QUADRENNIAL DEFENSE REVIEW 2009

Ministry of National Defense
REPUBLIC OF CHINA

Contents

Contents

Quadrennial Defense Review

Contents	**2**
Minister's Foreword	**4**
Abstract	**6**
Introduction	**18**
Chapter 1 Core Defense Challenges	**26**
Section 1 Trends and Challenges of the Strategic Environment	**26**
Section 2 Military Threats and Risk of War	**30**
Section 3 Driving Force and Dynamics of Defense Transformation	**43**
Section 4 Major Tasks of Defense Reform	**50**
Chapter 2 National Defense Strategic Guidance	**62**
Section 1 National Defense Policy	**63**
Section 2 National Defense Strategy	**64**
Section 3 Military Strategy	**70**
Chapter 3 Defense Transformation Planning	**76**
Section 1 Defense Organization	**76**
Section 2 Force Structure	**78**
Section 3 All-Volunteer Force	**83**
Section 4 Force Planning Mechanism	**87**
Section 5 Armaments Development Mechanism	**89**
Section 6 Joint Operations Command Mechanism	**94**
Section 7 Human Resources Development	**97**
Section 8 Defense Expenditure Management	**106**
Section 9 Combining Defense with Civilian Needs	**109**

Chapter 4 Guidance for Joint Warfighting Capability Development 116
Section 1 Joint C^{4}ISR Capabilities 117
Section 2 Joint Information Operation and Electronic Warfare Capabilities 121
Section 3 Joint Counter Air Capabilities 124
Section 4 Joint Sea Control Capabilities 128
Section 5 Joint Ground Defense Capabilities 131
Section 6 Asymmetrical Warfare Capabilities 136
Section 7 Reserve Mobilization Capabilities 138
Section 8 Joint Logistics Capabilities 141
Section 9 Overall Intangible Combat Capabilities 147
Afterword 153

Minister's Foreword

Since taking office, President Ma Ying-jeou has been implementing various new policies, pursuing fundamental reforms, improving foreign relations, and, in particular, resuming dialogues across the Taiwan Strait. President Ma's pragmatic efforts at improving interactions with the PRC have dramatically eased cross-strait tension to the benefit of security in the Strait and across the Asia-Pacific region. As far as defense policy is concerned, President Ma has repeatedly emphasized building a "Hard ROC" defense and consolidating the military strategic concept of "resolute defense and credible deterrence", so that the Republic of China would act as a peacemaker in the Asia-Pacific region. Under this conceptual guidance, the Ministry of National Defense (MND) has initiated a series of reviews and consolidated measures aimed at building a "small but smart and strong" modern force capable of deterring potential military aggressors from taking reckless actions and serving as a solid buttress for the Government in cross-strait negotiations.

The Amendment to Article 31 of the National Defense Act passed by the Legislative Yuan on July 17, 2008 mandates the MND to submit a Quadrennial Defense Review (QDR) within ten months after every new president takes office in order to review and confirm defense strategy and military strategy, and provide a vision for future development. The MND has thus established a task force and a consultant group of experts and scholars from the private sector. Elements of defense studies—including defense strategy review, military strategy revision, force structure adjustment, defense organization re-structure, implementation of an "all-volunteer force", and joint warfighting capability assessment—were combined into

this project to form a comprehensive review of our national defense. The purpose is to identify the roadmap for defense reform and force development in the QDR and provide a clear and responsible explanation to the Legislative Yuan and the public.

This first publicly announced QDR describes the prospects and reform directions of the ROC Armed Forces in the face of challenges in an evolving strategic environment. The Armed Forces will make a concerted effort to implement comprehensive reforms and conduct a full-scale transformation, and thereby ensure that the measures to improve organizational structure, force structure, planning procedures, human resources development, resource allocation, and warfighting capability buildup can effectively meet the objectives of the defense strategy.

The ROC stands at a historic turning point, confronted by many difficulties and barriers. It is vital that the entire nation reach a consensus, achieve unity of purpose, face up to the challenges, and build a new future with wisdom and courage. The Armed Forces bear a heavy responsibility of safeguarding national security and creating peaceful, stable conditions that allow us and future generations to enjoy a peaceful and secure environment, as well as a bright future of sustainable development.

As there may inevitably be some shortcomings in this first-ever QDR of the ROC, I sincerely invite all to share their advice and support with us. The Armed Forces will maintain an open-minded thinking and listen to a wide range of views concerning defense strategy and force planning. The ultimate goal is to ensure deliberated and feasible defense policies and thereby safeguard our national security.

Minister of National Defense

Chen Chao-Min

March 2009

ABSTRACT

I. Legal Basis & Background

1. The Legislative Yuan passed the amendment to Article 31 of the National Defense Act on July 17, 2008. It became effective on August 6 after being signed by the President. The 4th paragraph was added as: "The Ministry of National Defense shall, within ten months after each presidential inauguration, publicly submit a Quadrennial Defense Review to the Legislative Yuan."
2. The first publication of the Republic of China (ROC) Quadrennial Defense Review (QDR) has three major implications:

(1) The President's overarching concept of national defense is embodied in the policy planning of the Ministry of National Defense (MND), solidifying the concept of "civilian control over the military".

(2) The country's strategic planning system is further consolidated, as the QDR follows the President's overarching concept of national security in shaping defense strategy and force planning.

> Most terms or phrases in quotation marks are directly translated from special ROC military acronyms and jargons.

(3) The establishment of a four-year periodical review mechanism enables the MND to conduct comprehensive assessments of

major policies and articulate the vision for future reforms and development.

II. Conceptual Framework

1. The first ROC QDR is based on the central theme of "building a professional armed force and maintaining peace in the Taiwan Strait", with a thinking logic of "future strategic environment analysis, strategy examination, organizational re-structuring, force planning, and resources utilization". The QDR is comprised of four chapters, namely, core defense challenges, national strategic guidance, planning for defense transformation, and guidance for joint warfighting capability development.
2. Prospects of defense and security challenges are stressed in the QDR, while appropriate defense and military strategies and actual steps of defense transformation are devised accordingly to set the course of capability development for the Armed Forces and effectively ensure national security.

