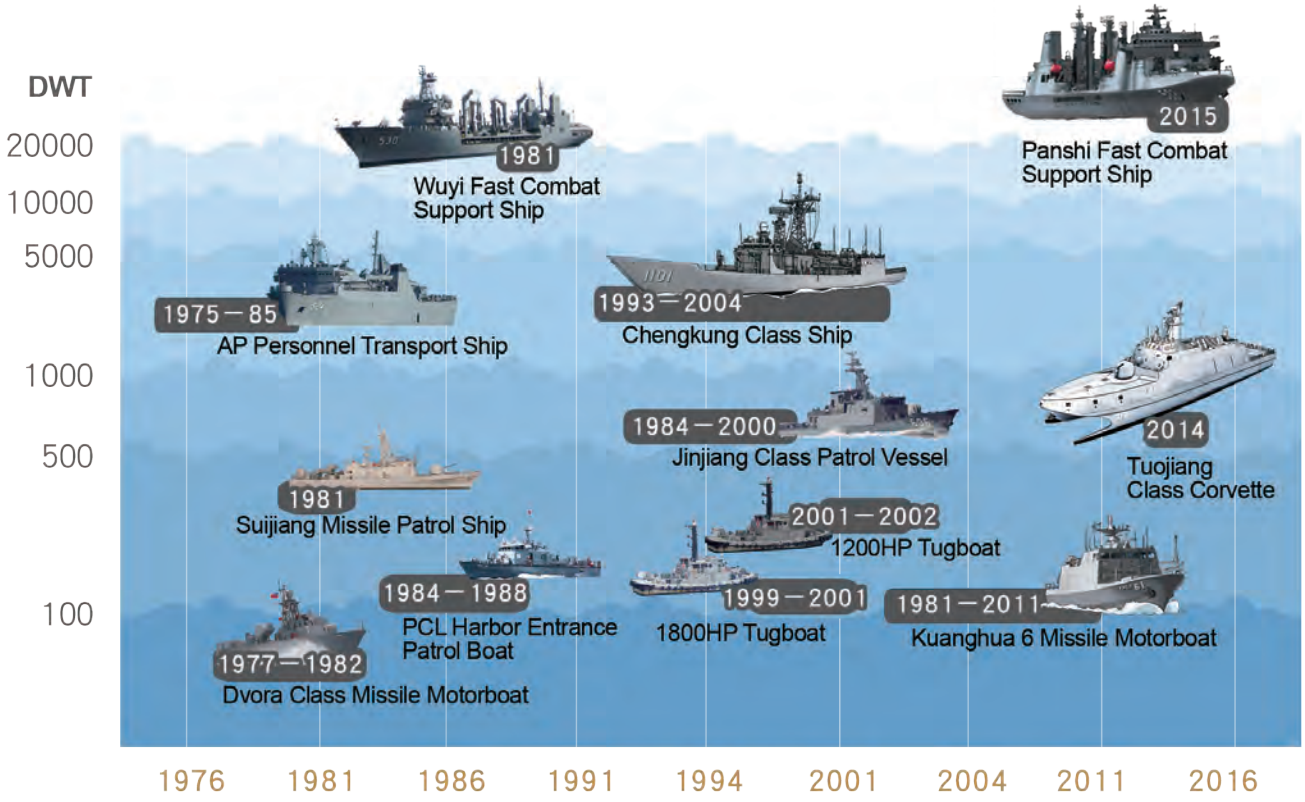
(2) The New Advanced Trainer Outsourced Manufacture and Cooperation MOU Signing Ceremony was hosted by President Tsai on February 7, 2017, announcing the determination to jointly develop the aerospace industry. The Air Force and National Chung-shan Science and Technology Research Institute (NCSIST) have signed an outsourced manufacturing agreement for 66 advanced trainers, integrating the capabilities of the domestic aerospace industry to build a long-term industrial supply chain; the case's engineering design has begun, software and hardware system specifications set, material acquisition, assembly and testing are being carried out, business solicitation meetings have been held, and project control meetings are periodically held.



[Progress of Planning of New Type Advanced Trainer]



[Major Events in Production of Indigenous Military Aircraft]



[Development of Building of Indigenous Surface Ships]

Indigenous Military Aircraft Inherit the Past, Usher in the Future

Military aircraft manufacturing capability has been accumulated and new-generation high-performance trainers and fighters have been developed, increasing national defense self-reliant capability and ensuring air space security.

Underwater Dragon
Indigenous Submarines

Submarines are important strategic weapons. The ROC possesses key technology and has broken through bottlenecks and taken a big step towards building an indigenous submarine.

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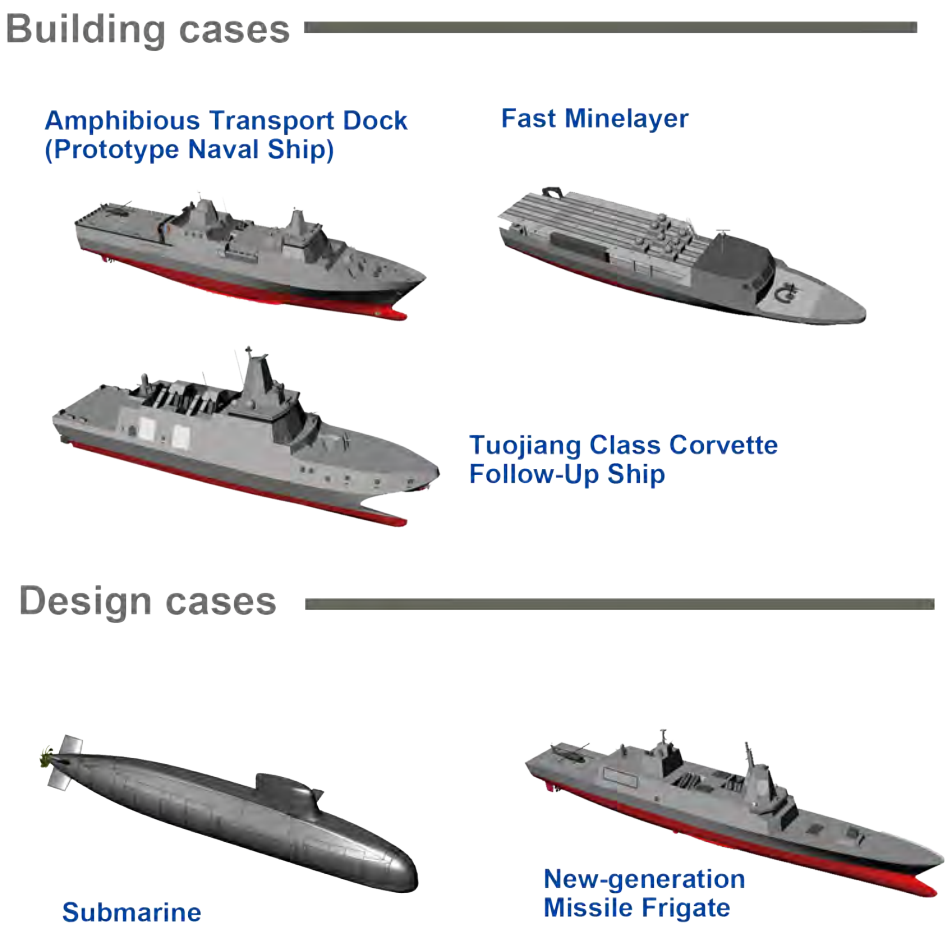
II . Indigenous Naval Ship Building

(1) The ROC already has surface ship self-building capability. Domestic shipbuilding companies have successively taken part in the construction of various surface ships and shipbuilding quality is gradually maturing. The MND plans future forces according to operational needs, self-building using the batch, cyclical and long-term method to meet force buildup and readiness requirements.

(2) In 2017, "new type amphibious transport dock, follow-up combat ship, fast minelayer construction" cases and "submarine, new generation missile frigate" contract design cases were added.

(3) On March 21, 2017, President Tsai hosted the Indigenous Submarine and Ship Design Launch and Cooperation MOU Signing Ceremony. NCSIST and China Ship Building Corporation (CSBC) signed an indigenous submarine and ship design launch and cooperation MOU, signaling the launch of the indigenous submarine and ship building program and the active promotion building of indigenous navy ships.



[Ongoing Indigenous Ship Building and Design Cases]

III. Information Security

(1) Short, mid and long-term development strategies are drawn up involving development of military-civilian dual use products, linking industry, academic and research capabilities and nurturing information security talent; in accordance with readiness preparation requirements, budget is allocated and projects that domestic information security companies can take part in are released to give domestic manufacturers a chance to participate in national defense research and manufacture.

(2) In 2017 to the present time, 20 information security workshops have been held including the National Defense Information and Electronic Dominance Symposium; in 2017, the Military Academy Cup and Armed Forces Cup Cyber Defense Exercises were held and had 16 teams from 14 units participate. 38 information security technology seminars were held including Taiwan Cyber Security Summit and Advanced Persistent Threat (APT); also, a strategic alliance partnership was signed between the MND and National Taiwan University, National Chiao Tung University and National Taiwan University of Science and Technology, under which the universities will be commissioned to carry out research to allow advanced information security technology to be acquired and thus strengthen the information, communication and electronic capabilities of the Armed Forces.

(3) Cyber security has become an important national strategic objective. To cope with the threats that represent an increasingly serious challenge by the day, the Armed Forces must maintain the highest information security specifications. In the area of information security R&D, universities in Taiwan already are world class; in the future, through continued cooperation and exchange, and holding academic research and information security forums, practical training and seminars, the aim is to stimulate the interest of more students in national defense information security; utilizing this advantageous situation, outstanding young people will be recruited to store up a pool of national defense information security talent and expand information security capability.

Chapter 6 National Defense and Public Welfare

The MND seeks to strengthen national defense technology development and application utilizing the resources of various government agencies. The MND also promotes green energy and environmental protection to drive the development of the national defense industry and move towards achieving the dual objectives of meeting national defense requirements and creating economic effectiveness.

Section 1 National Defense Industry

The national defense industry is an important force supporting national defense self-reliance. In order to develop the national defense industry, the transfer of national defense related R&D and technology to the private sector continues. Further to this, steps to upgrade domestic industry and build an end-to-end national defense industry supply chain are being taken. In addition, by releasing resources from national defense to private enterprises, domestic manufacturers are given trial opportunities of production technology, and this helps to expand the scale of the national defense industry.

I . Transfer of National Defense Technology to the Private Sector

(1) In line with government policy, the MND promotes the development of the national defense industry and increased national defense self-reliance through "transferring national defense technology to industries, creating industry value" and "private sector power supporting national defense technology."

(2) Visits to national defense related companies aim to understand national defense industry capacities and the results of national defense technology R&D are transferred to guide companies to develop system components and high value core products. In addition, intellectual property rights strategy has been strengthened, a mechanism for R&D revenues flowing back established, and the revenues invested in the R&D of national defense technology.

(3) To nurture the domestic defense industry, through a military hardware research, manufacture, and maintenance mechanism, a defense industrial supply chain with private enterprise participation has been built. In the last five years the amount of outsourced research, manufacture, and maintenance has totaled over NT$5.01 billion.

II . Developing Military-civilian Dual-use Technology

(1) Military-civilian dual-use technology R&D is carried out, and industry-academia-research upstream and downstream cooperation teams are built, developing weapons systems in line with national defense requirements; mature national defense technology

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Through “transferring national defense technology to industries, creating industrial value” and “bringing together private sector power, forming industrial clusters,” development of the national defense industry continues to be promoted, driving economic development.

is converted to products connected to people’s livelihood, to raise the technology level and international competitiveness of domestic industry, and to create derivative benefits for industry.

(2) In 2017, in coordination with the Ministry of Science and Technology, military-civilian dual-use technology was applied to the electric vehicle and green energy industries, and aerospace industry development was promoted by linking the materials, manufacturing, processing, testing, verifying and aerospace application industry chain.

(3) With people’s livelihood industry requirements as the base, the NCSIST is implementing 25 technology projects, with a total budget of NT$886.07 million. The development of the national defense industry is being supported in conjunction with private industry to increase national defense self-reliance and revitalize the national defense industry.

III. National Defense Manufacturer Security Control

To maintain national defense and security and also protect the results of key research, in 2017 the MND drew up the Guidelines for Establishment of Confidentiality Review Committees and Review for National Defense Affairs, Execution Methods of Security Investigation on Defense Manufacturers of Technology Cooperation and purchase agreement "Special Confidentiality Clauses (template)" with reference to the US's confidential security control mechanism and checking standards; confidentiality protection manpower was adjusted to set up the Security Investigation Office, with the indigenous aircraft and navy vessel programs and other major projects as the pilot projects; control actions such as security investigation and confidentiality auditing are carried out with respect to the NCSIST and manufacturers' personnel, facilities, and information security involving confidentiality, providing assistance so that the security standards in the agreements are reached, protecting sensitive assets in the execution process, and preventing the occurrence of leaks and illegal acts.

Also, to strengthen control of confidentiality of personnel taking part in national defense affairs, the Control Standards Practice Manual for the Participation of Personnel in National Defense Affairs was drawn up in April 2017, specifying confidentiality security control measures and auditing actions with respect to non-MND personnel visiting or attending meetings at the MND or engaging in academic exchange, to maintain confidentiality discipline and ensure that personnel taking part in national defense affairs meet the requirements of confidentiality security.

IV. Resource Releasing

The releasing of national defense resources to private enterprises is guided by the principle of "absolutely no overseas purchase when domestic manufacturers can supply; when capability is lacking, provide guidance to upgrade technology level." Non-sensitive, non-readiness time-critical and non-core capability weapons, equipment and supplies are released to the private sector to increase the military product R&D, manufacture and repair and maintenance capabilities of domestic suppliers. When purchases must be made overseas, the contracted overseas supplier is required to, according to the Industrial Cooperation Program, transfer technology to the ROC to build a national defense technology industry foundation and move towards achieving the policy objective of national defense self-reliance.

Releasing of national defense resources can be divided into 3 types: "military hardware procurement," "military hardware maintenance," and "general military hardware," with the annual planned objective of releasing set according to force buildup concepts and weapons reconstruction guiding principles. In 2016, the planned objective of releasing was NT$81 billion and the actual achieved amount was NT$104.7 billion, an achievement rate of 129.36%. The planned objective of releasing for 2017 is NT$93 billion. The focus is on 8-wheeled armored vehicle manufacture and maintenance, upgrading of F-CK-1 Ching-kuo Fighters, manufacture of advance trainer jets, strategic commercial maintenance of military aircraft, vessels and vehicles, and GOCO for military industries.

Section 2 Environmental Protection and Energy Conservation

In line with national environmental protection and green energy policies, related measures are actively promoted while taking into account national defense and security and combat readiness, to facilitate energy conservation and sustainable use of environmental resources.

I . Energy Conservation and Carbon Reduction

The Armed Forces have implemented various measures to reduce energy use; in the area of combat readiness and training, greater use of training simulators is being made to reduce energy consumption, and decommissioning and sealing of outdated old weapons continues. New building project design must feature natural lighting and ventilation, sunshade equipment and solar powered water heating, as well as a dual water supply system, water storage pool and shower wastewater re-use. Electrical equipment and appliances that have energy conservation and environmentally protection marks are purchased on a priority basis and good individual water and electricity use habits are promoted to save water and electricity. Energy conservation and carbon reduction measures have been adopted in line with national sustainable energy and environmental protection policies and in accordance with the Executive Yuan-approved *Four-saving Projects among Government Agencies and Schools*, *Energy Conservation Action Plan among Government Agencies and Schools*, and the MOEA *Water Resources Conservation Normalization Action Plan*. In terms of energy saving results in 2016, water saving percentage was 6.64% on 2015; as for 2017, in the first three quarters, water saving percentage was 0.04% on the same period in 2016; electricity saving percentage was 3.23% on the same period in 2016.

II . Military Airbase Noise Control

To reduce the effect of airbases noise on surrounding residents, annually the MND provides subsidies for noise-control facilities at 12 airbases. Since 1998, subsidies have been provided for the installation of noise-control facilities by schools, libraries, hospitals, public facilities and households in the vicinity of military bases. As of 2016, NT$2,342.77 million had been allocated. In 2017, NT$106.2 million was set aside for airbase noise control and subsidy operations have already been handled according to schedule control. Also, to strengthen flight and airbase management and implement environmental flight paths and flight time periods, aircraft or engine test muffler facilities have been installed, noise barrier walls erected around airbases, green buffer zones established in control areas and other measures taken to allow readiness mission execution requirements to be met and the impact of noise on local residents reduced.

III. Harbor Pollution Prevention

In line with the *Environmental Protection Administration's Marine Oil Pollution Emergency Response Plan*, areas of responsibility have been delineated on wharfs at Zuoying and Qijin harbors in Kaohsiung, and Magong, Keelung and Su-ao harbors and are regularly patrolled. Ships docked in harbor areas and wharf units are required to carry out clean up, reporting and prevention operations in the event of a major oil pollution incident to maintain harbor area environmental cleanliness. In 2016, 3 ocean oil pollution exercises were held in coordination with the Executive Yuan and local governments; in both 2016 and 2017, 2 educational lectures on sea area oil pollution and sea-transported chemical pollution response were held to enhance the military's emergency response operational capability in the event of a marine pollution incident.

IV. Military Green Energy Facilities

In line with the Executive Yuan's policy of using central government owned building roofs and land for the installation of solar photovoltaic systems to promote energy diversity and self-supply and build a green energy low carbon environment, sites suited to the installation of solar photovoltaic systems were reviewed by the MND and list of sites passed to the Bureau of Energy, MOEA for selection. 127 buildings were deemed suitable, the area involved over 204,000 square meters. Follow up invitation of tenders and installing of systems is being handled by various units. The deadline for completion of the systems is the end of June 2018.

V. Environmental Protection Actions

(1) Green Procurement

In accordance with the Executive Yuan Environmental Protection Administration's "promotion of green procurement by government agencies" policy, the production and use of green products is encouraged by the MND. As of 2016, the environmental protection product designated procurement case amount was NT$153 million and the total environmental protection product procurement amount was NT$158 million, giving a designated procurement case achievement rate of 98.09% and green procurement case achievement rate of 99.25%, exceeding the Executive Yuan's target of 90%.

(2) Maintaining Bio-diversity

Taiwan has a unique and diverse ecosystem. Invasive species threaten the existence of native species and alter the existing ecosystem, and affect the agricultural economy and residential quality of citizens, therefore prevention of invasive species is necessary to maintain native bio-diversity.

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1.2.A green-energy low-carbon environment is being built in line with the Executive Yuan's policy of promoting the establishment of solar power.

3. Areas of responsibility have been delineated on wharfs and are regularly patrolled. In the incident of a major oil spill, harbor area pollution clean-up, reporting and prevention operations will be carried out to maintain harbor environmental cleanliness.

Armed forces bases are scattered all across Taiwan and its islands. In accordance with the Executive Yuan Council of Agriculture's Work Report on Central Red Fire Ant, Inter-government Departments Promotion for Biting Midge Prevention, the Bio-diversity Sustainable Development Implementation Plan, and its allocation of labor table, environmental ecological protection work is carried out by the Armed Forces. As of 2016, infestations of red fire ant (*Solenopsis invicta*) had been eliminated at nine bases, bitter vine (*Mikania micrantha*) at 12 bases, fragrant eupatorium (*Chromolaena odorata*) at 13 bases and biting midge (*Forcipomyia taiwana*) at 30 bases.