III. QDR Summary

1. Core defense challenges

(1) Trends and challenges of the strategic environment

a. The Asia-Pacific region is relatively stable. However, the international clout of the People's Republic of China (PRC) is expanding, gravely challenging the role of the ROC in the regional security environment. Participation in regional security cooperation is therefore urgently imperative for the ROC.

b. Security tensions in the Taiwan Strait area are gradually diminishing. In support of overall government policies, the MND needs to formulate appropriate strategies to direct future force development.

c. The trend toward globalization necessitates paying greater attention to unconventional security issues. The Armed Forces have a duty to address these issues and assist the government to protect the people's lives and property.

(2) Military threat and risk of war

a. Currently, there are both opportunities and challenges for the security of the Taiwan Strait area. Despite easing cross-strait military tension, the PRC has never renounced the use of military force against Taiwan. Vigilance for readiness preparation, therefore, cannot be relaxed.

b. The PRC has been aggressive in the development of surveillance and reconnaissance satellites, electronic warfare, information operations, ballistic and cruise missiles, and air, maritime & landing operations capabilities. There are growing threat against the C^4ISR systems, sea/aerial lines of communication, and homeland defense of the ROC. The PRC has also initiated a "three-front war"—legal, public opinion, and psychological warfare—to create advantages over the ROC in these areas.

(3) The driving forces and dynamics of defense transformation

a. The impacts from new military technologies and patterns of war

Evolving military technologies and patterns of war in the information age continue to drive transformation and reform

of the Armed Forces.

b. The challenge of maximizing cost-effectiveness in defense budgets

With limited defense resources, the strategies for resource utilization should be refined to achieve maximum efficiency.

c. The requirements of supporting national and social development

In conjunction with national economic strategy, the national defense development should devote defense resources to overall economic development to create benefits for the entire society.

(4) Major tasks of defense reform

a. Rapid changes in the environment and multifaceted defense challenges call for the MND to streamline simultaneously its organization, mechanisms and operations to create greater organizational efficiency for attaining defense missions.

b. Tasks of defense reform include defense organization, force structure, an all-volunteer force, the force planning mechanism, the armaments development mechanism, the joint operations command mechanism, and human resources development.

2. National defense strategy guidance

(1) Defense policies

The purpose of national defense is to safeguard national security and maintain the livelihood of the people and sustainable development of the country. Given current and prospective strategic environment and imminent threats and

challenges, the Armed Forces are proactively engaging in a defensive capability buildup under the President's guidance of building a "Hard ROC" defense. The Armed Forces have a mission of defending the homeland and deterring wars, thereby serving as a solid buttress for the government in its pursuit of cross-strait peace, regional stability and national prosperity.

President Ma's phrase in Chinese would translate: "solid as bedrock," signifying a rock-solid and impregnable defensive force that, by implication, could not be dislodged, shattered, or breached by a numerically superior enemy force during an attempt to attack or invade ROC territory. The abbreviation for the Republic of China, ROC, happens to rhyme with the word "rock" in English, allowing word play that does not exist in the original Chinese formulation.

(2) Defense strategy

Defense strategy is the actual planning and concrete measures for the realization of a "Hard ROC" defense. The specific strategic objectives are "war prevention", "homeland defense", "contingency response", "conflict avoidance", and "regional stability". They are elaborated below:

a. war prevention

Establish a "Hard ROC" defense force, enhance credible deterrent and defensive countermeasure capabilities, and realize an all-out (general civilian mobilization) defense; and participate in regional security cooperation and promote cross-strait military confidence building measures (CBMs) at the opportune moment to prevent cross-strait conflicts.

b. homeland defense

Deter enemy invasion with elite forces, sufficient

early warning, effective force preservation, efficient joint warfighting capabilities and a solid all-out defense.

c. contingency response

Enhance crisis awareness, control, and response, and assist the government in disaster relief and prevention and responding to situations endangering national security.

d. conflict avoidance

Closely monitor activities in Taiwan waters and airspace, management risk factors, enhance contingency response capabilities, and abide by the principles of "not provoking incidents, not escalating conflicts, and avoiding hostile actions", as well as readiness regulations, to prevent military confrontations or accidents.

e. regional stability

Promote security dialogue and exchange, and undertake greater responsibilities regarding international security issues, such as security of sea/aerial lines of communication, countering weapons proliferation, counter-terrorism, and humanitarian relief, therefore making positive contributions to peace and stability in the Asia-Pacific region.

(3) Military strategy

Under the guidance of defense strategy, the military strategy of the Armed Forces can be coined as "resolute defense and credible deterrence". When war is inevitable, the military should exercise its joint operational capabilities, incorporate all-out defense capabilities, and engage in homeland defense, in order to reject, repel, and eliminate enemy forces and ensure national security. To reach these

goals, the Armed Forces need to effectively accomplish the following missions:

a. resolute defense, to ensure the integrity of national territories;
b. credible deterrence, to maintain strong and deterrent war-fighting capabilities;
c. counter blockade, to secure sea and aerial lines of communication;
d. joint interdiction, to prevent enemies from approaching ROC territory; and
e. ground defense, to prevent enemy forces from landing.

3. Planning for defense transformation

(1) Defense organization

In accordance with the principle of "accountability and specialization", the MND is reviewing and modifying the division of authority and responsibilities and work procedures for various departments.

(2) Force structure

The Armed Forces currently have a strength of 275,000, which, in the future, will be downsized to 215,000. This target is set in consideration of defensive operational requirements and availability of human and financial resources. The ROC intends to build a "small but smart and strong" force.