國防

Part 4: National Defense Governance

Public governance differs from traditional, compulsory “top-down” public administration in its emphasis on the participation of government, society, and the individual in the public policy processes, and all can equally contribute to the public policy dialogue. The MND has actively made changes in the administration of policy decisions and in communication methods and promoted policies favorable to service personnel, such as national defense reform, improving living facilities, and transforming the organizational culture. It has provided a policy-recommendation channel to low-level service personnel, and the general public alike, which is expected to make for a superior, more democratic National Defense Governance.

Chapter 7 Policy Effectiveness

In its *2017 Quadrennial Defense Review*, the MND announced several innovative policies, including refining the volunteer military system, optimizing quality of manpower, enhancing the image of service members, attending to the welfare of military personnel, and streamlining defense laws and regulations. There have been positive initial results, and the MND will continue to push through these reforms for improvement of the quality and effectiveness of national defense policies.

Section 1 Volunteer Military System

The volunteer military system is an important national defense policy. The MND has continued to promote the *All-Volunteer Military Implementation Plan* ratified in 2012 by the Executive Yuan. It has adopted as a policy objective "increasing voluntary recruitment and reducing conscription year by year," to ultimately arrive at a standing force comprised of volunteer service personnel on active duty.

I. Effectiveness of Implementation

Under the Executive Yuan's guidance and coordination, the MND has promoted accompanying measures and volunteer military system initiatives to raise the achievement rate of all-volunteer service personnel from 58.7% in 2012 up to 78% in 2017. The proportion of volunteer military personnel rose from 39% to 80.5%, which is a marked increase in volunteer manpower.

There is room for improvement in recruitment of officers, due to a decline in the number of conscripts over the years, the declining birth rate in the population, competition in the employment market, and heavier workloads borne by rank-and-file soldiers and officers. We will strengthen officer recruitment, provide incentives for them to stay in the military and encourage the long-term retention of high-quality active personnel through a number of continual actions, including increasing the recruitment sources of junior officers, improving recruitment outreach, adopting more flexible means of recruitment, enhancing the military's image, improving the active-duty environment, and refurbishing personnel dormitories.

II. Support Measures

To achieve stable recruitment and retain the needed personnel, the MND continues to implement recruitment support measures for the volunteer military system to enhance professional military skills and the capability to carry out readiness missions.

(1) Comprehensive Legal Basis

The Provisional Act for the Implementation of the Volunteer Military System was formally enacted on October 2, 2015. There has been comprehensive legislative drafting to date, with 26 regulations completed, including *Military Education Regulations*, and 5 other regulations, including *Statute of Welfare for Military Service Members*, currently in the draft stage. The interim regulations will continue to apply to the various ministries until the

[Military Service System Transformation and Support Measures]

Unit : NTD

Allowance for Personnel in outlying islands of the Penghu Area
Adjusted to 5,840–9,790

Air Traffic Control Operation Service Allowance
Adjusted to 4,100–8,200

Volunteer Company-grade Officer Support Allowance
8,000 adjusted to 10,000

Electronic Signals Detection Personnel Allowance
Adjusted to 4,100–6,600

Company-grade Officer Retention Bonus
First year: 17,000
Second year: 33,000
Third year: 50,000

Tri-Services Color Guard Allowance
Regular service members 5,000
Reserve service members 3,000

Information (cyber warfare) Service Bonus
5,000 to 50,000

Second Phase Combat Unit Allowance
For company-level units, including Chemical Corps, Engineer Corps, and Signal Corps of the Army, Reconnaissance Company of Marine Corps, and Maintenance Squadron of the Air Force.

[Allowances for Military Personnel Approved by the Executive Yuan in 2017]

implementation period ends on December 31, 2020, which is the deadline for amendment and introduction of these regulations, which guarantee comprehensive legal rights and welfare benefits for military personnel to build an optimal environment for young people entering the armed forces.

(2) Enhanced Compensation Scheme

The Executive Yuan approved adjustment of the Allowance for Personnel in the Outlying Islands of Penghu Area, which took effect on January 1, 2017. On July 1, 2017, the adjusted Volunteer Company-grade Officer Allowance, Company-grade Officer Retention Bonus, Information (cyber warfare) Service Bonus, Air Traffic Control Operation Service Allowance, Electronic Signals Detection Personnel Allowance, and Tri-Service Color Guard Allowance were approved. On October 1, the Second Phase Combat Unit Allowance was approved.

The adjustments in allowance described above will help in the retention of low-level soldiers, officers, and specialized personnel. In addition, the MND will seek to expedite allowance adjustments for Master Chief Petty Officers as a morale incentive and to increase volunteer manpower.

(3) Training in Multiple Specializations

Military personnel are encouraged to pursue advanced education, either full-time or during off-hours, studying for academic degrees or professional certifications according to their duties, on the condition that such pursuit does not affect their operational training and missions. In cooperation with public and private universities, In-Service Education Programs are set up at camps, along with Certification Training Classes. We have worked with National Open University on the provision of advance education for those stationed in remote areas, in mountainous stations, and personnel onboard Navy vessels through the online education platform. In addition, we also help discharged military personnel participate in vocational training set up by the Veteran Affairs Council and the Ministry of Labor. This effort allows military personnel to acquire both military expertise and civilian certification for smooth transition to the civilian labor market after their military service.

[Integrating Military Members into the Civilian Job Market]

Section 2 Caring for Officers and Service Personnel

The service environment of officers and the service personnel has been improved, with renovated living quarters and facilities, military uniforms of improved quality, better food services and supplies, and care for family dependents. Existing facilities and amenities have been upgraded as a policy incentive for talent recruitment and retention.

I. Renovation of Living Quarters

Considering that the living quarters for units have exceeded their age limit, a priority has been placed on refurbishing old camps into standardized military accommodation. New camp construction has multi-use facilities for living activities, administration, and leisure activities, providing well-rounded life functionality. With the extended term of service for the volunteer military system, more consideration has been given to human concerns of privacy, though the Xing An Project, with family as the guiding concept: apartment-style modular design creates a family-like atmosphere. In 2017, 16 construction projects of the Army's Huadong Defense Command have continued to be implemented, with another 99 planned. At present, 10 of the projects have been initiated and will be carried out according to a rolling review of priorities.

To minimize the disruption to service members' households and family life, existing dormitories are renovated but not demolished. By doing so, the old structures are made new, creating an excellent living environment. In 2017, there were 819 refurbished service dormitories in 21 villages and planned construction of new dormitories to address a lack in some areas.

II. Improved Quality of Military Uniforms

Starting in 2017, the fixed clothing allowance for officers and service personnel rose from NT$4,803 to NT$9,860 annually, which improved the quality of their attire. In addition, to address future needs in combat and to increase the effectiveness of camouflage, Tri-Service and military police combat units have changed the uniforms to the new digital camouflage patterns; the switch to digital camouflage uniforms for the Marines is ongoing. Disaster relief troops and recruits have been allocated digital camouflage crewnecks, and conscripts undergoing short-term military training have been allocated more PT shirts. Dedicated management of military apparel will result in increased clothing quality and more effective supplementary allocations, which will meet the needs of officers and service personnel for practical clothing.

III. Food Supplies and Services

The MND takes the actual needs of officers and service personnel into account in promoting its services, providing superior medical care and innovative welfare commissaries, strengthening crisis support services, benefiting officers and service personnel and their dependents and helping them solve difficult problems. This enables both officers and service personnel to focus on the tasks of military operations and training.

(1) Innovative Services

As new media on mobile devices gradually replaces traditional media, new marketing channels such as the MND's General Welfare Service e-commerce website, combined with the group buying website Good Life, can use various social media groups or apps to broadcast information about deals. This provides an innovative, fast, and convenient service platform for service members, their dependents, and the families of veterans, allowing welfare work to reach everywhere; the online store can proactively provide a touring service at fixed points, allowing an understanding of the needs of units and individuals to be acquired, and based on this, a diversity of products can be promoted and discount prices offered, deepening the connection with the lives of the service members and their dependents.

(2) Diverse Service Initiatives

There is active discussion with civilian companies to provide reliable products and preferential deals to service members, their dependents, and the families of veterans, and to start programs with them for discount services. These include providing discount vouchers for well-known businesses, actively getting merchants to participate in campaigns that honor military personnel with discount deals as a way of supporting government efforts to stimulate the tourism industry and provide service members with suitable leisure-time services. This will broaden the scope of services to meet consumer needs and allow service members to feel the respect and deference of the country and of civilian companies.

(3) Comfort and Counseling for Service Members

For the comfort and encouragement of the units involved in military training or disaster relief, set procedures have been implemented to provide comfort to emergency response forces, so when a crisis erupts, materiel and resources are given priority deployment, enabling service members to give their undivided focus to their respective tasks. To this end, mobile commissaries have been set up to facilitate the giving of prompt and convenient service to officers and service personnel. For service members and their dependents undergoing hardships or disputes, or who are suffering indigence or illness, the Friends of the Armed Forces Association provides help with counseling services, patient visitations, and emergency relief. This helps to fortify the family ties of service members, and by promptly addressing their critical hardships, they are enabled to perform their duties free from distraction. From 2016 through November 2017, there have been 1,390 cases of urgent illness, death or injury, or comfort, for which over NT$8.69 million in consolation allowances have been issued.

(4) Care of Military Families

The sale of scattered units in refurbished 3rd and 4th echelon Military Dependents' Villages resulted in 656 advertised new units, which has been effective in bringing stability to the lives of military personnel and their dependents. The *Guidelines on Care of Military Families* provide military dependents with some cost reductions when receiving medical treatment at military hospitals. It also provides for preferential treatment by public power and water utility companies for their water and electricity usage. Military accommodation facilities also give preferential treatment, as do veterans' savings banks. Financial assistance for childcare, education, and funeral expenses, as well as emergency financial help for health emergencies and crises of indigence are also provided. There are 395 first-rate registered childcare organizations that have signed contracts to provide service members and their dependents with substantial care services. This has helped to address the issue of childcare.

(5) Optimizing Medical Services

Effectively raising the standard of medical care and treatment is accomplished through comprehensive military medical education, constant training of military medical practitioners, acquisition of cutting-edge medical equipment, planning the building of modernized medical buildings, comprehensively updated medical information systems, and optimized workflows. Health education and policies push for physical conditioning, optimal sleep health, emotional management, healthy eating and drinking, prevention and treatment of tobacco and betel nut-related diseases, weight management, and tracking of physical examinations. This deepens service members' basic knowledge and conceptual understanding of self-management, and through big-data statistical analysis, their health and treatment needs can be grasped. In this way, appropriate health services and healthy work environments can be provided, enabling the service members to undergo strict combat skill training, and thereby enhance the military capability of personnel.

Section 3 National Defense Financial Resources

Under the rubric "active acquisition, reasonable allocation, and effective utilization" of financial resources, the MND continues to anticipate combat needs and available financial resources. Making an integrated assessment of effectiveness, based on equipment performance, acquisition priorities, and full lifecycle costs, funding outlays are made to comply with the volunteer military system's legally-required expenditure on a priority basis; the MND places an emphasis on enhancement of indigenous capability, procurement of advanced weapons systems, improving main battle equipment availability, and improving the living facilities of service members. These measures enhance administrative efficiency overall. Moreover, the MND also has implemented cost systems, carried out active fund management and developed cloud solutions as strategic moves to effectively support management decisions.

I . Budget Allocations and Future Planning

(1) MND Financial Resource Analysis

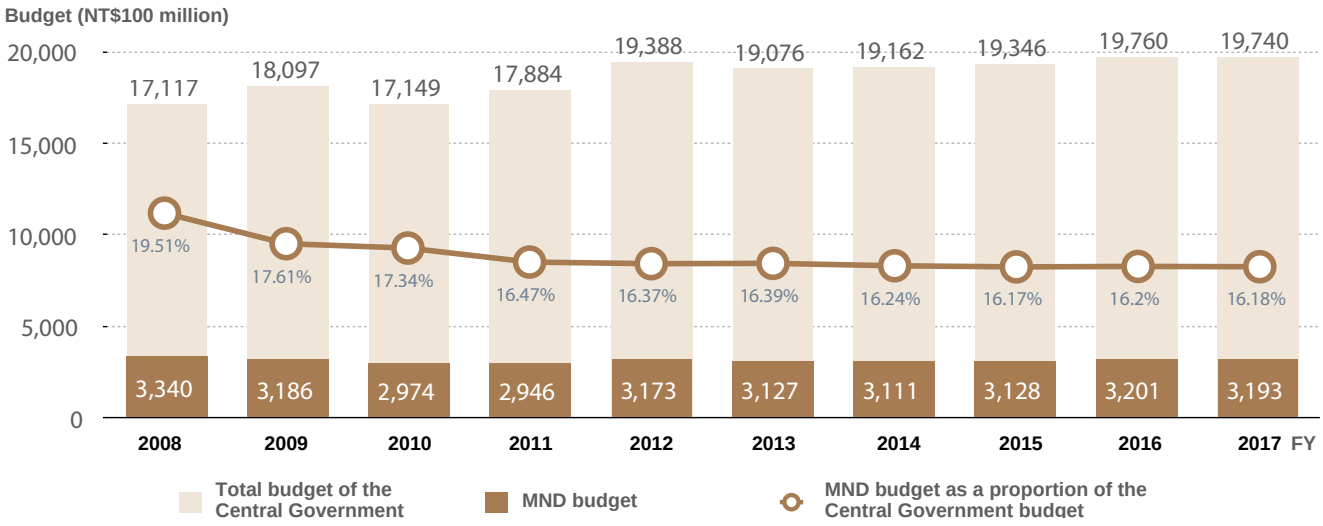
The national defense budget is drawn up by the Executive Yuan, which weighs up the needs of national economic development as a whole, the government's financial resources, and the financial requirements of social welfare programs, educational expenditure, scientific and cultural expenses, together with the force buildup timeline, for appropriate allocation of national defense budget. Over the past 10 years (2008–2017), the budget has been between NT$294.6 billion and NT$334 billion, comprising approximately 16.17% to 19.51% of the total overall budget of the government.

(2) Principles of MND Budgetary Allocations

The MND's fiscal plan is based on the level of funding the government is currently able to allocate. Budgetary categories are divided into the 3 areas of maintenance of personnel levels, operations and maintenance, and military investment. Within this budgetary allocation framework, the MND's priority is funding regulatory outlays of the volunteer military system, while placing an emphasis on implementation of key policies, including increasing domestic capabilities of weapons development and manufacture, procuring advanced weapons systems, maintaining availability of main battle equipment, and improving the living facilities of service members, to ensure stable development of force buildup and combat readiness.

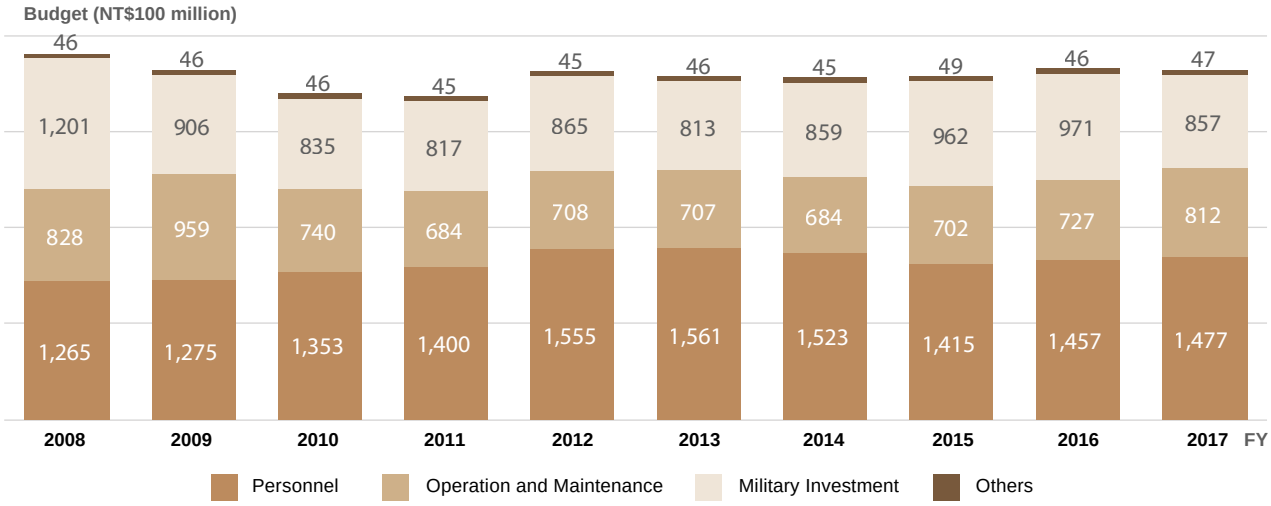
(3) Key Aspects of FY 2017 National Defense Budget Allocation and Policy Implementation

The annual MND budget for the 2017 fiscal year was NT$319.3 billion, with the following key appropriations:



[MND Budget and the Central Government Budget]

1. Personnel: NT$147.7 billion, mainly allocated to meet regulatory requirements for implementation of important government policies, including personnel compensation, allowances and insurance costs incurred from volunteer force recruitment, force retention and conscription and training of standing troops.
2. Operation and Maintenance: NT$81.2 billion, allocated chiefly to maintain the readiness posture of main battle equipment and to improve the living quarters of service members to meet the basic operational needs of all level unit for development of comprehensive integrated capabilities. A balance is struck between military exercises and training for combat readiness and disaster prevention and relief missions.
3. Military investments: NT$85.7 billion, used in continued contractual implementation of the new-type utility helicopter and PAC-3 missile programs, and to push major plans for domestic production of naval and air force vessels, including indigenous advanced training aircraft and subsequent mass-produced high-efficiency naval vessels. These initiatives are a specific demonstration of self-defense determination and ability.
4. Others: NT$4.7 billion, primarily for the budget of the National Security Bureau.



[MND Budgetary Allocations]

II . Financial Management

(1) Implementing Cost Systems to Support Management Policies

With procurement of military weapons and equipment subject to process re-engineering, cost analysis of weapons development investment based on product cycles, and depletion costs of combat units in the main force subsumed by operations, cost parameters are compiled for human resources, operation and maintenance, and equipment procurement at all levels, and a knowledge-sharing platform enables defense cost analyses operations to be established for all of the units in the MND. This provides reference and basis for procurement budgets and financial forecasting and brings out the functional potential of financial management in contributing to the goal of force buildup and readiness.

(2) Funds Activation to Develop an Optimal Environment

To meet the needs of national defense administration, national defense resources are integrated by leveraging special funds, importing enterprise management concepts, strengthening fund management, and extending the performance of financial investments. Disused military camp assets have been effectively activated to provide overall stable financial resources, providing sufficient investment to aid in the restoration of outmoded camps and accelerate the optimization of living quarters for service members. There have been concrete improvements in the living environment of service members. Comprehensive service operations have benefited from the ability to be more innovative, raising the quality of medical care for service members, providing better social services, better arts and education options, banking and financial, food supply and mess service.