(3) All-Volunteer Force

The ROC is developing an all-volunteer force, with planning divided into three phases: "planning preparation", "project formulation", and "implementation and validation". In the process, the MND will annually reduce the number of draftees and increase the number of volunteers while

reviewing benefits for voluntary soldiers. Regulations are to be revised and complementary measures formulated to achieve the target and complete the transition by December 2014.

(4) Force planning mechanism

Since the defense organizations are changing, it is imperative to refine the PPBS (planning, programming, and budgeting system) and military investment case building procedure to enhance strategy formulation and force planning.

(5) Armaments development mechanism

Resources in the public and private sectors shall be integrated to facilitate technologies transfers, research and development, production, maintenance, and sales. Such integration is important for force development and readiness.

(6) Joint operations command mechanism

Consolidate the "joint operations command mechanism" that is "consistent and accountable in peacetime and wartime" to maximize effectiveness of the joint operations command.

(7) Human resources development

Based on the objective of "purpose-oriented and plan-based education", human resources development must meet defense transformation requirements, with education advanced to boost human resources quality, so that, after leaving military life, discharged military personnel can further contribute to national development and societal needs.

(8) Defense expenditure management

In principle, the level of defense expenditure accounts for no less than 3% of Gross Domestic Product (GDP),

but the actual amount may fluctuate if national economic development, major government policies or progress of the all-volunteer force so require. The MND will adhere to the principles of "practical force planning and reasonable budgetary allocations" to effectively allocate and apply defense resources.

(9) Combining defense with civilian needs

Industrial cooperation, technology transfer, defense outsourcing, and military property release are measures to facilitate domestic technological and industrial development, increase employment opportunities, and fulfill the needs for national infrastructure projects and local development. This way, defense resources can contribute to driving domestic economic growth and prosperity.

4. Guidance for joint warfighting capability development

(1) Joint command, control, communications, computers, intelligence, surveillance, and reconnaissance (C^4ISR) capabilities

Establish "integrated command and control, real-time communication, and precise intelligence surveillance and reconnaissance" capabilities to develop networked C^4ISR systems.

(2) Joint information operation and electronic warfare capabilities

Establish "early warning, rapid response, effective countermeasures, and delaying enemy offensive" to ensure information and electronic security and superiority.

(3) Joint counter air capabilities

Establish "early surveillance and reconaissance warning,

long-range precision engagement and joint multilayer interception" capabilities, in order to gain air dominance in desired airspaces, and safeguard the sea and air space of the Taiwan Strait.

(4) Joint sea control capabilities

Develop "high efficiency and performance, rapid deployment, and long-range strike" capabilities, to deter enemy invasion, and secure sea lines of communication.

(5) Joint ground defense capabilities

Establish "digitized, multi-dimensional, and agile" ground combat and special operations capabilities to effectively defend national territory.

(6) Asymmetrical warfare capabilities

Develop the capabilities to attack the enemy's center of gravity and critical vulnerability, and employ innovative tactics and techniques while coordinating with basic land, maritime, and air combat capabilities, to strike at the enemy's weak points and overcome its advantages, in order to counter an enemy invasion.

(7) Reserve mobilization capabilities

Establish deterrence-capable reserve combat capabilities with "on-site mobilization and engagement" and "timely mobilization and engagement".

(8) Joint logistics capabilities

Establish "precise logistics management and rapid logistics support" capabilities, and raise the operational efficiency of combined logistics.

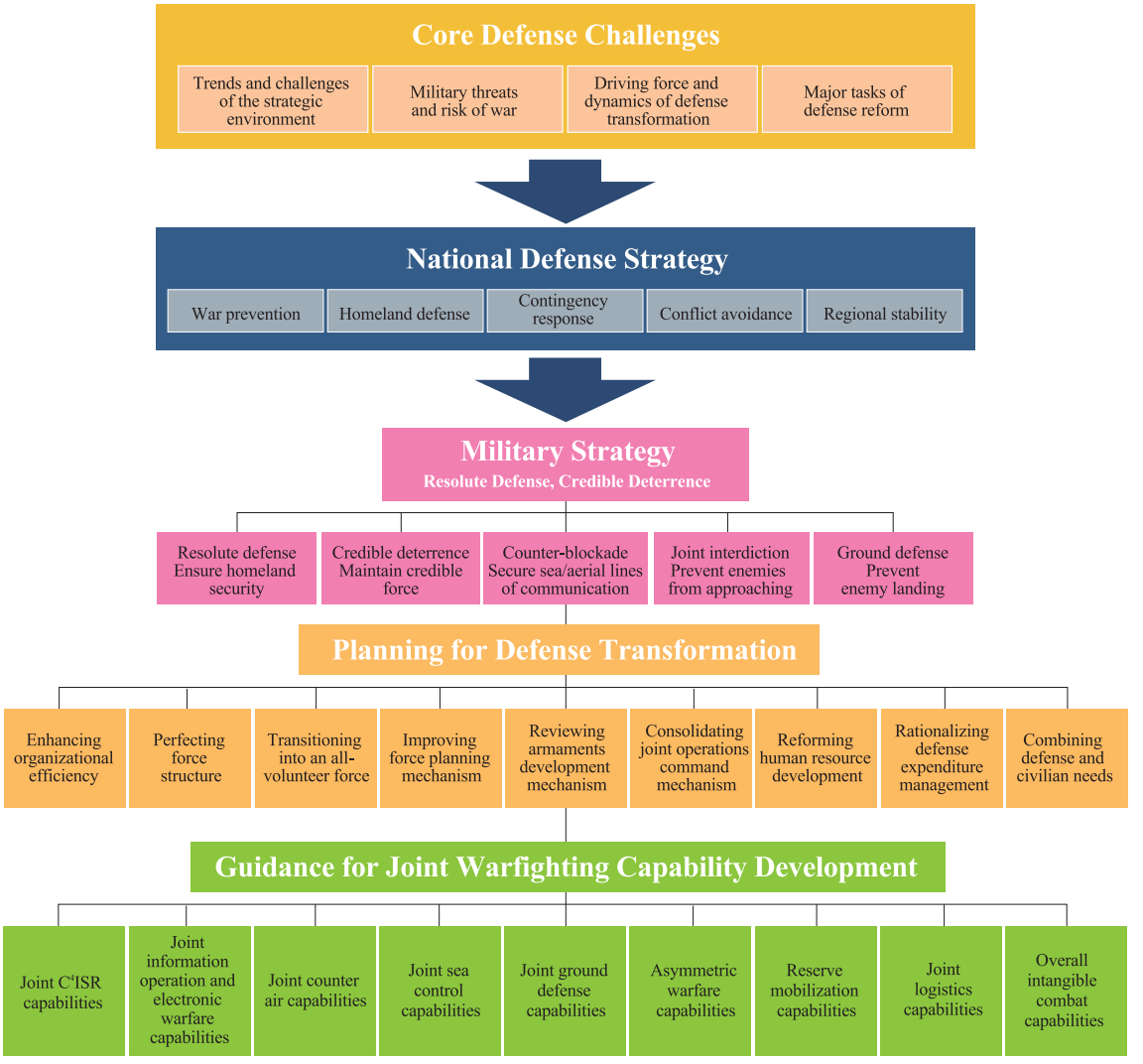
(9) Overall intangible combat capabilities