(3) Developing Cloud Solutions and Strengthening Data Analysis

Based on the MND Financial Information Cloud Services Network, auditing and financial operations are integrated into information systems and cloud services. An auditing control system uses a consistent interface and centralized database, together with electronic signatures and digitized documentation. This simplifies operating procedures and improves the quality of operational data. In the future, with large transaction data volumes at its disposal, it will effectively utilize big data technology for analysis to find correlations and discrepancies among unit budget implementation, expense items and monthly financial statements with multiple perspective analytical techniques. This aims to facilitate subsequent budget preparation and enhance budget utilization effectiveness for supporting managers' decision-making and expediting force buildup and readiness.

Section 4 Weapons Acquisition

One of the major issues in maintaining and upgrading military power is acquisition of equipment and weapons at reasonable cost. A stringent weapons acquisition system, including advance assessment operations, procurement method analysis, and improved case management, can guarantee that procurement of superior weaponry proceeds according to a scheduled program. This will meet combat needs and eliminate the military power gap, making the Armed Force an optimal fighting force.

I . Military Investment Program Management

To refine the efficiency and quality of military acquisition procedures, and procure optimal weapons in terms of meeting operational requirements and demand for cost-effectiveness, the ROC Armed Forces have been integrating weapon acquisition processes, carefully reviewing all documentation, and utilizing professional personnel with more flexibility in operations, in order to make well-rounded programs for weapon acquisition, and achieve our goals of force buildup and self-reliant defense.

II. Program Establishment

There are 2 stages in program establishment. In the first stage, the General Staff HQ determines operational requirements, and issues top-down force buildup directives in close harmony with the overall defense concept, supporting the needs of joint operations. In the second stage, planning of procurement methods begins, and thereafter, comes a complete assessment of domestic production capability, systems analysis, and overall logistics support and industry economic benefit analysis. When this is completed, an overall acquisition planning report is made to address the mission of force buildup and readiness. This provides recommendations for optimal weapons to procure, a review of national defense financial resources, together with reasonable budget allocations.

[The MND Weapons Acquisition Process]

III. National Defense Effectiveness Assessment

With respect to joint forces planning and the stage of weapons acquirement, the MND has continued to forge ahead in its assessment of national defense resources. This entails an overall assessment of weapons and equipment serviceability, cost assessments over equipment life cycles, and analyses of acquisition priorities. Using an integrated scientific, quantitative evaluation system, the effectiveness of joint operations is evaluated along with cost-effectiveness. The MND evaluates the effectiveness and cost of weapons and equipment in order to acquire weapons and equipment of appropriate quantity and quality and optimize the distribution and utilization of national defense resources.

IV. Procurement Operations

(1) National defense procurement is a key support of combat readiness, and lies within the scope of national defense administration. The procurement process must take into account overall factors of quality, cost, and effectiveness over time, as well as compliance with *Government Procurement Act*, and it must safeguard the public interest and the principle of fairness in transactions. Meanwhile, the MND continues to ensure procurement quality through auditing and supervisory efforts and professional training.

(2) With regard to acquiring large weapons systems, a determination is made according to the overall acquisition planning report, and an appropriate strategy is set. In meeting the need for force buildup, priority is granted the NCSIST for indigenous research and development and NCSIST specialists in the field of systems integration. They assist with specialized management and implement security controls with respect to military defense contractors involved with classified information.

Section 5 Military Medicine

Military medicine is a discipline that significantly differs from conventional clinical medicine. It is an integrated field of applied medicine devoted to promoting the mental and physical health of military personnel, preventing disease, and providing emergency medical attention and clinical care. It is subdivided into various medical fields such as battlefield medicine, aviation medicine, naval operational medicine, submarine and underwater medicine, combat psychiatry, and others. During peacetime, it is concerned with pre-planning work, including implementing service members' health self-management, health promotion and disease prevention in the barracks, public health and infectious disease prevention and treatment, risk management on duty, and optimizing psychological strengths on the battlefield. These things are intended to raise the physical fitness level and combat skills of the service members, and the military effectiveness of the unit. On the other hand, during wartime, emphasis is placed on emergency medical care and rapid evacuation for combat injuries, relief of battlefield pressure and anxiety, ensuring that maximum care can be given to the wounded in the battlefield hospital, and making sure the supply line for blood and medicines remains unobstructed. In this way, both military effectiveness and troop morale can be maintained.

I . Health Education in the Barracks

The health of service members is the foundation on which force capability rests. To establish awareness of health self-management with respect to healthy diet, bodyweight management, stress management, and optimal sleep habits, the MND has instituted a health education program, and has set up a systematized outreach program. A system to monitor the results of annual physical exams can target anomalies in particular service members via a "3-Level Diagnostic Referral for Physical Exam Anomalies." Follow-up outpatient visits and retests can be more aggressively carried out, and with more active treatment and health education, the service member can recover his or her health. The MND has also implemented a military health management information system containing annual physical exam data for service members. Using big data analysis, changes in service members' health status can be more deeply understood, enabling adjustments to be made in preventive health strategy and emphasis, so that early warning signs can be effectively identified and addressed. This has created a service environment for a modernized force, ensuring maintenance of current defense capability.

II. Hearing Protection

When service members engage in combat readiness exercises, live-fire drills, disaster relief and rescue operations, flight service, or engage in engineering or factory (depot) work, they are frequently exposed to high-decibel noisy environments. If no suitable hearing protection is used, their hearing may be damaged, and they may suffer from noise-induced hearing loss. To address this, the MND complies with the national regulations on workplace noise, takes measurements of on-site ambient noise, performs risk assessments, arranges for health education on hearing protection, and carries out hearing tests, and health management.

To address service members' need for hearing protection when carrying out their military duties, the *Occupational Hearing Conservation Program Guideline* has been devised. The MND has issued a *Hearing Conservation Program Guideline for Military Service*, which clarifies the rights and obligations of units with respect to statutory hearing protection rules at their posts of duty, and the modes of protection. Individuals are provided with means and tools to manage their sense of hearing's basic physiological function, control environmental noise and for self-protection, and provided information on medical diagnosis and treatment. This has raised overall awareness and concern among service members about protecting their hearing.

Forging ahead in the area of hearing protection in the military, the MND has integrated the various interdisciplinary fields of military medicine, human-factor engineering, materials science, electrical engineering, and communications, information, and electronics. It has set up research teams, issued funding for national defense medical research, and invested in R&D projects analyzing main battle weapon noise levels, collection of statistical data in military facilities with high noise levels, and R&D of hearing-protection equipment and devices. It can be anticipated that industry and academia will jointly develop products for common use that conform with national military standards, such as active ear protection equipment, offering even better hearing protection.

III. Aviation Medicine

Aviation medicine is applicable to both Air Force units and the civil aviation industry. With regard to the Air Force, the central mission is to maintain safety in flight and enhance air defense combat capability. The aviation physiology training model enables Air Force personnel to better adapt to the potential physiological stresses and psychological burdens in the airborne environment. State of the art technical training equipment enables fighter jet pilots to safely experience virtual environments in which they may encounter high G force, G-force-induced consciousness loss, high-altitude hypoxia, spatial disorientation, motion sickness, and other aviation hazards. A series of stringent physical and psychological endurance tests not only prepares the pilot to execute his or her duties with a higher degree of safety, but also enhances their air combat skills.

The MND, in addition to analyzing the personality characteristics of its pilots, also undertakes analyses of health risk factors in the flight environment. Key issues here are integration of the human-machine interface of flight control and weapon systems etc., and a huge amount of resources has been invested with the aim that limited flight training resources yield the greatest effects in screening, training and utilization of talent. In addition to their medical duties relating to flight, aviation medical personnel must also perform the tasks of occupational and preventive medicine. The MND is committed to the ideal of both training talented people and fostering innovative, specialized research and development to solve practical problems relating to flight physiology. Meanwhile, it continues to train professionals in aviation medicine and sends its personnel to take part in international training and international military medical exchanges. It invites specialists in aviation medicine from Taiwan and abroad to further plans for aerospace medical research, exchange practical experience, and solidify the professional skills and abilities of its aviation medical personnel.

IV. Undersea Operations and Submarine Medicine

Other specialized medical disciplines of undersea operations and submarine medicine include undersea operations, submarine activity, emergency evacuation, healthcare, and health maintenance. Whenever service members carry out undersea missions, they must face the dangers of abnormal pressure, and so the MND has set up diving simulators in which personnel undergo pressure and oxygen tolerance tests. This enables them to simulate carrying out undersea combat missions safely in a controlled environment and lets on-duty servicemen become accustomed to abnormal pressure environments underwater, reducing the incidence of undersea accidents and increasing the completion rate of submarine missions. To treat personnel suffering from physical conditions related to their undersea service, the MND has also introduced hyperbaric oxygen therapy technology produced for clinical use, making it a pioneer in undersea and hyperbaric medicine in the country.

V. Combat Casualty Care

Combat casualty care generally refers to the medical treatment of personnel who have been wounded under enemy fire, and its purpose is to lower the casualty rate of combat troops. Given the experience of the United States in the 2 Gulf Wars, preventable trauma accounts for most casualties. The MND has acquired a great deal of experience in the field of combat rescue training, and has increased its quality of care even as the *Emergency Medical Services Act* was issued and went into force. The MND set up EMT-1, EMT-2, EMT-P, and instructor training courses for cultivation of emergency care talent. To date there are more than 10,000 emergency medical technicians regularly deployed in the military. To familiarize personnel with the skills needed for battlefield care, and to increase resistance to stress, county and municipal fire departments have entered into agreements to encourage those military personnel with EMT qualifications to actively serve in the fire system, providing emergency treatment. It is hoped that training will thereby unite with actual use in the field. Like the battlefield environment, care for the wounded is carried out under rapidly shifting circumstances. To help improve the capacity to care for wounded soldiers under enemy fire, the MND has trained staff in Tactical Combat Casualty Care, or TCCC. Emergency medical technology is melded with tactical ways of thinking to fortify the military medical specialist's ability to provide Care Under Fire (CUF), Tactical Field Care (TFC), and Tactical Evacuation Care (TACEVAC). In wartime, this can help maintain both the military's fighting ability and the morale of the troops.

Section 6 Protecting Human Rights

Today, protecting human rights is a major issue in the international community. The MND also strives to safeguard the rights of service members. When the rights of a service member have been violated, they can obtain immediate relief; moreover, promotion of the policies of gender equality has made awareness of gender equality part of exercises and training as well as daily life.

I. Relief System

(1) Appeals

The MND's review committees for appeals and petitions are composed of fair and impartial committee members, both from inside and outside the MND. Whenever someone deems that a disciplinary action administered by a military unit, school, or department (facility) of the MND is illegal or improper, or if it has violated their rights or interests, they may file an appeal with this committee. After deliberations, the case will be duly resolved within 3 months. In addition, regular lectures are held to further service members' practical understanding of normal legal procedures and administrative remedies, which helps with the proper handling of cases.

(2) National Compensation

In recent years, national compensation process committees have carried on an education initiative among mid- and high-level cadre to acquaint them with the national compensation system and take action to prevent any practices that may result in national compensation claims. They have done outreach visits at all levels and held workshops to further understanding of military cadre about the national compensation system and prevent such cases at source.

(3) Protecting the Rights of Service Members

1. If a service member becomes subject to an improper administrative measure or punishment, or if they become involved in a lawsuit while carrying out their duty and need to apply for assistance, or have suffered some other damage to their individual rights, they may petition committees for the protection of service members' rights and interests (Rights Protection Committees). These committees are in the Army Command Headquarters, Navy Command Headquarters, Air Force Command Headquarters, and Political Warfare Bureau. If their case is denied, they can petition the MND Rights Protection Committee again for reconsideration of their case.
2. At all levels, the Rights Protection Committees deliberate on cases brought by service members, and both impartial civilians, as well as executives within the department, are brought in to discuss the case and try to reach a decision promptly, after due consideration.
3. In safeguarding the legal rights and interests of service members, from 2016 to

November 2017 the Rights Protection Committees at all levels accepted a total of 543 cases for consideration or reconsideration and adjudicated 482 of these. The remaining 61 outstanding cases are being tracked and under investigation to ensure the rights of our service members.

4. Service members are encouraged to boldly take on responsibility and are given support in duly carrying out official business. There were 8 applications for legal assistance for service members in all ranks involved in lawsuits arising from official business. Of these, 6 investigations were completed, and 2 were ongoing. Service members who request such assistance are given legal advice at all stages of the process.

II. Complaint System

The MND complaint system is intended as a means of communication to protect the legal rights of service members, civilian employees in the MND, and their dependents. The most direct complaint line is the "1985 Consultation Helpline." In order to improve the service quality and shorten the processing time of the 1985 Consultation Helpline, we have elevated the supervision level of complaint handling to army corps headquarters and the equivalent, increased manpower for the hotline service and expanded its information system deployment. From 2016 to November 2017, 4,543 complaints were received. Of these, the majority had to do with internal administrative matters, military-civilian complaints, or disciplinary issues. All were handled or resolved within the requisite deadline.

III.Gender Equality

In line with global social trends and developments in gender issues, the government has kept pace, adopting various policies to promote gender equality. In recent years the MND has taken steps to implement various gender equality initiatives.

In realizing gender equality and shaping values that support equal rights, the MND has promoted gender equality in the administration of operations, training, rights protection, and daily life. These active measures include the educational television show Armed Forces Juguang Park, discussion events on gender issues, and various courses on awareness of gender equality, with the aim of eliminating gender-based verbal violence, sex discrimination, and gender-based stereotypes. These efforts help establish proper ways of interacting, for the creation of a work environment that fosters mutual cooperation, respect and acceptance and is friendly.

There has been a gradual increase in recruitment of women in the military since the 1990s, and the system of military service has transformed in kind. Women were allowed to become enlisted members in 2007. In recent years, measures have been adopted to enable women to balance career and family and reduce disparities in treatment in the workplace, such as unpaid parental leave for raising children; and a 4-year amelioration plan has been adopted to verify the effectiveness of such measures in order to extend women's opportunity for participation. Since 2013, the Army has opened armored branch specialization courses to female service members, and women have been gradually deployed to armored units. In the Navy, since 2014, changes and alterations have been progressively made on board navy vessels to improve work and living spaces, increasing opportunities for women to serve on navy vessels. In addition, in the Air Force since 2016, excellent female pilots have been trained for first-line fighter aircraft conversion.

Section 7 Active Utilization of Land

In line with national policies on land revitalization and due to military downsizing and organizational readjustments, a policy of joint resource use by all three military branches was adopted after a comprehensive overview of forward planning for the sustainable use of camp properties. The policy enhances land use efficiency, promotes reciprocity and mutual benefit. The MND also carries out review of disused camp properties when appropriate for land revitalization.

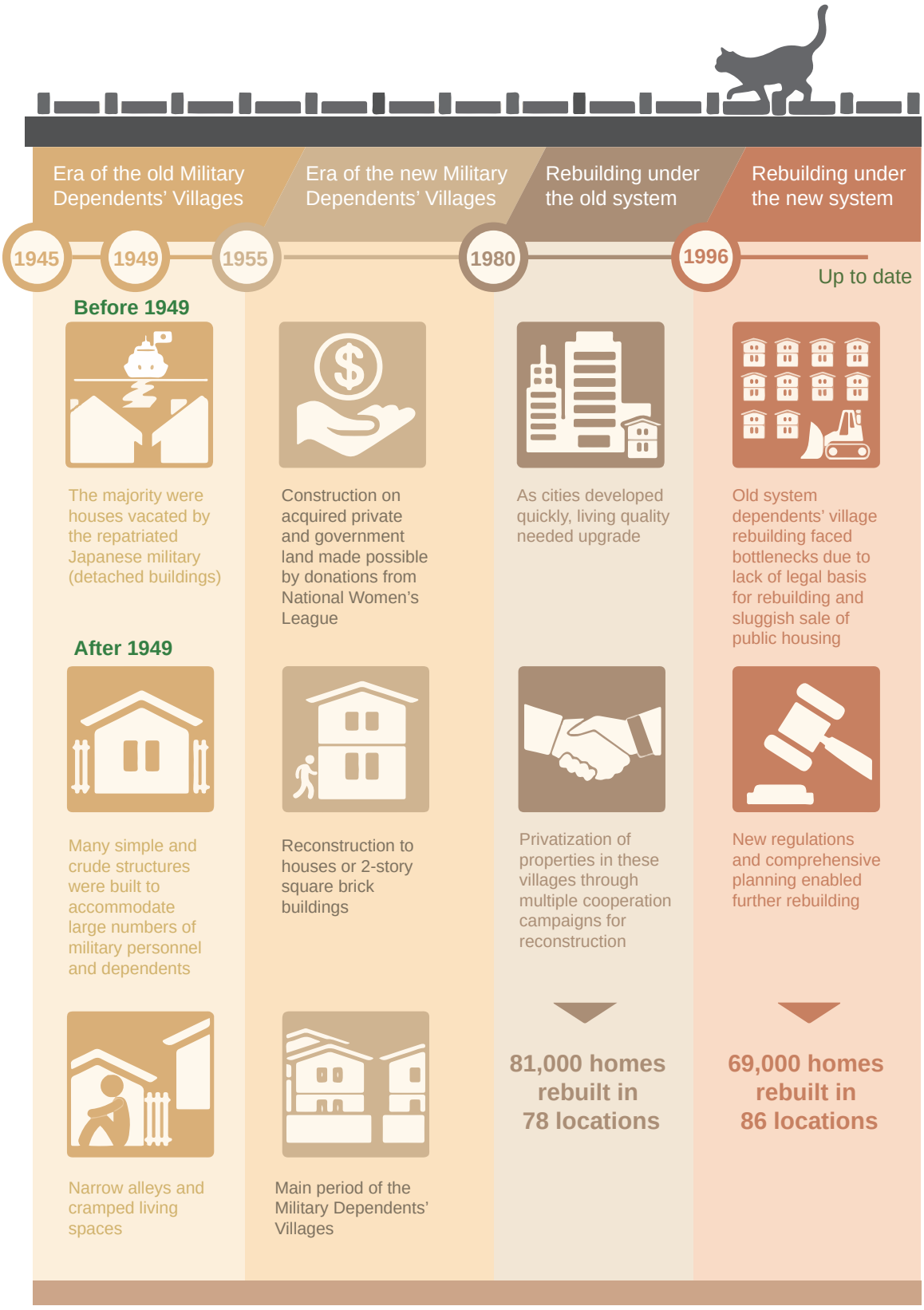
I. The Culture of Military Dependents' Villages and Their Conservation

(1) Enacting Cultural Preservation

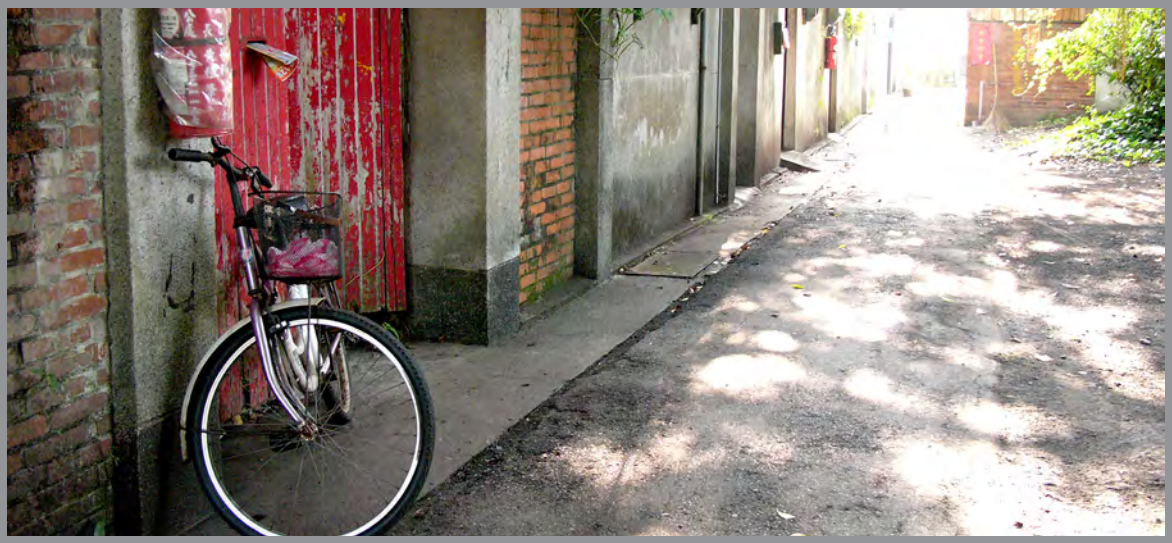
Military Dependents' Villages, which housed service members and their dependents that moved to Taiwan, represent a microcosm of life in Taiwan in the second half of the 20th century, and are an important part of our cultural heritage. Preservation of the culture of these villages is visible evidence of the country's development. In accordance with the *Act for Rebuilding Old Dependents' Village* and *Regulations Governing the Selection* and *Review of old Dependents' Village of the ROC Armed Forces for Cultural Preservation*, the MND has chosen Zhongxin New Village in Taipei and another 13 villages as military dependents' villages cultural preservation areas. Furthermore, we have selected an additional 30 military dependents' villages recognized as cultural assets and, by collaborating with local governments, revitalized or renovated them through urban planning changes and urban renewal measures so as to preserve their cultural legacy and mold a new military dependents' village spirit.