Set the overall objectives as follows: "solidify national identity, cultivate patriotic integrity, nurture honorable virtues, clarify military discipline, harness force solidarity, consolidate a winning determination, counter enemies' psychological warfare, and establish all-out defense".

IV. Perspectives for the Future

In the face of the changing strategic environment, the MND has compiled its very first QDR to address future challenges and introduce future planning and reform directions. The MND is fully devoted to implementing defense transformation and improving operational capabilities in order to effectively achieve national defense strategic objectives. Subsequently, the MND will apply effective management and evaluation mechanisms to ensure the realization of all the objectives laid out in the QDR, so as to realize the President's defense concept, achieve the goals of "war prevention" and "resolute defense and credible deterrence", and facilitate the sustainable development of the ROC in a peaceful and stable environment.

Framework of the ROC Quadrennial Defense Review



INTRODUCTION

I. Legal Basis and Background of the Quadrennial Defense Review

In accordance with Article 137 of the Constitution of the Republic of China, the Armed Forces shall have a mission of "protecting national security and maintaining world peace". The Ministry of National Defense shall observe the principle of "Taiwan first and in the interest of the people" as announced by the President and adhere to the concept of "preventive defense". To ensure a peaceful and secure environment for the nation's development and prevent armed conflicts from endangering people's lives and properties, the MND is committed to maintaining an appropriate defense force during peacetime as a means of deterring war, preventing conflict, protecting the homeland, and fending off any potential aggressors. Due to the complexity and seriousness of the challenges it faces, the MND must conduct a pragmatic, full-scale review of the national security environment, cross-strait relations, and military threats to formulate appropriate defense strategies, promote the transformation of the Armed Forces, and review defense policies and the priority of force development, in order to strike an optimal balance between strategic needs and resource limitations, and thereby ensure that the Armed Forces' strength can achieve national security objectives.

To ensure that the defense readiness complies with overall strategic guidance and is subject to legislative supervision, the Legislative Yuan passed the "Amendment to Article 31 of the National Defense

Act" on July 17, 2008, which was promulgated by the President on August 6, 2008. The newly-added Paragraph 4 of this article states. “The Ministry of National Defense shall, within ten months after each presidential inauguration, publicly submit a Quadrennial Defense Review to the Legislative Yuan.” The purpose of amending this law was to allow review of existing defense policies by each newly-inaugurated president and to ensure that the President's defense blueprint and strategic ideas are reflected in MND policies. The QDR also provides the Legislative Yuan with a basis for reviewing and supervising the MND's policy implementation.

II. Significance of the Quadrennial Defense Review

The issuance of the first QDR has three important implications. Firstly, the QDR incorporates the President's overarching concept of national defense in the MND's policy planning, and further solidifies the concept of “civilian control over the military”. Secondly, the QDR follows the President's overarching concept of national security in shaping the MND’s defense strategy and force planning, thus consolidating the strategic planning system and ensuring that the ROC Armed Forces' organization, plans, and capabilities effectively support defense strategies and fulfill military missions. Thirdly, the establishment of a four-year periodical review mechanism will enable the MND to conduct comprehensive assessments of major defense policies and policy planning, integrate internal views, incorporate a broad range of external recommendations, and articulate the vision for future reforms and development based on an up-to-date thinking.

Unlike most conventional policy reviews, the QDR not only examines the current state of the Armed Forces, but also performs an integrated assessment and proposes forward-looking reforms. The QDR relies on an assessment of the future strategic environment and trends to determine the goals the Armed Forces must attain, capabilities they must possess, and readiness they must achieve to respond to future security challenges. The QDR further examines the Armed Forces' current deficiencies and shortcomings, and lays out appropriate transformation strategies and reform measures accordingly. In other words, the QDR is not just a retrospective or summary review, but also a new starting point and roadmap for further progress. Accordingly, the MND must engage in a series of carefully thought-out planning, assessment, and improvement actions, and pragmatically assess existing strategies, organizations, plans, resources, priorities, and focuses to update defense strategies and attain national security objectives.

III. Methodology and Logic behind the Quadrennial Defense Review

The compilation of this QDR adopted the logic of the "strategy to task" principle. This is to say, in order to uphold national interests and achieve national security objectives, it is necessary to forecast the future security environment and determine defense challenges and opportunities, and use this information to map out defense strategies and military strategies and the missions needed to realize them. This process will allow development of key abilities corresponding to mission needs, and facilitate the acquisition of weaponry needed to create effective fighting power.

Therefore, the QDR's role in the Planning-Programming-Budgeting System (PPBS) is to clarify defense strategy guidance and the focus of future military capability development, thereby guiding the formulation of "force planning concepts" and "force buildup program" within military strategy plans. This will ensure that the allocation of defense resources can satisfy force requirements in accordance with defense strategy plans, and achieve the goals of force development and national defense.