(2) Land Revitalization for Military Dependents' Village

To actively address the difficulty of disposing of large plots of Military Dependents' Village land through open tenders, the proposal for revitalization of 174 locations (i.e. Military Dependents' Village land) has been approved and the total assessed value amounts to NT$88.4 billion. Between January 1, 2017 and November of this year, disposal of Military Dependents' Village land brought a total of NT$86,023 million in income, including sale of the old military dependents' villages through open tenders, local governments' installment payment of consideration and royalties for creation of superficies.



[A Brief History of Revitalization of the Military Dependents' Villages]



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1.2.Military dependents' villages are a vital part of Taiwan's cultural heritage. Preserving the culture of military dependents' villages secures valuable historical evidence of the ROC's development in Taiwan, and the diligent spirit of the people who lived in them.

3. One story brick and tiles houses and close neighbors: these are what most residents of Military Dependents' Villages remember.

II . Management and Utilization of Military Properties

(1) Releasing Disused Land

National security is a priority concern of the MND's management and utilization of its military properties, which first consider the needs of military training for service personnel. To facilitate the management of military land disposal, comply with government social housing policies, and assist local government in acquisition of land, the MND regularly convenes a Military Properties Movement and Release Review Meeting for gradual release of idle military properties over the coming years. The aim is achieving a balance between military land utilization and the government's overall administrative needs and economic development for effective utilization of governmental

assets. As of November of 2017, more than 2,331 hectares had been released with the MND's consent.

(2) Promoting Local Development

To balance the needs of local environmental green areas and expedite disaster relief operations, a review was carried out of land not in use for military training operations, making a provisional determination of land that could be granted to local government for green spaces, leisure, or settlement of disaster victims, without impacting defense needs. As of November 2017, 65 such plots of military land, totaling over 68 hectares, were lent. The MND has carried out another review of properties with a high potential value, and letters of intent were signed jointly with local government. A plan was created to transform the Yongchun Slope Camp, located in Taipei's Xinyi district, into an urban wetland park, the first of its kind, combining conservation, culture and history, and sustainable development. New developments in urban planning and floor area adjustment are expected to increase its land-use efficiency. In the future, financial resources can be transferred to the ROC Armed Forces Camp and Facility Rebuilding Fund to meet the needs of construction funding for old camps. As of November 2017, a total of 164 military properties, or more than 330 hectares of land, had been reviewed and disposed of, generating over NT$77.7 billion of revenue for the Fund. This has created a win-win situation for multiple parties by contributing to the domestic economy and stimulating prosperity at the local level.

Section 8 National Defense Legal System

"Administration by Law" is the basis of national defense administration. The military must abide by legal statute when engaging in its various missions and operations. The MND has, in recent years, issued *Rules of Engagement of the Armed Forces*, and has drafted *Regulations on Reinvigoration of Defense Industries*. We have consulted legal precedent in advanced nations to plan specific stipulations protecting service members to safeguard their legal rights. In addition, authorities in the judiciary have set up a civil-military judiciary liaison mechanism to put an end to illicit drug use among service members, effectively fighting crime.

I. Rules of Engagement

To ensure that military operations comply with national policies, international law, and domestic regulations, and to strengthen the foundation for joint military cooperation with allies, the MND issued *Rules of Engagement of the Armed Forces* in 2017. This gives commanders the authority to execute operations "according to law, suitably, and legitimately," ensuring that military actions are in the national interest and comply with relevant laws and statues. It also empowers them to promptly adopt contingency responses when dealing with regional security threats.

II. Defense Industry Regulations

The national defense policy of self-reliance emphasizes integrating government and civilian resources, and is supported by defense industry development, domestic R&D, and production of weapons systems. The MND has drafted *Regulations on Reinvigoration of Defense Industries* to give a legal basis for defense industry development with the aim of increasing its effectiveness. The national policy objective is "to use the national economy to develop defense, and use defense to spur the economy."

III.Specific Protection Act for Service Members

According to Judicial Yuan *Interpretation No. 430*, service members' task is to fight, and they are to follow orders. For this reason, they may not be regarded the same as civilian officers. In a broader sense, however, the service member is a type of civilian personnel, and their occupation has a legal connection to the public law. Service members do not differ from other public servants except in relation to the military's right to issue commands and exercise reasonable rewards and punishments.

To improve the system by which military personnel obtain legal redress, the MND has considered the interpretation of the Justices of the Constitutional Court of the Judicial Yuan with respect to the laws guaranteeing the legal protection of civil servants and related regulations, and is pushing regulations governing protection of the right interests of military personnel. The legislation will

guarantee the rights and interests that service members enjoy, and stipulates that human rights within the military must be protected. This makes for a sound national defense legal system.

IV . Judicial Contact Mechanisms

After revising the *Code of Court Martial Procedures*, legal cases involving active service members are submitted to the regular judicial system. In order to allow the regular judicial system to recognize the unique nature of military service and management, the MND has established exchange between our judge advocates and judicial officials to share military law case-handling experiences. To align with national drug enforcement policy and reinforce drug search and seizure operations within the military, a mechanism has been established by the Ministry of Justice and the National Police Agency to link investigation reports and search-and-seizure actions. Drug interdiction is executed across departments, targeting the drug selling networks infiltrating or supplying the military with illegal drugs. To root them out, service-wide search and seizure is carried out, regularly and randomly, which effectively combats the threat of illegal drugs in the military.

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Chapter 8 Partnerships

The MND furthers government policies by promoting international military exchange and cooperation. Through military affairs interaction, ties with friendly and allied nations are consolidated. The MND has also actively sought opportunities to expand strategic dialogue and cooperation in security matters with countries having common strategic interests, for maintenance of security across the Taiwan Strait and stability in the Asia-Pacific region.

Section 1 Military Cooperation

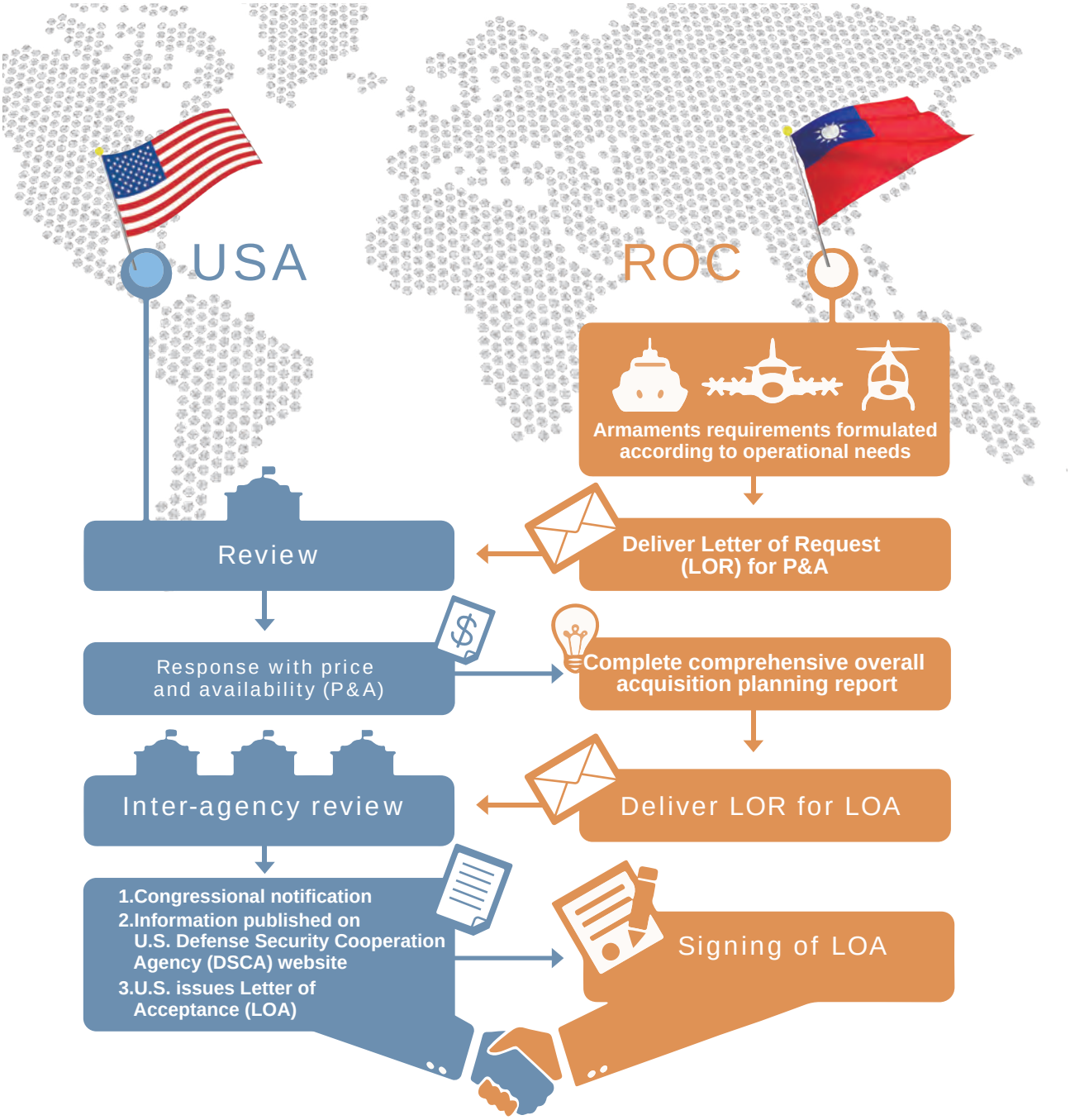
Interaction and collaboration with allied countries in security matters yield dividends in knowledge in areas including advanced military technology, force buildup concepts, warfighting experience, and education and training. This serves as reference for the MND in formulating defense strategy and strengthening readiness and preparedness in force buildup and readiness.

I . Taiwan and the United States

The basis of the bilateral relationship between Taiwan and the United States is the *Taiwan Relations Act*, under which the United States continues providing the ROC with the necessary defensive weapons systems to ensure that the ROC maintains sufficient defense capabilities. It also established channels for comprehensive military exchanges at all levels, including on-job training, exercise observations, overall capability assessment, and high-level talks and visits. There has been substantive progress made, both qualitatively and quantitatively, symbolizing the United States' concrete support for Taiwan and commitment to its security and also demonstrating stable and solid friendship between the ROC and the US military.

(1) Foreign Military Sales (FMS)

Unlike conventional profit-driven commercial transactions, the FMS programs are "government to government" sales of weapons systems and technology services and a reflection of US foreign policy. FMS to Taiwan put the emphasis on security cooperation and maintaining regional security, and are one of the utmost priorities in the Taiwan-US relationship. After taking office in June 2017, US President Trump announced 7 items of military sales to Taiwan, including follow-up technical support for the Surveillance Radar Program (SRP); a demonstration of the United States' concrete political commitment to support Taiwan and its security. Militarily, in addition to weapons acquisitions, Taiwan's defense capabilities are practically enhanced through combat training, intelligence exchanges, and logistical maintenance extended from FMS.



[The US-Taiwan Arms Sales Process]

No.	Military sale	Quantity	Use
1	AGM-88B High-speed Anti-Radiation Missiles(HARM)	48 (10 Training HARMs)	Air-to-ground missiles to elevate strike capability of the Air Force against radiation sources
2	AGM-154C Joint standoff weapon (JSOW)Missiles	56	Air-to-ground missiles to enhance the Air Force's long-range strike capability
3	MK-48 Mod 6AT heavyweight torpedo (HWT)	46	Submarine-launched torpedo to increase submarine attack capability
4	AN/SLQ-32(V23) upgrade	4 suites	To increase Taiwan's EW capability
5	MK-54 Lightweight torpedo (LWT) Conversion Kits	168	To extend torpedo service life to enhance submarine strike capability
6	SM-2 Block ⅢA Standard Missiles and Components	47 Guidance Sections 5 Target Detecting Devices	Shipborne surface-to-air missile, to increase the Navy's area air defense capabilities
7	Surveillance Radar Program (SRP) Operation and Maintenance Support	5 years	To enhance and ensure early-warning detection and recon capabilities

[US FMS to Taiwan announced on June 29, 2017]

(2) Military Exchanges

The MND engages in a variety of interactions to advance and promote joint military capabilities. These include policy exchanges, FMS project management, academic exchanges, intelligence exchanges, combat training exchanges, logistics exchanges, information communications and electronic warfare (EW) exchanges, armaments exchanges, defense assessments, and education and training.

(3) US Congressional Support

Representatives friendly to Taiwan in the United States Senate and House of Representatives have always placed great importance on Taiwan's defensive security and Taiwan-US security cooperation. Other than visiting Taiwan annually, they also propose articles and resolutions in favor of Taiwan, showing their steadfast support of the ROC during every review period for the next year's *National Defense Authorization Act* (NDAA). During periods of adjournment, the ROC Legislative Yuan's foreign affairs and national defense committees also visit the United States to meet with congressmen and women and government officials. The strong support coming from both legislative sectors for ROC national defense continues to drive an ever-closer Taiwan-US cooperation relationship.

II. Taiwan and Other Allies

In line with the needs of the government's overall diplomatic work, the MND posts military attachés to carry out military diplomacy in Central America, the Caribbean, the South Pacific, and Africa under the direction of ambassadors to our diplomatic allies. Maintaining sound relations and strong military friendship with allied countries is facilitated through intelligence exchanges, education and training, high-level military mutual visits, military medicine, military observation programs, and foreign military training in Taiwan.

In addition, military representatives are deployed to friendly countries for promoting defense exchanges; meanwhile military officers, government officials, and scholars from those countries are also invited to come to Taiwan to engage in conferences or forums on national security, intelligence, diplomacy, and Mainland affairs. The MND also invited graduates of the National Development Course, sponsored by the Ministry of Foreign Affairs, from diplomatic and friendly allies to participate in advanced courses, such as the National Development Course for Senior Officers and National Development Course for General/Flag Officers, in 2016 and 2017, respectively, to create platforms for high-level officer/official interaction, with the aim of facilitating international diplomatic and military exchanges. To date, 12 such courses have been held with 464 participants from 11 countries.

Military Exchanges to Cement Friendships

Military diplomacy forms one part of the nation's overall diplomacy and is promoted through high-level interactions, security dialogues, and humanitarian medical assistance.

Section 2 Think-Tank Exchanges

We have continued to strengthen exchanges with well-known international think-tanks through academic conferences, workshops, project collaboration, and sending research personnel to think-tanks for on-site training, to elaborate our national defense policy and expand the network of friendly connections.

I . Reciprocal Exchanges

To allow major think-tanks in the world to speak out for Taiwan and garner recognition and support for its defense security stance, 3 visits by the MND were made to think-tanks in the US, Japan, and Europe to exchange views with scholars and experts on bilateral defense strategies, military thinking, and concepts in force buildup. In addition, through Track II Exchanges, opportunities were sought for bilateral military exchanges. In 2017, another 4 visits were paid to the United States, Japan, Southeast Asia, and Europe, respectively, to broaden the scope of exchanges and share the democratic values of the ROC as well as concepts of regional security cooperation in combination with our government's New Southbound Policy, and build on existing foundations in think-tanks exchanges.

The MND invited 15 think-tanks scholars from 6 countries, namely, the United States, Japan, South Korea, India, Indonesia, and Singapore to participate in the Defense Forum on Regional Security and held discussions and view exchanges with regional countries on areas of shared interests; and held strategic forums together with think-tanks in the US with over 50 military officers and government officials attending from Taiwan. These addressed issues of national defense and security, with the aim of raising awareness of Taiwan's external defense policy and gain better knowledge of regional political and security situations, cross-straits relations, and Taiwan-US security cooperation and other issues, to form reference points for further promoting of defense security cooperation and exchanges.

II. National Defense Think-Tank

To meet challenges of the strategic environment and the requirements of government policy, the MND, referring to experiences of think-tanks in advanced countries such as the US and UK and opinions from scholars and experts, is setting up a National Institute for Defense Studies in May 2018 in accordance with *Directions for Administrative Supervision of Government-Donated Foundations* stipulated by the Executive Yuan. The mission of the think-tank will be to provide professional reference and consultation for policy making, broaden defense-relevant academic exchanges and cooperation, and promote international strategic communications and dialogue. In the future, it will conduct in-depth research regarding politics and military affairs in support of effective strategic communications with other think-tanks with an independent, objective, farsighted, and global perspective in order to facilitate sound implementation of defense policy and force buildup.

Section 3 International Linkages

Given Taiwan's difficult diplomatic situation, the MND takes pragmatic approaches with a proactive attitude, utilizing soft power to acquire international linkages and show our international vision in a bid to further the best interests of our nation and continue contributing to the international community.

I. Clean and Transparent Force Buildup

To align with the era of transparency, accountability, and clean government, the MND's Ethics Office and the Office of the Inspector General work on the principles of "working in parallel with multiple supervision" and "coordination with functional integration," to address the tasks of eliminating corruption and wrongdoing as well as maintaining order and discipline to maintain a clean and transparent image in military force buildup.

Transparency International, a non-governmental organization, is currently the only international organization specializing in fighting graft and corruption. Its 2015 Government Defense Anti-Corruption Index (GDAI), with rankings from A through F, ranked the ROC Grade B for its low levels of graft and corruption. Sharing the same ranking with the US and Singapore among over a hundred countries evaluated indicates the MND's effort towards clean government and transparency continues to gain recognition from the international community.