IV. Framework of the Quadrennial Defense Review

The compilation of this QDR is based on the defense concept proclaimed by the President on numerous occasions and the policy directives of the Minister of National Defense. The QDR task force recruited staff from policy offices and agencies of the MND. Experts and scholars from the private sector were also invited to form a consulting team. The QDR comprehensively examined the Armed Forces' current systems, mechanisms, and major policies

> The full name of the Armed Forces planning and budgeting system is the "Planning, Programming and Budgeting System (PPBS). This system is used by the MND to perform strategic decision-making and resource management, and employs a series of interconnected documentary procedures to tightly coordinate strategies, plans, and budgets. The system enables the effective utilization of defense resources to achieve anticipated strategic objectives.

and plans in a forward-looking manner to identify problems and deficiencies and formulated improvement methods to determine future strategic guidance and directions of force development.

The QDR contains four chapters: "Core Defense Challenges",

"National Strategic Guidance", "Planning for Defense Transformation", and "Guidance for Joint Warfighting Capability Development." The logical process consists of identifying security challenges and, accordingly, formulating strategic guidance and specific actions of defense transformation to serve as the foundation for building capabilities needed by the Armed Forces. The purpose is to enhance efficiency of defense organizations, strengthen self-defense capabilities, effectively safeguard national security, and collaborate with various administration measures of the government, so as to achieve the goals of creating peace and maintaining stability across the Taiwan Strait. The following is a summary of the QDR:

1. Core defense challenges

   In the foreseeable future, key challenges facing Taiwan's defense include coping with changes in regional and cross-strait security environments, countering military threats from the PRC, updating strategies, restructuring the Armed Forces, to develop a mix of defensive capabilities, and facilitating economic development with defense investments. To address the aforementioned challenges, the MND must utilize limited resources to promote transformation measures for organizational efficiency, critical military capabilities, joint warfighting capabilities, defense technology advancement, industrial development and all-out defense.

2. Defense strategic guidance

   Taiwan's defense strategy seeks to protect national security, keep the Taiwan Strait free of war, and enable the people to live and work in peace and contentment. The country's current defense strategy has the objectives of war prevention,

homeland defense, contingency response, conflict avoidance, and regional stability. By building a "Hard ROC" defense and participating in regional security cooperation, the Armed Forces can deter potential aggressors from taking reckless actions. The military strategic concept is "resolute defense and credible deterrence". When war is inevitable, the Armed Forces shall exert joint warfighting capabilities and also draw on civilian sector resources in an all-out defense to deter, defeat, and annihilate the enemy and safeguard national security.

3. Planning for defense transformation

Transformation is a fundamental task in defense strategies, which enables the Armed Forces to cope with the evolving strategic environment and diversified challenges in the future. The MND must strike an appropriate balance between dealing with current security threats and promoting reform and transformation. Critical transformation elements include organizational efficiency, force structure, transitioning into an all-volunteer force, force planning, armaments development mechanism, joint operations command mechanism, human resources development, defense expenditure management, and combining defense with civilian needs.

4. Guidance for joint warfighting capability development

Based on the guidance of defensive defense and the military strategic concept of "resolute defense and credible deterrence", the ROC Armed Forces must consolidate various warfighting capabilities on the basis of improved joint operations efficiency in order to achieve "strategic sustainment and tactical decisiveness", dissolve enemy attempts to achieve a quick

victory, and seize on a strategic turning point. Key items include joint C^4ISR, joint information operation (IO) and electronic warfare (EW), joint counter air, joint sea control, joint ground defense, asymmetric warfare, reserve mobilization, joint logistics, and intangible combat capabilities.

Chapter 1
CORE DEFENSE CHALLENGES

Section 1 Trends and Challenges of the Strategic Environment

I. The Armed Forces Needs to Proactively Participate in Security Cooperation in an Evolving Regional Environment

Currently, the strategic environment in the Asia-pacific is relatively peaceful and stable. The region is witnessing accelerated economic integration as economic development is the first priority for the majority of states within the region. Conflict and war are seen as a destructive behavior. Under mutual reciprocal gestures of goodwill from both sides of the Taiwan Strait as the ROC transitions to a new administration, there have been constructive improvements to cross-strait relations, opening the way for concrete interaction and cooperation.

Furthermore, the US-Japan security agreement and US-Republic of Korea Mutual Defense Treaty still exist, benefiting the maintenance of stability in the East Asia region. In the foreseeable future, there is a very low probability of war between states in the region. However, the emergence of many transnational security issues, such as international terrorism, weapons proliferation (including small arms and weapons of mass destruction), illegal activities from armed groups (such as pirates), epidemics and pandemics, and major natural disasters, have become increasingly more threatening towards the security and interests of

various states. Multilateral cooperation is urgently needed to remedy these issues.

Also, rapid growth of the overall national capabilities of the PRC is producing fundamental changes to the security situation of Taiwan, which needs to be seriously looked upon. In the last 30 years, the economic growth, political stability, and military and diplomatic capabilities of the PRC have increased dramatically. In particular, it has improved its relationships with countries around the world through economic, energy, and security diplomacy, allowing it to participate in major international affairs, and attain decisive leadership in relevant issues. In contrast to the PRC's influence in regional security affairs, Taiwan's participation in regional security affairs is comparatively minor, creating severe challenges to Taiwan's role in regional security.

In order to address possible trends that may be unfavorable for Taiwan's role in regional security, to integrate common interests in regional security, and to prevent transnational security threats, the ROC Armed Forces need to continue increasing the number of its partners and avenues for military exchanges, proactively participate in regional security cooperation activities, and, through the establishment of military CBMs, explore possibilities of cross-strait security cooperation to maintain peace in the Taiwan Strait and stability in the region.