Band / Lower & Upper Score	Country	Percentage	Corruption risk
A (＞83.3%)	2 countries: New Zealand, UK	2%	Very low
B (66.7~83.2%)	17 countries: **ROC**, Australia, Germany, Japan, Singapore, the United States, Switzerland et al.	15%	Low
C (50.0~66.6%)	17 countries: South Korea, Argentina, France, Italy, Mexico et al.	13%	Moderate
D (33.3~49.9%)	18 countries: Ukraine, Russian Federation et al.	16%	High
E (16.7~33.2%)	33 countries: Afghanistan, the PRC et al.	28%	Very high
F (≦16.6%)	30 countries: Egypt, Iraq, Myanmar et al.	26%	Critical

[2015 Government Defense Anti-Corruption Index]

II. Midshipman Cruise Training

Midshipman cruise training to promote friendly relations is, among many others, a major task of the Armed Forces. The Navy dispatches a midshipman training squadron annually to visit our allies and friendly states as a means to acquaint cadets about to graduate with life at sea, provide professional training, as well as widen their international horizons. It also serves to validate the fleet's long-distance operational capabilities, strengthen interstate alliances and friendship, and demonstrate solidarity with citizens living abroad. It is a concrete demonstration of how national defense and diplomacy work together.

(1) Midshipman Home Training Round the Island

Home training is designed to inure students to maritime life and teach them seamanship, strengthening their fitness for duty. The training combines academic theory and practical experience to increase their vocational capabilities, to eventually qualify them as naval officers after graduation for immediate deployment to the fleet. During the home training in Taiwan, and as part of student recruitment drives, the vessels are open to public tours. The general public is invited, together with foreign officials stationed in Taiwan, where they can see firsthand the results of force buildup and readiness. An onboard outreach exhibition displays specialized items in the realms of technology, the arts, and cultural and creative products, showcasing the military's own achievements, so citizens are able to understand the ROC's determination to achieve self-reliant national defense and the concept of all-out defense, and therefore support the government's national defense policy.

(2) Midshipman Cruise Training Abroad

Most of the task forces sent abroad for midshipman training go to allied countries, where there are courtesy calls with senior officials and various patriotic and goodwill events held such as flag-raising ceremonies, vessel open-house exhibitions, outreach exhibitions, honor guard performances, military aid, and dinner functions. These events strengthen the sense of identification with the ROC of overseas compatriots and fortify their patriotism, deepening relationships with allies and manifesting the effectiveness of military diplomacy while establishing interaction models that deepen military exchanges substantively.

III.Humanitarian Assistance

To improve humanitarian assistance and disaster relief (HA/DR) capabilities in the Asia-Pacific region, county and municipal governments hold Ming-An (public safety) exercises, inviting disaster prevention specialists and NGOs from allied countries to observe. Disaster prevention and relief units from the ROC share their knowledge and experience in humanitarian assistance operating mechanisms and promote international cooperation for disaster relief. Also, during the annual International Conference on Military Education, a forum on HA/DR was held to expound to other countries the ROC's disaster relief system, capabilities of the military for rescue operations,

and experience overseas with humanitarian assistance with the aims of increasing international recognition and promoting further military exchanges and cooperation.

(1) Improving Overall Humanitarian Assistance Capabilities

To respond to the national policy on humanitarian assistance, general preparations are actively made in sea and air transport mission capabilities, so that whenever a disaster happens abroad, assistance can be promptly dispatched in the form of rescue personnel and supplies. Through mutual cooperation with various countries based on military diplomacy and drawing on new knowledge in advanced military medical technology, exchanges of medical expertise and skills training, rescue capabilities are enhanced, and opportunities for cooperation in medical assistance are broadened.

(2) Broadening International Humanitarian Assistance Exchanges

The ROC has publicly demonstrated its experience in carrying out humanitarian assistance and disaster relief through its participation in courses and programs on international humanitarianism and observing disaster relief drills in allied countries. This has also shown its strong political will to become both an international humanitarian assistance provider and regional peace facilitator and further promote exchanges and cooperation with neighboring countries. The ROC's visibility in the international community has thus been enhanced.

Allies and countries in the Asia-Pacific region, together with international non-governmental aid organizations are invited to Taiwan to observe disaster relief exercises, participate in international military education conferences, and visit the ROC's emergency, fire, and search-and-rescue units in a bid to demonstrate the ROC's overall capabilities in disaster relief, share experiences and learn from each other, and promote multilateral joint disaster relief exercises, with the goal of eventually establishing a cooperative mechanism for international humanitarian assistance.

Holding an international academic conference on clean government

Honing seamanship during midshipman training aboard

Advancing humanitarian assistance

Joint anti-terrorism activities

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1.Adam Földes, Advisor with Transparency International's headquarters in Berlin, Germany, together with Transparency International New Zealand CEO Janine McGruddy, were invited in 2017 to participate in an MND clean government forum.

2.Midshipman cruise training validates long-distance operational capabilities, strengthens relations with allied countries and inspires expatriates; cadets also learn to adapt to and endure the sea.

3.Active preparation for becoming a provider of humanitarian assistance internationally.

4.5.Absorbing the experience of other countries fighting terrorism, and increasing the anti-terrorism capabilities of the special forces.

IV. Cooperation in Anti-Terrorism

The anti-terrorism capabilities of the special forces of the ROC Armed Forces have been improved by absorbing real combat experiences through anti-terrorism training provided by partners and friendly nations. Training facilities have been established, such as the "Limited-space Combat Shooting Range," "Virtual Environment Classrooms," and an "Anti-Terrorism Training Center." Combat scenarios for anti-terrorism training are simulated based on real objects, situations and operations, improving the effectiveness of special forces. Furthermore, personnel also participate in international conferences on subjects such as anti-terrorism or anti-piracy, where practical experience is shared, which helps enhance the special operations capability in the area of anti-terrorism.

國防

Part 5 The Honor of the Armed Forces

According to the responsibility to defend the country and protect the people given by the *Constitution*, the Armed Forces have written a glorious and heroic history with lives and blood, in doing so laying down the foundation for the ROC to freely develop and consolidating peace across the Taiwan Strait. Inheriting this glorious history, today's Armed Forces actively promote force buildup and combat readiness, and guided by the spirit of "military-civilian as one," implement all-out defense and operations to protect the people. Also, to stimulate the sense of honor and mission of service personnel and fully bring into play the effectiveness of national defense human resources, we have continued to refine talent training and military education and actively promoted guidance and care for retired or discharged military personnel, so that service personnel can quickly adapt to civilian life after leaving the military and thus continue to contribute to society.

Chapter 9 The Military and People United as One

Modern national defense requires the support and cooperation of all the people to be able to achieve the greatest strength. To put the idea of all-out defense into practice, the Armed Forces continue to enhance all-out defense education and military-civilian interaction, as well as hold base open days and Armed Forces history exhibitions, with the aim of forming a national consensus on all-out defense. Facing the ever-increasing threat from non-traditional security threats, guided by the belief "suffer what the people suffer", the Armed Forces are always quickly on the scene when disaster strikes, caring for and assisting the people, effectively calming popular sentiment and stabilizing social order.

Section 1 All-out Defense

Article 3 of the *National Defense Act* stipulates that the national defense of the ROC is "all-out defense." In accordance with the *All-out Defense Education Act*, the MND actively holds various events to increase military-civilian interaction and, through Facebook, interacts with the public and collects suggestions about military affairs from the people. At present, the Military Spokesman Facebook page has over 300,000 fans. The MND has invited loyal fans of this Facebook page to take part in national defense to put the idea of all-out defense into practice.

I . All-out Defense Education

Since the *All-out Defense Education Act* came into effect in February 2005, the MND has actively integrated the resources of various ministries, local government, schools and society for "school education", "social education", "on-the-job training at governmental agencies (institutions)" and "protection, promotion, and education of national defense relics". Through classes, academic discussions and sorting and re-using of national defense artifacts, holding diverse events and designing innovative promotional materials, the MND has propagated five educational themes, namely, international situation, national defense policy, all-out defense, defense mobilization and defense technology, in order to plant the belief of all-out defense deeply in people's minds and arouse the public's national defense awareness.

(1) Diverse Activities to Cultivate School Education

The Ministry of Education (MOE) is the competent authority for all-out defense school education. As well as holding various educational courses and events in line with the MOE's annual planning, the MND also proactively holds various events to strengthen the understanding of and support for national defense affairs of youth.

1. Going onto campus: an exchange channel between students and military schools and forces is provided, and a variety of on-campus activities that involve all-out defense

education and recruitment system explanation are planned to increase the acceptance of and support for national defense affairs of students. The aims of the activities are to attract quality national defense talent and instill in participating students the concept of all-out defense.

2. Shooting observation: shooting observation sessions are held for local community groups, social groups and schools so that adults and students have a chance to experience national defense affairs in person and view soldiers shooting in real life.
3. Winter and summer battle camps: using diverse teaching methods and a learning-while-having-fun approach, battle camps, science experience camps, news and media study camps, military band and military ceremony experience camps are held at military training grounds and facilities. The students are allowed to experience national defense affairs through realistic training, actual exercises and visits.
4. Spratly Islands study camps:Universities were invited to recommended masters and PhD students to accompany a Navy patrol to the Spratly Islands for study camps. During the voyage, the students had a chance to operate the vessel. A visit was made

Camp Type	Camp Name
Combat Camp	Kinmen, Matsu, Penghu, Aerospace, Iron Defense
Tour Camp	Navy Ships, Air Force (Tainan, Taitung, Taichung, Chiayi, Hualian, Pingtung, Hsinchu), Air Force Weather Wing
Experience Camp	Maritime Life, Aerospace Technology, Science, Military Ceremony, Battlefield Pressure Resistance, Republic of China Air Force Academy, Military Band
Study Camp	News and Media, Defense Science Fundamental-Practice and Study Camp, Medical Care, Art, Spratly Islands
Challenge Camp	Amphibious Warrior, Iron Defense
Shooting Camp	Chenggongling, Huilan, Shijian, Xunlei
Special Combat Camp	Special Airborne Unit
National Defense Experience Tour	Army Aviation and Special Forces Training Center, Huatung Defense Command, Suao Naval Base, Zuoying Naval Base Museum, Air Force 3rd Wing(Taichung), Aviation Education Exhibition Hall, Air Force Fifth Wing(Hualien), Forensic Science Center

[Overview of Holding Camps and National Defense Experience Tour in 2016 and 2017]

Opening camps lets students learn more about the Armed Forces

Visits to navy ships increase young peoples' understanding of the Navy

Spratly Islands study camps introduce participants to a far-flung part of national land

The National Defense Tour seeks support from students for the Armed Forces

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Through opening of bases, Spratly Islands study camps, utilizing national defense artifacts, and holding a variety of activities, the MND has increased the public's understanding of and support for national defense affairs, arousing patriotic consciousness and allowing the idea of all-out defense to take root in people's minds.

to Taiping Island Well No. 5. Through the camps, the participants were shown the determination of the Armed Forces to defend ROC sovereignty in the South China Sea.

5. National Defense Experience Tour: Armed Forces camps are opened to visits by student groups on an application basis, giving them a chance to view the weapons and equipment currently in service. Guided by camp interpreters, national defense becomes part of the students' lives.
6. National High School Marching Band Competition: It displays the youthful vitality of students and stimulates creativity, team spirit and self-realization, arousing student support for national defense and a desire to join the military.

(2) Nurturing All-out Defense Teachers

To implement the *Guidelines for the Implementation of All-out Defense Education by Government Agencies (Institutions)*, the MND accepts applications from central government

All-citizen Support and Participation

Modern national defense must build a national consensus and gain the support of all citizens to achieve the greatest strength.

ministries and local governments and selects professional teachers from National Defense University to give related lectures. From 2016 to November 2017, 362 in-service education sessions were held, with over 40,200 participants. Also, in coordination with the Executive Yuan's e-learning website (https://elearn.hrd.gov.tw/mooc/index.php), an All-out Defense Education Workshop has been established to deepen the public's understanding of the idea of all-out defense.

(3) Promoting National Defense Understanding

The MND held 6 base-opening events, including one at the ROC Military Academy, with over 550,000 visitors received. Also, an all-out defense online quiz with prizes for the right answers was held, attracting over 1.4 million participants, and eligibility for the Armed Forces Literature and Arts Gold Award was also expanded to members of the public, with the aim of planting the idea of all-out defense deeply in people's minds.

(4) Promoting Historic Sites

To promote the protection of national defense artifacts, in line the government's tourism policy and in coordination with local governments, the MND provides spots that have national defense artifact preservation value for inclusion in travel planning. The "Introducing National Defense Relics and Military Sites in Various Counties and Cities" film series has been posted on the All-out Defense Education website, which also provides local tourist information.

(5) Rewarding Outstanding Contribution

In accordance with the regulations of the *All-out Defense Education Act*, the all-out defense education execution results of city/county governments are evaluated and units with outstanding performance are rewarded. Also, the All-out Defense Education Outstanding Contribution Award is given to commend various quarters for all-out defense education excellence.

II. Military-civilian Interaction

The relationship between the military and civilians is vital for the promotion of readiness training and affects the force buildup and comprehensive military power of the Armed Forces. To promote military-civilian interaction, the Armed Forces have established channels for communication and negotiation with local government and elected bodies and integrated local resources to implement a military-civilian interaction mechanism that is dedicated to executing related civil activities, promoting community relations work, caring for the socially disadvantaged and fulfilling social responsibility. The overall aim is to present the image of the Armed Forces serving society and caring for the people.

In the new digital era, the Armed Forces keep abreast of online information at all times and take appropriate action, communicating with the media to give the public a correct understanding

of the facts. Reports on positive issues such as service personnel being "good people who do good deeds", disaster prevention and relief and readiness training are issued at suitable times to expand the propaganda front and win the public's support and trust. Also, the media is guided to produce positive reports through holding press conferences, media visits, online communities and other dissemination channels.

The MND produces Armed Forces image promotion advertisements and mini films. Performances by the Tri-Service Honor Guards and displays of combat capability by readiness forces at national ceremonies, sports competitions, battle commemoration events and other suitable occasions show the military's strong capability.

III.Improving the Image of the Armed Forces

The basic values of military service personnel are defending the country and protecting the people. The people expect service personnel to charge and break through enemy lines and defeat the enemy in the event of war, therefore service personnel formative education places special emphasis on obedience and sacrifice. The core beliefs of military personnel are "country, duty, and honor". When the country is in difficulty, the ROC military will not hesitate, even if it means injury or death.

Looking at the war history of the Armed Forces, numerous martyrs gave themselves selflessly to the country. "Heroes, facing increasing world tension, gathered together during turbulent times and sworn to give their lives for their country" is the best explanation of the "soldier's soul." From the moment of joining the Armed Forces, soldiers have to be prepared to go into battle in service of the country. The words inscribed over the entrance to the ROC Military Academy "If you are afraid of death, do not enter, if you desire promotion and wealth, pick another career" are not just words of encouragement, they also reflect the danger of death that being a soldier involves.

Through the 6 direct presidential elections and 3 changes in ruling party the ROC has seen, the Armed Forces have always faithfully fulfilled the role bestowed by the Constitution, maintaining neutrality and becoming the guardian of democratic transformation. In the 21st century, in addition to the traditional fitness requirements, soldiers must possess new skill sets to cope with the development of technology and new forms of warfare. Different specialisms such as cyber-attack-defense, system integration, medical healthcare, intelligence analysis and strategic communication mean that the Armed Forces now have a new look, characterized by a diversity of talent.

As well as diligently patrolling sea and sky and protecting the homeland, the Armed Forces make every effort in the area of participation in disaster rescue. Taiwan is located in a high-risk area for natural disasters. The Armed Forces always rush to disaster areas to help. The image of the military suffering what the people suffer, caring for and helping people has been deeply embedded in the public consciousness after earthquakes, typhoons and floods on many occasions.

The occupation of the soldier is characterized by limited freedom, high-risk, 24-hour a day

standby and absence from home. Complaint, understanding and acceptance sum up the mental journey that almost all military families undergo.

The Armed Forces are a microcosm of society, made up of people from all different walks of life, making it difficult to avoid mistakes. We expect high standards to be met by military personnel and accept encouragement and suggestions from all quarters. When problems are encountered, they should be faced up to honestly and corrected. However, exaggeratedly negative reporting often has a detrimental effect on morale. We hope that a mature, rational society can give service personnel the respect they deserve and, by doing so, raise military morale and attract outstanding talent to join the Armed Forces.

The honor of the Armed Forces is not only the duty of officers and other ranks, but also requires the support of all citizens from the heart. The performance of the military and the encouragement of society complement each other, and both are indispensable. With harmonious military-civilian relations, when the country is in need the military will be even more willing to give their all for the people without hesitation.

IV. Promoting Armed Forces History

To pass on and commend the glorious past deeds of the Armed Forces in defending the country and protecting the people and increase the military literacy of officers and other ranks, the MND continues to compile historical collections and translate foreign military publications. To commemorate the arduous process of Armed Forces force buildup and the development of each force, special exhibitions are staged at the Armed Force Museum combined with promotion of national defense policies and ideas. Also, to highlight the contribution of the military in terms of "safeguarding our nation and people" and display the past deeds of the ROC Armed Forces in resisting foreign aggression, it is planned to build the national military museum at Dazhi District of Taipei City. The museum will properly preserve, study and exhibit Armed Forces historical relics and documents and, by doing so, carry out the mission of all-out defense education.

(1) Military Historical Periodicals Compilation

In 2016 and 2017, the books *Monuments of Bravely Fallen Soldiers of ROC Armed Forces*, *The 2nd Army of the National Revolutionary Army* and *Military History Review* were published. Non-periodical collections for specific historical events and oral history will continue to be published to highlight the lofty aspirations and moral fortitude of the worthy predecessors of today's service personnel, promote military ethics and encourage the officers and other ranks of today's Armed Forces to emulate their predecessors and train diligently.

(2) Revitalization of Historical Relics and Documents

Historical relics and documents are witnesses to the development of history and culture and also part of overall national culture. To promote the historical legacy of the glorious struggle of the Armed Forces, the MND continues to collect and sort historical relics and documents from each period of the Armed Forces and, through themed exhibitions,

1 2 3 To promote the glorious history of struggle of the Armed Forces, the course of the establishment of the Armed Forces and the evolution of the MND, are faithfully displayed through themed exhibitions and museums.

faithfully displays the course of their force buildup and the development of the MND.

1. Armed Forces Museum Exhibitions

Exhibitions introduce historical relics and history from the founding of Whampoa Military Academy, the Eastern Expedition, Northern Expedition, War of Resistance against Japan, Anti-Communist Counter-Insurgency War, and Taiwan Strait Crises, and display the force buildup and readiness situation at present. Combining national defense specialism and military characteristics, “The Facts of the Anti-Japan Resistance Exhibition” was held at Chiang Kai-shek Memorial Hall jointly with the Ministry of Culture. In addition, the museum held three special exhibitions: “Loyalty, Legacy, Glory, Honor-Armed Forces Reserve Command”, “The 90th Anniversary of the Northern Expedition”, “Historical Development of the Navy Submarine Force”, and “Military Media of the Ministry of

National Defense-The Vigorous Youth".

2. The History Exhibition Hall of MND, ROC

To fully display the glorious history of the MND and its role in and contribution to national defense affairs, the establishment of The History Exhibition Hall of MND was completed on September 19, 2016. The five main exhibition areas are: flag display, organizational evolution, former Defense Ministers and Chiefs of the General Staff, major policies, and international exchange, each with multi-media displays. There is also a multi-media showing room that showcases related films. The Hall is open to colleagues from the MND as well as receiving guest groups from Taiwan and overseas to show the honor and glory of the nation.

3. National Defense Art Museum

Completed on January 6, 2017, the museum is the first modern art museum of the Armed Forces and has the important responsibility of promoting and preserving their major art assets. The museum houses several hundred important works of art spanning calligraphy, Chinese painting, oil painting, water color painting, comics and sculpture, including the work of masters such as Zhang Da-qian, Yu You-ren, Wang Wang-sun, Shao You-xuan, Lee Qi-mao, Chen Dan-cheng and Ou Hua-nian. Exhibitions of works from the collection and themed exhibitions are regularly held, promoting the "Armed Forces New Art and Culture Movement" by connecting martial arts and literature and art.

4. Zuoying Naval Base Museum

The museum opened on May 16, 2016, the aim to highlight the Navy's defense of the nation and protection of the people and the moving stories of how the worthy predecessors of today's sailors sailed the high seas to protect the country's sea borders. Combining precious artifacts, historical files and multimedia and using moving, static and digitized display methods, touching stories of the base and the dependents' villages are told.

5. Aviation Education Exhibition Hall

Completed on September 9, 2015, the Hall records the history of the Air Force's defense of the nation. It preserves aircraft and equipment used by the Air Force over the years and, in a first for a domestic museum, aircraft are exhibited by suspension and installation display. The Aviation Education Area tells the story of flight from the invention of the airplane to the space age; the Educational Display and Education Promotion Area has an engine area, weapons and equipment area and simulator area, showing the course of and results of the Air Force's force buildup and readiness preparations.

6. ROC Air Force Museum

This museum opened in 1987. It promotes the Air Force's loyalty and courage, display's related artifacts and implements the all-out defense policy. To allow the

precious historical artifacts to be better preserved and to upgrade the exhibition space, the museum was renovated and reopened on August 11, 2017. Displaying over 20,000 photographs, documents and models, a modern and high-tech exhibition method is used to show the Air Force's historical evolution and mission, promote its history and sustainably pass on the Jianqiao spirit.

(3) Planning of the National Military Museum

The aim of establishing the museum is to promote soldiers' martial ethics and all-out defense. Combining history, military, science, education, culture and art thinking, the museum's core values will be "passing on history, promoting martial ethics, molding the military soul, sustainable operation" and it will effectively bring into play the display, education, collection and research functions of a modern military museum. In 2016, the display design requirement planning case was handled, an important basis for the design stage. In 2017, entrusted planning and design and supervision tender operations were completed, and detailed design is now being undertaken. In the future, the national military museum will continue to collect and sort historical relics and documents with collection value, refine the design of processes and facilities and complete construction and operation planning to allow construction preparation work to be carried out on time, to the required quality and within budget.

V. Translation of Foreign Military Publications

(1) Foreign Military Publications

Selected books in nine categories, namely national security, global and regional security, military theory, revolution in military affairs, military operations, leadership, political and strategy, public opinion and media, crisis handling and risk management are translated to obtain information on the latest military development and experience from overseas to increase the military knowledge of service personnel and keep abreast of military evolution. The aim is to enlighten service personnel by introducing military concepts in support of Armed Forces force buildup and readiness objectives.

(2) Translation of Foreign Periodicals

The *National Defense Digest* is published monthly, containing forward-looking articles from overseas, the aim being to enhance the knowledge and skills of military personnel and enrich the military literacy and international view of cadres. Combining national defense new knowledge and current affairs, the categories of article are: Special Topic, Strategy and International Relations, Military Operations, Military Affairs, PLA Development, Regional Security, Military History and Advanced Weapons. As well as obtaining materials from more than 10 foreign language military periodicals, the sources of articles are being continually expanded with the aim of attracting readers from the ranks of officers, enlisted personnel and the general public.

Glorious History
Ever-lasting Noble Spirit

The History Exhibition Hall of the MND displays the glorious history of the MND, highlighting its role in and contribution to national defense affairs.

第3任部長
徐永昌
■生卒年：清光緒13年12月15日至民國48年7月12日
■任期：民國37年12月22日至民國38年4月30日
■籍貫：山西嵊縣
■學歷：陸軍大學4期
■經歷：山西省政府主席、軍事委員會軍令部部長
第1任部長
白崇禧
■生卒年：清光緒19年3月18日至民國55年12月2日
■任期：民國35年5月23日至民國37年6月2日
■籍貫：廣西桂林
■學歷：保定軍校3期
■經歷：軍事委員會軍訓部部長、桂林行營主任
0016
第5任部長
閻錫山
■生卒年：清光緒9年10月8日至民國49年7月22日
■任期：民國38年6月12日至民國39年1月30日
■籍貫：山西五臺
■學歷：日本陸軍士官學校6期
■經歷：山西省政府主席、太原綏靖公署主任
(備註：行政院院長兼任國防部部長)
第2任及第4任部長
何應欽
■生卒年：清光緒16年4月2日至民國76年10月21日
■第2任任期：民國37年6月3日至民國37年12月21日
■第4任任期：民國38年5月1日至民國38年6月11日
■籍貫：貴州興義
■學歷：日本陸軍士官學校11期
■經歷：軍事委員會軍政部部長、同盟國中國戰區陸軍總司令
0018

榮耀印記

Coastal Border Defense and Stamp of Honor

Using digital display methods and dynamically and statically, Zuoying Naval Base Museum tells the moving history of the Navy's defense of the nation's sea borders.

Military Publications

Compiled Military Publications

Monuments of Bravely Fallen Soldiers of ROC Armed Forces

The inscriptions on the monuments, photographs and historical materials from local governments are used to record the glorious sacrifice of the service members of the Armed Forces in Taiwan and on Penghu, Kinmen and Matsu. The achievements of the worthy predecessors of today's Armed Forces personnel won with their blood and tears are recorded in full.

Military History Review

The book combines military theory and historical research, the content of Military History Review extends the academic field of military history, aiming to allow the people to understand the evolution and development of the Armed Forces from various perspectives.

The 2nd Army of National Revolutionary Army

The book describes the organizational evolution, important personnel, deployment area changes and battles of the 2nd Army of National Revolutionary Army during the time periods of the Eastern Expedition, Northern Expedition, the War of Resistance against Japan, and Anti-Communist Counter-Insurgency War.

Translating Foreign Military Publications

Transition Scenarios: China and the United States in the Twenty-First Century

The book defines the predictive factors for transition of power, and examines various possible scenarios for the development of US-PRC relations; each scenario is placed in a certain theoretical framework.

Strategy in Asia: The Past, Present, and Future of Regional Security

The book describes the past, present and future political and military relations between the countries of the Asia-Pacific region and with the US.

Governing the Use-of-Force in International Relations: The Post-9/11 US Challenge on International Law

The book examines, during the George W. Bush and Obama administration, the relaxation of the restrictions on the interpretation of unilateral use of force, the increased flexibility of unilateral use of force in response to threat, and redefinition of the rules on war power in the UN Charter.

Fire on the Water: China, America, and the Future of the Pacific

The book explores a better Asia-Pacific strategy for the US, assessing risk, war, prosperity and development in the region.

China's Coming War with Asia

This book has astute observation and in-depth but easy to understand analysis, it exposes the myth of China's peaceful development and puts forward a conclusion that foreshadows tension in Asia.

Bleeding Talents: How the US Military Mismanages Great Leaders and Why It's Time for a Revolution

This book looks back at the course of the US move from conscription to all-volunteer recruitment, examining the root of personnel problems in the US military today and, by analyzing related problems, puts forward innovative human resources management methods.

China's Strategic Interests in the South China Sea: Power and Resources

The book analyzes the PRC's strategic interests in the South China Sea, its relationships with neighboring countries and explains the effect of its power projection on the economy and security of the US.

Cybersecurity: Protecting Critical Infrastructures from Cyber Attack and Cyber Warfare

This book analyzes national critical infrastructure's fragility and main cyber-attack weapons from the angle of the historical background of computer viruses and malware. It concludes with a call to nurture the next generation's ability to cope with the challenge of cyber security transition.

The Cosmopolitan Military: Armed Forces and Human Security in the 21st Century

This book presents a partial interpretation of the War on Terror's moral landscape and predicts the Cosmopolitan Military.

Section 2 Operations to Protect Citizens

To protect the lives and property of citizens and national maritime rights and interests, the Armed Forces continue to enhance their capabilities in disaster prevention and relief, counter-terrorism support, emergency rescue, cloud seeding and medical service, and protect our fishery rights and the security of SLOCs in close cooperation with the Coast Guard.

I . Disaster Prevention and Relief

Taiwan is exposed to typhoons, torrential rain, earthquakes, gas explosions, swine flu and other threats. In line with their statutory responsibility to assist with disaster prevention and relief, the Armed Forces, in support of local governments, carry out disaster prevention and relief missions. In peacetime, the military keeps abreast of high-risk areas and availability of disaster rescue resources. When there is a disaster warning, various disaster prevention efforts are put in place following the principle of "forward deployment, force pre-positioning, and timely disaster prevention and relief" and the spirit of "disaster relief is warfare." When a disaster happens without warning, the MND commands all forces to support the local government, rapidly getting involved in the rescue effort and showing the effectiveness of the Armed Forces and ability to carry out disaster relief in peacetime and fight in wartime.

(1) Disaster Relief Force Preparedness

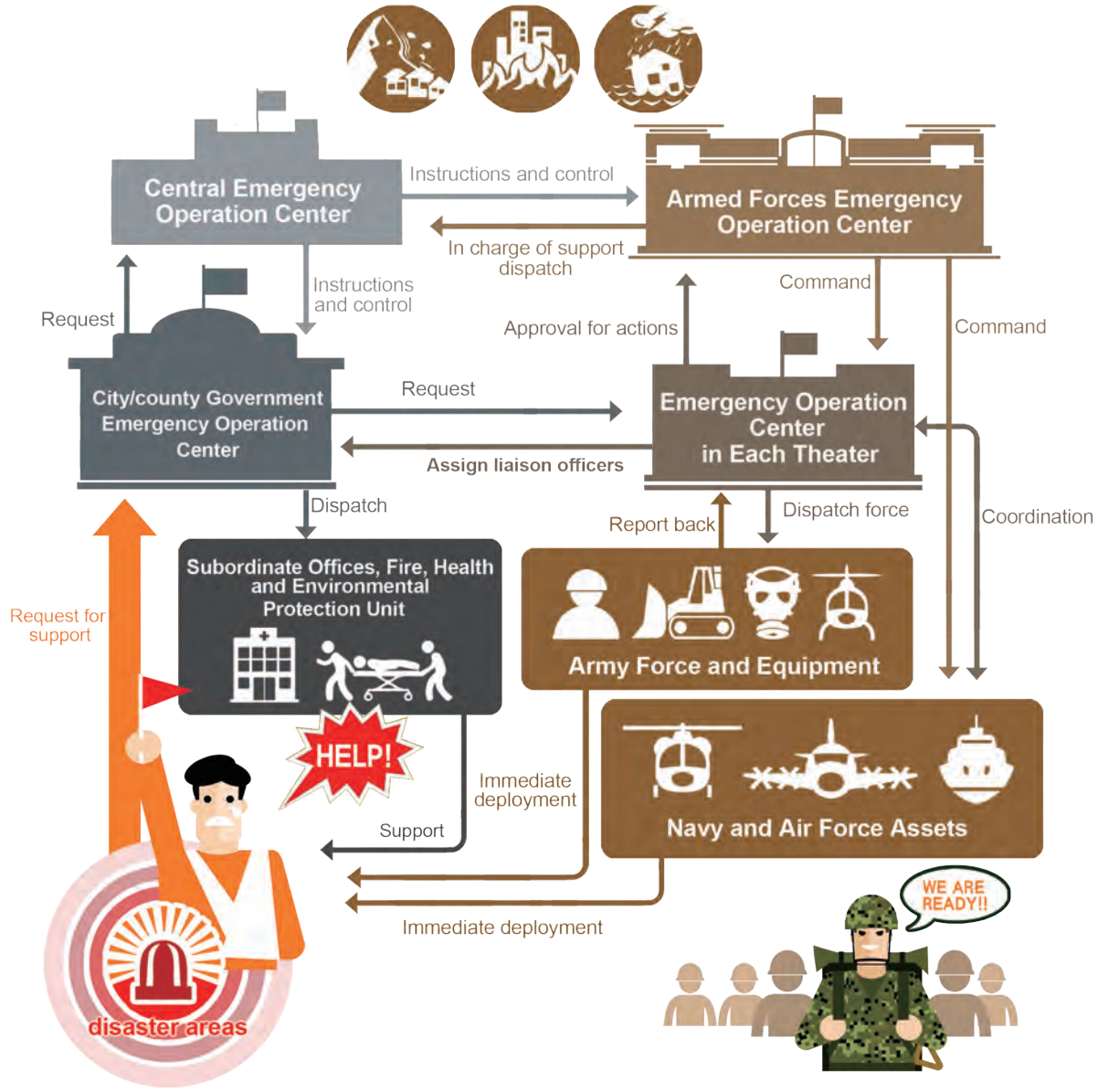
The Armed Forces deploy forces and equipment to places susceptible to mud/landslides or flooding 24 hours before a typhoon strikes. A total of 2,300 personnel are deployed to 121 locations, with 23 in northern Taiwan, 23 in central Taiwan, 45 in southern Taiwan and 30 in eastern Taiwan, while over 33,000 troops stand fast in each theater.

(2) Medical Team Preparedness

Military hospitals throughout the country and medical corps have organized 154 medical teams for peacetime preparedness, numbering 512 service personnel, and completed preparations of relevant supplies in order to increase emergency rescue capability in relief events. When a disaster strikes, they are able to enter the disaster area immediately, providing medical assistance to victims and arranging evacuation.

(3) Mental Counseling in Relief Efforts

The Armed Forces have a total of 214 mental health centers at all levels. In the event of a major disaster, each theater can immediately integrate all local mental counselors and establish a Major Disaster Mental Health Center. Together with civic social welfare and charity groups, mental counseling and care are provided to service personnel conducting relief efforts and people affected by the disaster.



[Diagram of Armed Forces Emergency Operation Mechanism]

(4) Disaster Relief Resources Preparedness

In peacetime, the Armed Forces have a total 1,700 pieces of relief equipment for preparedness, including 2,000 wheeled vehicles, 240 armored vehicles, 30 aircraft, 80 inflatable boats, along with light and heavy construction and search and rescue machines and tools, such as multi-function combat engineering vehicles, excavators, shovel loaders, life detectors and others available for relief efforts when needed. In the event of a major disaster, this equipment can be immediately employed for rescue work. In addition, in response to ordinary or compound disasters, each theater has shelters able to

To Share the Suffering of People, Protect and Help Them

Whenever a disaster strikes, the Armed Forces immediately join in the relief effort regardless of the hardship, and are always present where people need them the most; the impression of the military protecting and helping them is deeply imprinted in people's minds.

accommodate a total of 35,000 people in 80 different locations and provide shelter to the people affected when a request is made by the city/county government.

(5) Instructors Training for Disaster Prevention and Relief

Officers, NCOs, and the enlisted with experience in disaster prevention and relief are selected for the Armed Forces Instructor Comprehensive Training Course for Large-scale Disasters at the National Fire Agency Training Center in Zhushan, Nantou County to hone the disaster prevention and relief skills of the Armed Forces as a whole. From 2010 through 2016, 1,568 service personnel completed this course, with another 120 completing the course in 2017.

(6) Disaster Prevention and Relief Exercises

In 2016 and 2017, 22 city and county governments jointly held disaster prevention and relief exercises prior to the flood season, combining all-out defense mobilization exercises in accordance with the Executive Yuan's planning. The Armed Forces dispatched over 4,000 service personnel, 10 helicopters and over 1,600 vehicles to take part in the exercises to enhance tacit understanding between the military and local government in the area of disaster prevention and relief. Also, the MND supported the Nuclear Safety Drills No. 22 and 23 organized by the Atomic Energy Council of the Executive Yuan. In the scenario of compound disasters and threats caused by an earthquake-triggered nuclear incident, over 19,000 people were involved including specialized military personnel, police, fire departments, medical and government agency teams, members of the public and students. Through war games and field exercises, the

Theater of Operations (TO)		3rd TO (North)	5th TO (Central)	4th TO (South)	2nd TO (East)	1st TO (Penghu)	Kinmen Defense Command (Kinmen)	Matsu Defense Command (Matsu)	Total
Pre-positioned force	**Location** (disaster prevention area)	Taipei, Yilan, Longtan, Wufeng Hsinchu	Miaoli-Houli, Xinshe, Nantou, Changhua-Yunlin, Chiayi	Tainan,Xinhua, Gangshan, Qishan, Pingtung, Hengchun-Fenggang	Hualien and Taitung				2,310 personnel in 121 locations in 18 areas
	Number of people	532	476	853	449				
Medical groups	**Armed Forces hospital medicals groups**	54 people in 9 groups	12 people in 2 groups	36 people in 6 groups	12 people in 2 groups	12 people in 2 groups			525 people in 154 groups
	Medical Corps medical groups	117 people in 39 groups	78 people in 26 groups	87 people in 29 groups	18 people in 6 groups	24 people in 8 groups	27 people in 9 groups	48 people in 16 groups	

[Statistics of Armed Forces Disaster Prevention and Relief Preparedness]

[Statistics of the Armed Forces Conducting Disaster Prevention and Relief Efforts in 2016 and 2017]

response mechanisms of the emergency operation centers at all levels and task forces were tempered to familiarize related personnel with the decision-making process and strengthen their capabilities in dealing with such crises.

(7) Assisting with Disaster Prevention and Relief

Under the direction of the Central Emergency Operation Center of the Executive Yuan, the MND, in coordination with all emergency response mechanisms in place, simultaneously sets up emergency operation centers at all levels that operate 24 hours a day, so that manpower, transportation, equipment, and other resources can be effectively utilized in response to different natural disasters and protect the lives and property of the people. From 2016 through November 2017, the Armed Forces engaged in 13 major relief missions, i.e., cold damage, the February-6th Tainan earthquake, avian flu outbreak, the June-1st and June-13th floods, typhoons Nepartak, Meranti, Malakas, Megi, Nesat and Haitang, Hato, and Talim; and 86 mountain and sea evacuations and emergency rescues were carried out. The Armed Forces were able to effectively deal with the aftermath of natural disasters and complete their tasks, reducing loss of life and property and significantly mitigating the impact of disasters.

II . Counter Terrorism Support

Following the National Security Council's and Executive Yuan's policy guidance of "taking terrorism seriously and responding cautiously, remaining alert even in peacetime and preparing ourselves with a low profile," the nation is strengthening counter-terrorism response capability and enhancing early warning and contingency handling mechanisms for political and economic critical infrastructure and military base protection to ensure overall national security.