II. The Armed Forces Need to Undergo Strategic Adjustments to Address Changes in the Security Situation of the Taiwan Strait

Since taking office in May 2008, President Ma has upheld the principle of "Taiwan first and for the interest of the people", adopting a pragmatic stance in the approach to cross-strait matters. This has

improved concrete benefits for the people and a gradual easing of cross-strait tensions. Under the ROC constitutional framework and the "no unification, no independence, and no use of force" policy, the government is offering the principles of "facing reality, pioneering a new future, shelving controversies, and pursuing win-win solutions" in cross-strait interactions, exploring a balance of mutual cross-strait interests, and seeking peace in the Taiwan Strait. The PRC has also reciprocated such goodwill. The governments on both sides have resumed interaction and negotiations through intermediating organizations, opening the way for interaction and cooperation. Thus, subtle changes are occurring in the security situation over the Taiwan Strait.

The Armed Forces' strategic plans and force development and readiness undertakings must be effective in responding to changes in the strategic environment. They should also be guided by national interest and the government's overall state policies. Despite the current relatively relaxed security situation over the Taiwan-Strait, the PRC's rapid development in military capabilities remains the most direct security challenge for Taiwan. Mainland China's progress is as much of an important opportunity for the nation, as it is an obvious threat. And the ROC Armed Forces' responsibility is to minimize such threat so that Taiwan can enjoy a peaceful external environment and create more development opportunities thereafter.

During ROC's pragmatic cross-strait interaction with the PRC, the Armed Forces must still maintain strong defense capabilities, so that Taiwan can enjoy protected national security and establish a more lasting peace over the Taiwan Strait. In order to address developing trends in the strategic environment, the Armed Forces needs to

review national defense strategy and military strategy in accordance with the President's concept of "deepening peaceful ideologies and consolidating self-defense capabilities", and formulate new guidance and directions to lead force developments and enhance combat readiness, thereby maximizing our national interests.

III. The Armed Forces Need to Address Unconventional Security Threats with the Emergence and Development of Globalization Trends

Since the revolution of information technology, third-wave industrial revolution, and the emergence of a global market economy, the world has been evolving towards globalization. This wave of globalization has loosened up national boundaries, deepened the interdependence between states, and seriously challenged the political and administrative capabilities of governments in dealing with globalization-related issues. In particular, the emergence of transnational actors and non-state actors has become a major influence in international security affairs and national security.

After the "9/11 terrorist attack" in 2001, subsequent developments have increasingly highlighted the destructiveness of international terrorist activities and proliferation of weapons of mass destruction (WMDs) against national security. Counter-terrorism has become a difficult mission that requires long-term commitment and multilateral cooperation from modern states. The ROC Armed Forces have thus established the policy guidelines of "counter-terrorism and contingency response" in the last several years to address the threat of global terrorism, and undergo development of relevant response capabilities. In the future, the Armed Forces will continue to enhance risk warning

and control mechanisms and increase rapid response capabilities in order to effectively support national counter-terrorism missions.

In addition, under continuous influence of globalization, unconventional security issues such as naval escorts (to prevent piracy assaults), defense against chemical and biological threats, control of trans-regional epidemic outbreaks, and major disaster relief, etc., have become increasingly important. In the face of globalization and an international security environment with deepening interdependence, the ROC Armed Forces need comprehensive measures to address unconventional security threats and establish professional capabilities to perform missions of "military operations other than war (MOOTW)", enhance emergency responsiveness, risk management, and post-occurrence rescue, so as to support the government in protecting the people's livelihood, property, and security, and safeguarding national interests.

Section 2 Military Threats and Risk of War

I. Opportunities and Challenges Co-exist in the Taiwan Strait Security Situation

Since the new administration came into office, it has been striving to create an environment for cross-strait reconciliation and peace, and to seek opportunities to resume dialogue and communication, so that the two sides have now resumed negotiations. However, although cross-strait relations are gradually improving and military tensions have somewhat decreased, the two sides are still militarily confronting

each other. Since the PRC has never renounced the use of military force against Taiwan, the ROC still faces palpable military threats. Therefore, vigilance for readiness preparation cannot be relaxed. The development of this security situation is attested by the following facts:

1. The PRC has yet to renounce the use of military force against Taiwan

   Article 8 of the Anti-Secession Law passed by the PRC in March 2005 stipulates that, under specific circumstances, the PRC government regards itself as entitled to employ non-peaceful and other necessary means against Taiwan. This article provides the PRC with certain ambiguities and flexibilities in terms of means, forms, and timing when dealing with Taiwan. If cross-strait military conflict occurs, the PRC could cite this legislation to legitimize its military actions and inhibit any potential international intervention.

2. PRC military preparations still aim at Taiwan

   Despite the PRC's reciprocation, to some degree, of the ROC's goodwill, Beijing's military preparations still indicate that combat against Taiwan remains an important priority and possible option. Concrete facts include:

(1) Establishment of advanced guided missile brigades in the Guangdong, Fujian, and Jiangxi areas, and continued deployment of short and medium-range ballistic missiles covering all of Taiwan.

(2) Deployment of new air defense missiles (S-300PMU2 and HQ-9), with ranges covering areas surrounding airports in Taiwan and air patrol areas.

(3) Deployment of advanced fighters in airbases within 600 nautical miles from Taiwan, including Russian-made Sukhoi aircraft (SU-27 and SU-30 fighters).
(4) Continued developments of submarine capabilities, with activities extended to Taiwan's eastern coast and approaching the middle of the Pacific Ocean.
(5) The PRC Navy has organized trans-regional and long-range navigation training groups, with activities going beyond the first island chain, gradually increasing its strategic depth in coastal defense.
(6) Continued expansions of amphibious landing, coast-to-coast rapid landing, and airborne capabilities, as well as exercises in triphibious assault operations.
(7) In coastal areas of Zhejiang and Fujian provinces, exercises of joint sea-and-air blockade and control, and precision strikes have been conducted on offshore islands.
(8) The deployment of new anti-ship missiles (YJ-62A) in coastal areas of Fujian that cover targets throughout the Taiwan Strait.