In line with our capabilities and nature of terrorist attacks, Armed Forces counter-terrorism units such as special service companies from the Military Police, Marine Corps, and Army stand fast for anti-kidnapping, anti-sabotage, anti-hijacking, and other missions in all areas nationwide. Also, domestic terrorist attack scenarios are designed in accordance with observed patterns of transnational terrorism, and corresponding response mechanism and reinforcement preparedness are gradually improved; in compliance with the government's overall counter terrorism policy and building on existing counter-terrorism combat capability, intelligence exchanges, equipment preparations, specialized training and other concrete actions shall continue to be enhanced to form strong counter-terrorism capabilities and ensure overall national security.

The 2017 Taipei Universiade was the highest level and largest scale international sporting event held in the ROC's history, with over 10,000 athletes and team staff from 131 countries and regions taking part. To ensure the games went smoothly, the government committed related resources to security work. During the Universiade period, nearly 1,000 men and women in uniform from the 3rd TO, the Military Police Command, and other units were also engaged in support of security operations.

They were mainly responsible for perimeter security and assisted with maintaining security during the opening and closing ceremonies. To maintain games security, the entire security team also utilized various types of high-tech equipment, including the NCSIST-provided IED radio frequency interference system that can detect and jam roadside bombs, and an interception system that can prevent drone attacks. Various Armed Forces units collaborated to accomplish their security missions during the Universiade.

III.Backing up Fisheries Protection

Following the government policy of Navy escorts the Coast Guard (CG) as CG provides protection to our legal fishery practices, the Armed Forces, in coordination with the CG, conduct regular joint fisheries protection missions in the ROC's exclusive economic zone, using various Navy and Air Force assets to show the government's ability and determination to protect fishing rights and assert sovereignty.

(1) With an understanding of the areas where fishing boats congregate during high fishing seasons in waters around Taiwan and in coordination with the CG's fishery protection force, the military deploys its vessels in an adaptive manner to allow routine fishery protection patrols to be conducted.

(2) Communications mechanisms, information sharing, joint exercises on fisheries protection, and regular exchanges and interactions between the military and CG are held to increase tacit understanding as the two sides fulfill their duties.

(3) Overall, combat air patrols were conducted with more than 2,220 sorties, along with 1,820 maritime patrols by Navy vessels from 2016 to November 2017. Together, the Air Force and Navy also engaged in joint ISR missions and combat readiness drills other than routine joint fisheries protection missions with the CG.

(4)In August and November 2016 and March 2017, the Armed Forces assisted the CG in carrying out drills, i.e., Lian An Fisheries Protection, Nan Yuan No. 1 and Hai An No. 9 in southern Taiwan, Taiping Island (in the Spratly Islands) and Taiwan's northern waters, respectively. The exercises displayed the government's determination and efforts with regard to protecting the ROC's maritime rights, humanitarian assistance, counter terrorism and fisheries protection.

IV. Cloud Seeding

Taiwan's main rainfall comes in the rain period during spring, monsoon season, and typhoon season. With the idea of "share the suffering of people" deep in mind, the Armed Forces, in cooperation with the Water Resources Agency (WRA) of the Ministry of Economic Affairs (MOEA), carry out cloud seeding missions whenever a drought hits. Overall, 15 sorties (including rehearsals), 299 service personnel and 90 vehicles in different types were involved in the missions from 2016 to November 2017; the MND accomplished the mission bestowed by the Disaster Response Team within WRA each time and will continue to make such efforts to help ease droughts.

V. Emergency Lift

When private transportation operators are overwhelmed in workload due to bad weather or major national holidays, the Armed Forces, in coordination with the Ministry of Transport and Communications and under the precondition that regular missions are unaffected, will dispatch military aircraft to help lift people from outlying islands. Over 5,000 people were lifted by 100 C-130 transport flights from 2016 to November 2017 and returned home in a timely way, which once again demonstrated the exemplary Armed Forces tradition of protecting and helping the people.

VI. Medical Service

The Armed Forces medical system can be divided into "base health services" and "regional medical care" and operates under the principle of "getting treatment in proximity before medical evacuation if necessary." Base health services promote prevention work, such as vaccination and other health care, and also carry out heat injury prevention, smoking hazard and betel nut prevention education, urine screening and self-and mutual rescue training, as well as removal of and education on infectious disease breeding sources in coordination with the government efforts.

In regional medical care, each TO is assigned with a medical area of responsibility and has its own Armed Forces hospitals and medical centers that are responsible for providing outpatient, emergency and inpatient medical services to active members. Those hospitals also provide citizens with the same services in line with national medical care policy.

Disaster relief efforts

Cloud seeding

Medical evacuation

Emergency lift for outlying island

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The Armed Forces assist with disaster prevention and relief efforts, cloud seeding, medical evacuation and other operations, as well as work together with the CG to carry out regular fisheries protection missions as a way to show the effectiveness of the Armed Forces and the ability to carry out disaster relief in peacetime and fight in wartime.

(1) Integrated Emergency Rescue Network

To allow an effective response in an emergency medical situation, we are actively nurturing emergency medical technicians (EMTs) to increase the capacity of company-level personnel in emergency treatment before quick evacuation in order to enable the personnel injured during operations to quickly receive proper treatment before moving to nearby hospitals. This serves as a means to effectively support the regional medical responsibility system.

The Health Services Training Center of the National Defense Medical Center together with Armed Forces hospitals organizes EMT training and advanced courses in different areas. As of October, 2017, the number of qualified EMT totaled over 10,000, among which 237 are EMT-P (paramedic). The MND has signed MOU with the fire departments in five major cities and counties, based on locations of the Armed Forces hospitals, to

build an across-the-board cooperation platform and provide proper medical treatment to sick or injured active members and civilians alike.

Facing all kinds of compound disasters, the MND follows the policy guidance of "disaster relief equates with fighting a war," and "avoidance, then prevention, then relief efforts," assisting local governments with disaster prevention and relief efforts in incidents, such as the Kaohsiung gas explosion, TransAsia Air plane crash, Formosan Water Park explosion, and the February 6th Tainan earthquake, where our members were in the frontline of the rescue and relief effort.

(2) Improving the Quality of Medical Service

Armed Forces hospitals hold mass casualty handling drills aligning with the time of the major annual military exercises and are continuing to refine their management and quality of service. A medical information platform has also been built to achieve the objectives of automatic administration, digital management, and business-running model. In the meantime, the quality of medical care for active members stationed on outlying islands should continue to be improved by, for instance, improving emergency medevac operations and making the best use of remote medical services.

In response to the development of e-commerce and promotion of smart medicine and integration of mobile technology, the MND and the National Credit Card Center together formed a strategic alliance to actively build a credit card and Easy Card payment system for Armed Forces hospitals; it formally started operating on July 1, 2017, making the Armed Forces hospitals the first state-run organizations to provide such a service. Furthermore, driven by the desire to serve the public, military hospitals received both quality certification and awards from government agencies and civic units, e.g., Ministry of Health and Welfare Health Promoting Hospital Creative Plan Competition Merit Prize, National Biotechnology and Medical Quality Award, Symbol of National Quality (SNQ), 13th National Innovation Award, 14th Global Views Five-Star Service Awards-First Prize, Hospital Category, hence reinforcing the positive image of the professional work done by the medical personnel of the Armed Forces.

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Chapter 10 Talent Succession

With the aim of bringing the effectiveness of national defense manpower fully into play, through overall planning, the MND has built a sound military education and national defense civilian personnel nurturing system, to mold excellent manpower and nurture leadership, force buildup and readiness preparation and national defense affairs talent. The Armed Forces do not just provide a stage to allow talented people to bring into play their skills in service of the country, at the same time they bring together the elite in various fields. They also provide various consulting services and related information to allow service personnel to seamlessly find civilian employment that utilizes their skills after they leave the military, so they continue to contribute their skills to society.

Section 1 Talent Nurturing

With the aim of achieving "education for purpose," every level of education from basic, further to advanced etc. has been strengthened and the national defense civilian personnel system made complete. As well as promoting exchange between military and civilian academic institutions, long-term retention of military personnel is also actively planned to ensure that trained personnel continue to bring their expertise into play.

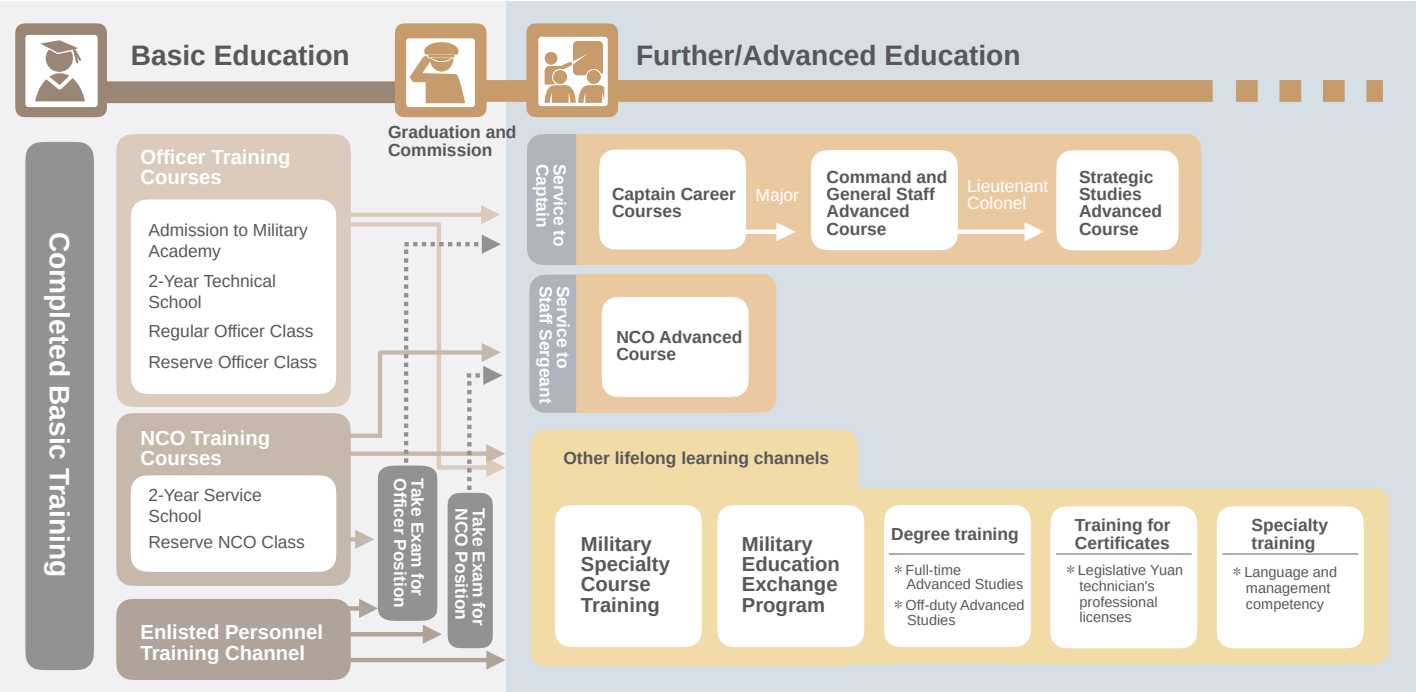
I. Basic Education

At the various military academies, design and planning of basic training, military style life management, mentor system, winter and summer vacation training and combat force internship give students soldierly demeanor, physical fitness, good character and the ability to think clearly. The aim is to allow the cadets to quickly align with force practice after they are commissioned as officers.

(1) In concert with the diversified admission and physical fitness policies of the Ministry of Education (MOE), coupled with the basic physical fitness requirements of the Armed Forces, we have added a physical fitness test to the cadet admission requirements. By so doing, only individuals with good physique and fitness can be admitted to our military academies.

(2) Military academy cadets are sent for branch internship in summer vacation. According to their branch, they go to take part in practical training to refine the results of military training, allowing them to become acquainted with the force operating situation early on so that cadets can fulfil the duties of low level cadres after graduation.

(3) Our 2-year Non-Commissioned Officer (NCO) Program focuses on imparting occupational skills and acquiring certificates. It is hoped that all graduating NCO cadets can be awarded with an occupational certificate and a degree diploma before being commissioned so as to improve their technical competencies.



[Armed Forces Training and Education Courses]

II. Advanced Education

Further education for Armed Forces officers is divided into 2 levels: command and staff level and strategy level to achieve the objective of "training to use, using to train, training and using, integration of selection, training and use". In line with the personnel requirements of each unit, talent that has development potential and command and general staff and national defense management competency is nurtured step by step and continually. As well as the core courses for each service and specialized job type, personnel and course cross training is also carried out to enhance the grasp of the concept of joint operations. Advanced education for NCOs is based on related theory courses of the NCO Advanced Course with equal emphasis on advanced leadership and management, the aim being to allow senior NCOs to be able to effectively assist commanding officers to lead and manage subordinates.

III.Overseas-based Personnel Management

Talent with international basic and advanced education, master's or PhD degrees and overseas work experience are cultivated for the command system; they gain necessary command experience under the arrangement of the MND; most of them have to work as HQ staff, armament R&D personnel and school education and research institution faculty. Some personnel with outstanding performance are selected to receive training at overseas think-tanks and strategic forums. These efforts are designed to nurture a varied pool of talent for national defense.

IV. Further Study and Training Courses

(1) Reserve Officers' Training Corps (ROTC)

In 2017, national and private universities were commissioned to jointly implement the University Reserve Officers Training Corps (ROTC). To the present, contracts have been signed with 119 universities. Corps cadets are provided with a tuition and miscellaneous fee subsidy and receive military training and education during their period of university study. The aim of the ROTC is to nurture mature and good quality low-level officer cadres and thus inject new blood and outstanding talent into the Armed Forces.

(2) Foreign Military Sales (FMS) Training

In terms of FMS Training, officers are assigned to attend training courses in the areas of force buildup planning or operational command, while NCOs and enlisted personnel are assigned to attend courses in the area of maintenance and repair skills or operation. The objectives are to improve officer planning and command abilities, and NCO and enlisted personnel's technical maintenance skills.

(3) Study at Overseas Military Colleges

Distinguished cadets and trainees are selected to attend basic educational classes and military exchange courses in friendly nations in order to broaden their international perspective and build up our military exchanges. From 2016 to November 2017, 51 cadets went for training in friendly countries in Central and South America and 22 cadets from friendly countries were accepted to study at military academies in the ROC.

(4) Full-time Further Studies (Master and Doctorate degree) and Short-term study

1. Every year, outstanding officers are selected to study for a degree overseas to meet high-level professional talent needs in the fields of national defense technology, strategic research, teaching, military medicine and foreign languages. This is intended to raise the level of professionalism and job competency of the Armed Forces.
2. With the aim of nurturing English language talent to carry out interpretation at major military exercises and to be stationed overseas, National Defense University (NDU) and National Taiwan Normal University have cooperated and the Military Interpretation Program has been added to the Institute of Strategic Studies' Strategic Studies International Master's Degree English Program. The curriculum has a military practice orientation and students are dispatched to perform interpreting duties at important exercises to increase their practical experience.
3. To build up special foreign language talent, the National Defense Language Center

teaches seven languages, namely Spanish, Arabic, French, Korean, Japanese, Russian and German. The length of the basic course has been extended from 52 to 75 weeks. Refresher courses are also held for personnel who are undergoing training for posting overseas to increase their military and diplomatic communication ability and maximize benefit for the country.

4. The MND and National Chengchi University have together established the Administrative Management Master's National Defense Program. A first for higher education and military education cooperation by national universities, it has established an exchange platform for military and cultural education. Through the educational program, students are able to absorb innovative thinking from new perspectives and using new methods.

(5) Short-term exchange between cadets at Taiwan and US military schools

Outstanding basic military academy cadets are selected to be sent for short-term exchange to different US military colleges, to nurture the cadets' international view and promote Taiwan-US military school exchange.

(6) Dispatching personnel for training at overseas think-tanks

In accordance with our national policies and comprehensive planning for international relations, combining functions such as national defense think-tank, strategic forums and dispatch to overseas think-tanks for training etc. the channels for exchange and collaboration with renowned international think tanks are maintained. It is hoped that through interaction with and participation in the studies of these institutions, we can increase the research ability of trainees and raise the level of national security, national defense policy, military strategy and cross-strait affairs research quality while developing closer ties with scholars in friendly academic circles. In future, cooperative relations with leading think tanks in various countries will continue to be developed to expand the nurturing of military affairs research talent.

V. Exchanges Between Military and Civilian Educational Institutions

The MND has been expanding academic exchange between foreign and domestic civilian universities and our service academies and National Defense University to instill in our cadets more innovative and flexible thinking through studying together and absorbing diverse concepts. During winter and summer vacations, selected cadets can join exchange activities in foreign countries to broaden the international perspective of future cadres.

VI. Nurturing National Defense Civilian Personnel

Ever since the *Two Defense Acts* that characterize our national defense organization as professional division of functions, civilian control of the military and convergence of military command and administration systems came into force in 2002, the MND has recruited highly capable civil servants to join in the national defense community as civilian officers through civil service examinations and open selection processes. For over a decade, civilian officers have worked alongside their military colleagues, making a notable contribution to national defense affairs planning and execution. Also, to increase the military competencies of Armed Forces civilian personnel, and promote military-civilian interaction and nurture their professional ability to handle national defense affairs, education and training is provided according to job level with the aim of building up national defense specialized knowledge.

(1) Enhancing Pre-Service Training

Every year, pre-service training is conducted for newly recruited civil servants to allow them to acclimatize to the national defense system and quickly become familiar with the MND's organizational attributes and national defense affairs. In addition, military-related visits are arranged to increase their sense of belonging to the Armed Forces and achieve the objective of long-term retention of personnel.

(2) Military Education by Recommendation

Since 2017, in accordance with job level and MND seniority, and in line with military personnel of the same rank, mid and high level civil servants have been selected to attend in-service courses at the NDU's War College and Army Command and Staff College. The aim is to hone their military competencies and promote exchange between military and civilian personnel, to nurture national defense professional talent that will gain promotion in future and serve the nation.

Section 2 Gathering of Talent

The ROC Armed Forces are stationed across Taiwan and its outlying islands, with missions conducted from skies above to seas below, requiring skills in many areas. Guided by government policy, specialists in different fields are nurtured, and career development opportunities are provided for women as well. Also, to continue to raise morale, every year military service personnel models and model units are chosen to commend units and individuals for outstanding performance.

I. International Recognition

After entering active service, members of the ROC Armed Forces engage in core training diligently on a daily basis as well as promoting their skills and knowledge in the civilian arena. To continually inject innovation into Armed Forces units, during their period of service, military personnel also continually engage in self-study and take part in various international competitions at which good results have been achieved.

At the 20th Moscow International Salon of Inventions and Innovative Technologies, "Archimedes-2017", Pan Yu-lin, Kuo Chiao-ling, Chang Yi, Kao Chi-wen, Tsao Yen-chia, who are members of Tri-Service General Hospital Nursing Department, won 2 gold medals, a silver and a special prize with their “Injection Memory Pen Cap” and “Adhesive-free Fixed Foley Belt” developed according to patient needs. Not only will their achievements help patients, they also demonstrate the professionalism of medical staff in the Armed Forces and the spirit of serving, innovation, and constantly seeking progress.

Colonel Hsu Zi-gui of the Air Force Institute of Technology won a gold medal and special prize at the 2017 International Warsaw Invention Show with Inspection Solution for the Electric Circuitry States. Colonel Hsu also won a bronze medal and 2 special contribution gold medals at the 16th Malaysia Technology Expo (MTE) for A Natural Convective Combustion Furnace with Film Cooling and Swirling Flow Like Aircraft Engine Design and Concrete that Can be Absorbed by Magnets, respectively, along with Major Yeh Chong-wei. Armed Forces personnel have won a total of 12 gold medals and 6 silvers at international invention exhibitions and have accumulated 39 patents in recent years.

Cadets Wu Min-xiu, Wang Mu-yu, Chen Yen-xun and Chen Zhi-yi of Chung Cheng Institute of Technology NDU, ROC took part in the National Aeronautics and Space Administration (NASA) 2017 NASA Hackathon with their invention the Angel-X Gliding Dropsonde. Combining NASA satellite open data and with data visualization as their theme, the design of their Dropsonde combines electronics, electrical engineering, meteorology, space and aerospace technology. Angel-X Gliding Dropsonde solves the problem of data insufficiency when a satellite encounters bad weather as well as reducing DOTSTAR costs. This invention placed 16th in the Global Popularity Award and won the Intel Special Award-first prize.

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1. Registered Nurse Pan Yu-lin of Tri-Service General Hospital and her team took part in the 20th Moscow International Salon of Inventions and Innovative Technologies "Archimedes-2017 ", winning 2 golds, 1 silver and 1 special prize.
2. Colonel Hsu Zi-gui and Major Yeh Chong-wei of the Air Force Institute of Technology took part in the 2017 16th Malaysia Technology Expo (MTE), each bagging a bronze medal as well as two special contribution gold medals.
3. Cadet Wu Min-xiu of the Chung Cheng Institute of Technology of National Defense University, ROC took part in the National Aeronautics and Space Administration NASA Hackathon, winning 16th in the Global Popularity Award and intel Special Award First Prize.

PV2 Hsu Chi-kai of the 9th Squadron of ROCMP won 6th place in the 2017 One World Windsurfing Championship. Military Police Special Services Company Sergeant Su Zhi-hua took 2nd place at the Ashgabat 2017-The 5th Asian Indoor and Martial Arts Games. These successes illustrate how, in addition to core tasks, members of the Armed Forces combine their expertise and spirit of innovation to actively challenge themselves and seek constant improvement, and achieve good results in international competition, in doing so winning glory for the military.

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1. Major Zhang Shu-yu won the 2017 24th Ten Outstanding Young Women Award-Military category.
2. Sergeant Jian Pei-hua was the 2017 Special Forces Sniper Training Champion.(Source: The Central News Agency)
3. Second Lieutenant Kang Jia-xin and Second Lieutenant He Wen-quan of the ROC Military Academy rose above the competition and will become the Army's first female tank commanders.

II . Heroines

In earlier days, the stereotypical image of the military was that it was male-dominated. As the concept of gender equality has gained ground in recent years and with the opening of the Armed Forces system, the proportion of women in the military has gradually increased. Women perform with excellence not only in logistics units but also combat units. They are fine examples of the saying "A heroine is a good as hero" and provide powerful combat capability for the defense of the country. As of 2017, there were more than 20,000 women in the Armed Forces, accounting for 13.5% of personnel overall.

Major Chang Shu-yu, company commander of Military Police Command which is tasked with protecting Taipei, signed for the Military Police upon graduation and was appointed platoon

commander of the Military Police Motorcycle Company, becoming its first female platoon commander. The training process involving riding a 366kg motorcycle was arduous but she showed great determination and overcome the natural physical disadvantages of women compared to men to qualify as a rider, and has since taken part in various exercises. For her outstanding performance, she was named one of the winners of the 24th The Ten Outstanding Young Women Award in 2017.

Sergeant Jian Pei-hua of Mechanized Infantry Battalion, Taitung Area Command passed the tough wilderness solo survival training and completed concealment, tactics application, designated marksman and other courses, showing the characteristics of calmness, steadiness and precision which are required to be a sniper. Able to execute a kill-shot over 1 kilometer, she was the champion of the 2017 Special Forces Sniper Training.

After female NCOs were allowed to become tank drivers, in 2017 the ROC Military Academy for the first time allowed women to choose the armor branch. Second Lieutenant Kang Jia-xin and Second Lieutenant He Wen-qian made a special effort to increase their fitness on a daily basis and included weight-training to increase leg strength. They came out ahead of the competition and will become the Army's first female tank commanders.

Captain Huang Su-qing, captain of Wu Chang Warship (La Fayette-class frigate), and Commander You Yi-lian, captain of Chung Ping Warship (Newport class tank landing ship), are, respectively, the Navy's first grade 1 and grade 2 warship captains. Since becoming captains, following the anchor chain spirit (everyone on board closely linked) and idea that "everyone is in the same boat," they have led all their crew members carrying out their tasks, with the objectives of nurturing Navy talent and fully bringing operational capability into play to maintain security in the Taiwan Strait.

Amongst the recipients of the Military Model award in 2017, seven were female, the largest number ever and all are members of combat units. Major Huang Li-si, commander of a rocket company, 43rd Artillery Command, ROC Army, led her unit through the Lei Ting Exercise and achieved full marks. Captain Chung Jing-yi is an F-5 pilot in 7th Flight Training Wing of the Air Force; every day she guards the front-line skies over the Taiwan Strait. Major Kuo Shi-yu, commander of Chinese Marine Corps Amphibious Reconnaissance and Patrol Unit, is the first female officer to complete amphibious frogman training.

More than 60 countries in the world have female military personnel and more and more are allowing women to join combat units. The performance of female officers and other ranks is equal to that of their male counterparts. Females can be seen all around in the ROC Armed Forces. They have broken through gender barriers, bravely taken on various challenges and share the major responsibility of protecting the nation. Women in the military use their ability to show again and again that a heroine is as good as a hero.

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The ROC military's special forces assist with special missions such as crime-fighting, counter-terrorism and anti-hijacking. Of these units, the Military Police Special Service Company, the Chinese Marine Corps Amphibious Reconnaissance and Patrol Unit, and the Army Special Forces strike fear into the hearts of the enemy and offer powerful combat capability to defend the nation.

III.Special Operation Elites

The Armed Forces are ready for war but do not want war. Facing a complex situation at home and abroad, special forces are not only focused on core tasks, they also support crime fighting, counter-terrorism, counter-hijacking and other national security operations.

Stealthy, mobile, unpredictable, the Army Special Forces specialize in shocking their opponents with surprise attacks. Special Forces can be organized flexibly according to enemy threat, mission type and operational requirements. They are modern, elite forces that can carry out short range assault, long-range sniper kill, target marking for airstrikes, infiltration and sabotage missions, and possess all-terrain and all-time communications capability. They are mainly responsible for quick reaction contingency response, protection of main targets and counter-terrorism support in northern, central and southern Taiwan, as well as carrying out

disaster situation reporting and frigid zone rescue work. In recent years, the Special Forces have been involved in disaster relief and rescue. They evacuated residents when typhoons Soudelor and Nepartak struck, searched for the crashed Air Force AT-3 trainer, and conducted search and rescue after the collapse of the Weiguan Building after the February 6 Tainan Earthquake in 2016, as well as for climbing accidents on Mt. Daxue and Mt. Shuangqi.

The Special Service Company, Chinese Marine Corps Amphibious Reconnaissance and Patrol Unit has triphibious capability, strategic, and surprise assault characteristics. The Special Service Company can be organized flexibly according to mission type, hostile threats and operational requirements. It can carry out a variety of missions including rapid strike, sea infiltration, high altitude parachute jump, assault and sabotage, long-distance sniping and counter-terrorism missions. In ordinary times, it is the quick reaction force and provides counter-terrorism support in southern Taiwan; it is also responsible for counter-ship hijacking operations at all major ports in Taiwan and for supporting high mountain disaster relief and rescue (Kaohsiung City's Namasia District and Taoyuan District). In recent years, the Special Service Company has undertaken missions including the Daliao Prison hostage-taking incident. Guided by the "three unafraids" of the Marines, namely unafraid of hardship, unafraid of difficulty, and unafraid of death, and semper fidelis to country, this all-around and fearless "black-uniform force" will always be on hand to tackle any mission it is given with everything it has.

The Military Police Special Service Company(MPSSC) is a counter-terrorism force that deals with hijacking and hostage taking situations. They are responsible for counter-terrorism support in northern Taiwan and island-wide counter-hijacking missions. Its wartime role is to protect the national leader, VIPs, and locations in the capital. Missions such as New Year's Day Security Taipei Universiade Security, Minan No. 3 and Haian No. 9 exercise and National Day Security have been completed successfully, fully displaying the brave and tenacious fighting spirit of special forces personnel.

Members of special services are trained by creating a high-pressure environment as well as making extreme demands of fitness to increase pressure resistance and willpower. They must be fearless, possess excellent combat skills and have will of steel to push themselves beyond their limit. Also, through messing up their routine, continual counterterrorism assault training, military hand-to-hand combat skills, combat casualty care courses, and so on, the members of special services achieve mastery of counter-terrorism and special operations skills. The spirit of diligent training and fearlessness in taking on hardship and difficulty makes special services elite units that the enemy fears.

IV. Models

The duty and mission of the members of the Armed Forces are to defend the country and protect the people and, when the country and people are threatened, to stay at their posts and do their utmost to protect the country and its people; they are also to actively hone various skills in addition to diligently carrying out core tasks, apply what they learn to their jobs,

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1. PV1 Zhou Shu-hong was awarded the Brave Deed Commendation award for defending the homeland like a true soldier.
2. Colonel Chang Zhi-wei was named one of the 2017 Ten Outstanding Project Managers.
3. (from left) Lieutenant Colonel Chang Jian-xu, Colonel Lin Zhong-kun and Major Ou Nai-jia won the 2017 Outstanding Youth Award.

simplify organizational structures, promote national defense reform and increase the level of national defense effectiveness; and take part in medical teams after major disasters abroad and provide volunteer medical service at home and overseas, showing the open hearted “turning small love into big love” mentality of the military, and setting a fine example for the people.

Military Police PV1 Zhou Shu-hong was awarded the Brave Deed Commendation by President Tsai Ing-wen at the 2017 Military Day Celebration and All-out Defense Day commendation event. On Family Day at the Office of the President, Zhou was injured when he stayed at his post and bravely stopped a man armed with a knife from entering the Office. He acted like a true soldier in defense of the country. Zhou said that, at the time, he was aware that there was an event being held inside and blew his whistle and stopped the intruder when

he saw him attempt to enter. After he recovered, he was quickly back at his post defending the President.

Colonel Chang Zhi-wei of the Department of Strategic Planning MND was named one of the 2017 Ten Outstanding Project Managers (TOPM). He is responsible for planning and promoting transformation of the military organization at the MND. Introducing the Project Management method in 2013 to military organization transformation work in the areas of organization, performance, execution, quality and costs etc., in combination with the characteristics of organizational culture, he has helped make national defense reform promotion work more objective and efficient.

3 members of the Armed Forces, namely Colonel Lin Zhong-kun of the Medical Affairs Bureau, Major Ou Nai-jia of the Tri-Service Hospital Songshan branch and Lieutenant Colonel Chang Jian-xu of the NCSIST, won the 2017 Outstanding Youth Award. Colonel Lin volunteered to provide medical services when the ROC sent a medical team to assist after the major 2010 Haiti earthquake. They provided voluntary medical services deep in the disaster area for one week, treating the sick and wounded. He not only displayed the "love has no borders" spirit of the Armed Forces through actual deeds, his actions also underlined the ROC's determination and ability to take part in international humanitarian aid efforts.

Major Ou volunteered to take part in treatment of victims of the Dongxing Mansions collapse after the September 21 earthquake of 1999 and, driven by the spirit of doing her duty and caring for others, has taken part in the medical treatment of victims after various disasters of a number of occasions since. After being transferred to Pingtung Medical Evacuation Team to serve as an aviation nursing officer, she has dedicated herself to the transportation of sick and injured service personnel from outlying islands so they can receive better medical care. Lieutenant Colonel Chang has undertaken promotion, technical integration and engineering planning, quality analysis and refinement for various flight system establishment cases, unmanned aerial vehicle airworthiness management research, and international industrial cooperation technical review. In recent years, he has been instrumental in completing flight system production, implementing the ideal of self-reliant national defense.

First Lieutenant Tsai Ming-zhen received the 2017 Outstanding Social Youth Award. While still studying at the National Defense Medical Center, she became involved in overseas voluntary medical services and was a member of the 1st National Defense Medical Center Volunteer Team. When serving as a medical officer after graduation she continued to strive to increase her ability and actively promote vaccination to prevent epidemics.

Their members enduring hardship and difficulties with indomitable spirit, the Armed Forces have made significant achievements in terms of force buildup and readiness and promotion of all-out defense. Meanwhile, they take on their tasks with enthusiasm, which has, in turn, created a favorable image for military personnel and driven overall enhancement of the Armed Forces. Prominent members of the Armed Forces have set a good example to all military personnel.

Section 3 Career Development

To provide guidance to and care for service members when they leave the military and allocate human resources to where it is needed most, MND makes every effort to combine with the resources of each ministry. The MND's employment and occupational training budgets have been gradually increased year by year. As well as providing Adaptive Assessment and Career Counselling Service to veterans, occupational training and industrial training courses are run to help veterans acquire various skills that will help them seamlessly adapt to civilian life and gain employment after leaving the military.

I . Guidance to Help Service Personnel Transfer to Civilian Work

To allow service personnel to quickly join the civilian workforce after they leave the military, employment service events are held for retired/discharged service personnel together with other ministries, and varied vocational training courses are offered by specialized institutions. Of these courses, management practice (international logistics, international trade marketing, digital marketing planning etc.) and operating practice (vehicle maintenance, computer graphics) courses can help ex-service personnel find employment and obtain skills certificates. 166 employment service events were held of various types in 2016 and 2017, offering 248,425 job opportunities, allowing service personnel to quickly find employment and smoothly return to civilian life.

Serving officers and other ranks are also, with the precondition that their core tasks are not affected, encouraged to use their off-duty time to undertake second skills training and obtain skills certificates to assist with transfer to civilian work after leaving the military.

II . Continuing to Contribute to Society

Leaving the military does not mean the end of the working life of officers and other ranks, just a change of stage. Equipped with the respect for work, pressure tolerance, passion for work, ability to work with others and other advantages nurtured when serving in the Armed Forces, service personnel are able carve out a second career as they take up positions with domestic and overseas groups and enterprises. They bring their skills and experience into play and continue to make a significant contribution to society.

Former MND spokesman Major General Luo Shao-he was known as the "Zero mistake spokesman". While serving as spokesman, he explained the handling of major news incidents sincerely, winning many admirers. He also introduced new media, setting up the MND Spokesman Facebook fans page that had over 250,000 followers when he left his post, more than any other ministry. After leaving the military, remembering his poor childhood, he took up a post as head of a charity organization that helps children in disadvantaged families find life direction. In doing so, he set a fine example of the Armed Forces caring for the disadvantaged and taking care of the people.

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1. After retiring from the military, Major General Luo Shao-he took up a post as head of a charity organization, setting a fine example of the Armed Forces caring for the disadvantaged and taking care of the people.
2. After ending his military career, Lieutenant Colonel Zhu Jin can became actively involved with search and rescue groups using what he learned in the military to assist in the training of firefighters, continuing to selflessly give back to society.
3. Colonel Yan Tie-lin took up the post of deputy director of the Taiwan Center for Security Studies at National Chengchi University.

Colonel Yan Tie-lin was selected to study for international relations degrees when he was serving in the military due to his excellent language ability and knowledge of international strategy. After completing his studies, he was employed in the MND's Department of Strategic Planning and Department of Integrated Assessment where he was engaged in Taiwan-US military exchange work, making good use of his English language skills and strategic vision. After leaving the military, he was invited to take up the post of deputy director of the Taiwan Center for Security Studies at National Chengchi University. Utilizing his knowledge and experience, he was active in academic circles and in national defense policy exchange and

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1. After retiring from the military, Colonel Chiu Bo-hao took up a position as a researcher at a well-known Japanese think-tank.
2. After leaving the military, Lieutenant Commander Wang Zhi-zhong set up a company developing fault diagnosis, decision analysis, Industrial Internet of Things and other systems.
3. Major Liao-Qi-shun started work in the metal raw materials industry after retiring from the military and won the affirmation of the Golden Merchants Award-Outstanding Firm in 2015.

dialogue, and became a leading scholar in the field of regional security. He later moved to the post of director of the Taiwan Aerospace Industry Association and he remains an active participant in international seminars and forums in this role.

After serving for many years in the Special Forces, Lieutenant Colonel Zhu Jin-can, who is now Director of Taoyuan City Civilian Rescue Association, became actively involved with search and rescue groups, using his commando training and abseiling, rappelling and other skills learned in his military career. Since retiring, he has worked on the rescue effort after the TransAsia air crash, Typhoon Soudelor and the collapse of the Weiguan Building. Also,

applying Standard Operating Procedure for plans, execution and evaluation etc. as utilized by the Armed Forces, 2014-2016 his association was rated "Excellent." Combining interests and skills, Zhu also joined the ROC Swimming Association and became a qualified referee, serving as referee at the National Games and National High School Games, as well as training firefighters at the Zhushan NFA Training Center, continuing to selflessly contribute to society.

While a cadet at the ROC Military Academy, in his spare time away from the strict military training, Colonel Chiu Bo-hao strived to improve his language ability and professional competencies. He also won a chance for advanced education while serving and acquired a doctorate, becoming an expert in Japanese and regional security. After he retired from the military, he took up a post at a well-known Japanese think-tank where he specializes in regional security and international relations research. Through the complete further and advanced education planning of the Armed Forces, personal in-service study and putting what he learned to good use in his military career, he has become a highly professional and practically experienced researcher who has won respect in international academic circles.

Leaving the military after reaching the position of Chief Engineer of a Navy vessel, Lieutenant Commander Wang Zhi-zhong went on to develop fault diagnosis, decision analysis, Industrial Internet of Things and other systems. He has obtained 32 patents and was named Outstanding Engineer by the ROC's Chinese Institute of Engineers as well as winning the 2015 NIEIA – Intel Internet of Things Awards. He now runs a private company. Using what he learned in the Navy, he has turned the idea of improvement after breakdown into prevention before breakdown, successfully playing the role of equipment diagnosis expert. His team has taken part in a well-known car company's production line engine abnormal sound testing, structural diagnosis of the valve at the base of Nanhua Reservoir dam, the South China Sea Acoustics Plan, and equipment testing for Navy Cheng Gung class warship and various power stations. Making industrial equipment status visualized and its diagnosis intelligent, he has created advantages and made a concrete contribution.

Major Liao Qi-shun started work in the metal raw materials industry after retiring from the military, starting at a basic level. After years following the principles of honesty and pragmatism, as general manager of a private company he won the affirmation of the Golden Merchants Award-Outstanding Firm in 2015. While serving in the military, Major Liao passed the grueling frogman training course that requires strong willpower, giving him a determined never-say-die approach to challenges. Using the organizational management model he learned in the military, he set up a management system and mechanism that put his company on the right track and opened up a successful second career, allowing him to continue to make a contribution to society.

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Always Standing Guard
The Never Changing Promise

Dusk and dawn, ravaging storm or scorching sun, the Armed Forces are always protecting this land, standing together with the people every second.

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