3. The PRC's military modernization lacks transparency

The PRC's military developments are relatively opaque, which, in recent years, continue to be a sensitive issue to surrounding nations in the Asia-Pacific. The white paper of China's National Defense in 2008, released on January 20, 2009, indicates that its defense budget for 2008 was $417.769 billion RMB. This does not include research and development (R&D), People's Armed Police funding, weapons sale profits, and external revenues from defense industries. Despite visible

disparities between different sources on estimates of the PRC's military expenditures, most estimates agree that the PRC's officially announced defense budget was palpably lower than the actual amount. Also, in recent years, the PRC insists to external observers that the growth of its defense budget merely reflects its economic development and budgetary revenues, as opposed to military expansion. However, this explanation can hardly dispel suspicion.

With over a decade of consecutive double digit percentile growth in its defense budget, the PRC's military modernization efforts have received alarming amounts of funding, which have facilitated its military reforms and weapon and equipment upgrades. Although the long-term objective of the PRC's military modernization is to establish regional and global military capabilities that are not entirely targeted at the Taiwan Strait situations, the PRC's increasing military capabilities endows it with increasingly more powerful capabilities against Taiwan. Furthermore, the PRC has never renounced the intention of using of military force against Taiwan, which imposes increasing pressure on our national defense and security.

4. Cross-strait military CBMs are yet to be established

Despite the fact that current cross-strait reconciliations lead to an opportunity for peace over the Taiwan Strait, and the two sides may be able to engage in broader interaction and cooperation in the future, the longstanding military standoff over the Taiwan Strait remains the most complex and difficult problem between the two sides. After President Ma assumed

the presidency, he called on the PRC many times to withdraw ballistic missiles deployed against Taiwan, and proposed cross-strait negotiations for "establishing military CBMs to relieve military pressure over the Taiwan Strait and avoid possible military accidents or armed conflicts.

However, so far the cross-strait CBMs have seen limited development. Currently, each of the two sides has partially adopted declaratory, transparent, or somewhat tacit measures, such as announcement of defense reports, revelation of plans for major military exercises, and self-imposed limitations on aircraft and ship maneuvering activities. No further implementation of communication (such as setting up hotlines), regulatory (such as code of conduct over the Taiwan Strait and military aircraft and ship encountering agreements), or limitation measures (such as limitations on the deployment of specific forces and military activities, as well as force reduction) have been achieved, signifying that the risk of cross-strait military accidents or conflicts still exists.

Overall, in view of the relative weakening of the ROC's military capabilities as compared to the strengthening of the People's Liberation Army (PLA), Taiwan does not intend to engage in an arms race, and will also not provoke and cause conflicts. However, the ROC must still remain steadfast in its determination for self defense and consolidate defense capabilities to deter the possible occurrence of war. When the time is ripe, the ROC will further promote cross-strait military CBMs to improve understanding through communication, resolve hostility through interaction, and proactively participate in regional cooperation to maintain peace over the Taiwan Strait

and stability within the region.

II. Major Threats from the PRC

Based on factors such as the PRC's military modernization progress, strategic concept development, force structure and deployment, and capabilities to research and produce weapons, it can be said that the PRC's capabilities in launching a war against Taiwan have increased dramatically. Currently, the PRC is proactively developing surveillance/ reconnaissance satellites, electronic warfare, information warfare, ballistic missiles and cruise missiles, air warfare, naval warfare, and landing assault capabilities. In the future, it will become a severe threat against the ROC's C^4ISR , sea/aerial lines of communication, and homeland defense. Additionally, the PRC may employ the "non-military three-front war" to secure legal, public opinion, and psychological advantages Details explained as follow:

1. Surveillance, reconnaissance and satellites capabilities

   The PRC has currently deployed over 30 positioning, navigation, communication, surveillance, research, and meteorological satellites. In the future, it will accelerate its aerospace research projects, with emphasis on launching and deploying surveillance, communication, and navigation satellites to create comprehensive capabilities such as surveillance systems, global navigation, and jam-resistant communication. In wartime, they can provide electronic warning and jamming, and support precision strikes with anti-radiation unmanned aircraft, ballistic missiles, and cruise missiles.

   Also, by using beyond-visual-range sky-wave and ground-wave radars in conjunction with warning aircraft,

unmanned reconnaissance aircraft, and other surveillance and reconnaissance equipment, the PRC possesses around-the-clock surveillance and reconnaissance capabilities over the western Pacific, eastern Taiwan, and the Okinawa. Additionally, on January 12, 2007, the PRC successfully destroyed a discarded low-orbit weather satellite with a medium-range ballistic missile, indicating that it has attained anti-low-orbit satellite capabilities. In the future, it will continue to develop anti-satellite weapon platforms that pose threats to the normal operation of Taiwan's satellite communication.

2. Electronic warfare capabilities

The PLA's ground electronic warfare (EW) forces are equipped with new communication jamming equipment, and have established various jamming sites. The PLA Air Force has deployed long-range jamming aircraft, anti-radiation unmanned aircraft, and anti-radiation missiles. In recent years, there has been an emphasis on conducting exercises in complex electromagnetic environments. In wartime, the PRC can engage in electronic jamming against the ROC Armed Forces and disable our command, control, information, and communication capabilities.

In the future, the PRC will develop EW equipment for fixed wing aircraft, helicopters, and unmanned aircraft, accelerate electromagnetic pulse (EMP) munitions, and other electromagnetic weapons, and proactively research and develop low-frequency EMP, kinetic interceptors, and other innovative weapons to seize electromagnetic advantage in the battlefield and engage in an offensive war.

3. Information operation capabilities

The PLA has established professional information operation (IO) units to research and develop computer viruses, devise tactics and fighting techniques, and establish capabilities to attack the enemy's computer systems and networks. It will wage information operations against its enemy by means of joint military and civilian participation, combining civilian network resources and information technology personnel to form a large network of assault capacity.

In recent years, there have been experiments, launched from mainland China or locations out of China, on network hacking, intelligence gathering, wireless network infiltration, and virus attacks against Taiwan. It is very possible that, in wartime, the PRC may aim at disrupting our political and military information networks, causing overall failure of Taiwan's normal information system operations.

4. Ballistic and cruise missile capabilities

The PLA has currently deployed more than 1,300 short-range ballistic missiles and cruise missiles in areas opposite Taiwan. Various kinds of improved missiles continue to be mass-produced and gradually assigned to the PLA.

In the future, the PLA will continue to research and manufacture high precision and interception-resistant ballistic missiles, and deploy supersonic cruise missiles, which enable rapid multi-wave missile assaults against Taiwan, and it can conduct precision strikes against Taiwan's critical political and military infrastructures, airports, sea ports, and military bases.

5. Air operations capabilities

The PLA's Air Forces against Taiwan consist of air defense missiles, fighters and bomber aircraft. Currently, there are approximately 700 new-generation fighters, which can engage in combat against Taiwan without resupply on the ground first. In the future, the PRC will continue researching and improving early warning aircraft and command and communication aircraft to enhance aerial command, control, and target acquisition capabilities, acquire aerial refueling aircraft to extend air combat radius, and mass-produce new fighter and bomber aircraft (J-10, J-7, and H-6 missile aircraft), Sukhoi series fighters, and unmanned combat aerial vehicles (UCAVs) to dramatically increase the PRC's air assault and surprise attack capabilities against Taiwan.

Additionally, the PLA has combined the Russian S-300 series missiles and indigenous Red Flag series of air defense missiles, forming a multilayer air defense network that contains short, medium, and long-range defense layers, with range covering airspace around the centerline of the Taiwan Strait, severely limiting the cruise range of the ROC fighters and threatening the safety of Taiwan naval and aerial surveillance forces in the Taiwan Strait.

6. Maritime operations capabilities

(1) Surface warfare: The PLA Navy has completed its purchase of the "Sovremenny" class missile destroyers, and manufactured its own large combatant ships, large multipurpose landing ships, and new missile speedboats. In the future, it will continue to consolidate mobile maritime force buildup required for adapting to an information-based

environment, and increase overall offshore and blue water warfighting capabilities, to achieve its objective of preventing foreign forces from intervening in theaters of operation by sea.

(2) Submarines: In recent years, the PRC has accelerated its research and manufacture of new nuclear-powered and conventional submarines, and purchased Kilo-class submarines from Russia, which greatly increases its underwater combat capabilities capable of partially blockading Taiwan and interrupting the ROC's maritime interdiction forces.

(3) Aircraft carriers: The PRC has been proactively pursuing research and manufacture projects of aircraft carriers in recent years, indicating its intention and determination to develop sea control capabilities in blue waters. With the establishment of its aircraft carrier battle groups in the future, they will pose severe threats to the waters east of Taiwan, with ability to directly attack Taiwan's eastern military facilities, or cut off the Taiwan's sea lines of communication (SLOCs) to the external world, and hence limit the mobility and strategic depth of the ROC Armed Forces.

7. Landing assault capabilities

The PRC currently possesses numerical advantages in its ground forces against Taiwan. Currently, its contingency mobile striking forces are fully equipped, organized, and trained, with emphases on engaging in combined amphibious assault operations in foreign terrains. They can engage in combat immediately without pre-combat training. In recent

years, the PLA has continued to enhance training and exercises in seizing coastal islands, and strengthening its triphibious assault capability.

In the future, the PRC will continue to construct large multipurpose landing ships, new amphibious landing ships, and hovercraft to increase its amphibious operation capacity, so as to establish capabilities to transport two amphibious mechanized infantry divisions at the same time and reduce the time required for force projection. In addition, the PRC is researching, manufacturing and purchasing large transport aircraft and utility helicopters from abroad to increase its airborne/air assault capacity and establishing triphibious attack and combined ground and air operation capabilities. Combining its Second Artillery Corps, and precision maritime and air strike capabilities, the PRC is now capable of seizing and blockading Taiwan's offshore islands. In the future, as its air and sea transport and logistics capabilities improve, it will greatly increase its chances of winning the war against Taiwan.

8. The "three-front war" against Taiwan

By incorporating the non-military three-front war (legal, public opinion, and psychological warfare) into its military thinking, and in conjunction with its modern warfare ideology which integrates political, economic, diplomatic, military, and psychological means, the PRC is able to employ measures other than military capabilities to assist in achieving its objectives of war.

The essence of the PRC's "three-front war" may include utilizing legal warfare to seek justification and legitimacy in

starting a war, employing public opinion warfare to influence national consciousness and acquire international support, thus producing a psychological intimidation effect on Taiwan, and conducting psychological warfare, with a two-prong strategy scheme that offers peaceful resolution and exerts military intimidation at the same time, to disrupt our willpower to resist and achieve its objectives of "attaining decisive results with a small fight" or "winning without fighting".

III. Possible PRC Military Actions against Taiwan

According to the analyses of current PLA capabilities and future developments, its possible course of military action against Taiwan can be categorized into five types:

1. Military intimidation

   The PLA may wage psychological warfare against Taiwan by means of escalating the intensity of its military activities, adjusting force deployments, including forward deployments, Field Training exercises, and firepower demonstration, and use media influences to exaggerate the seriousness of military situation over the Taiwan Strait, so as to stoke internal panic in Taiwan and undermine our willpower and morale.

2. Partial blockade

   The PLA may use its Second Artillery Corps, navy, and air force to conduct partial blockades against Taiwan's important ports, offshore islands, and routes connecting to the outside world, and blockade or seize Taiwan's offshore or remote islands, in order to shatter the will and morale of the populace, cripple our economic lifeline, depress our internal and external

environment, and force a peace negotiation on their terms.

3. Surgical strikes

The PLA may use ballistic missiles, cruise missiles, and air-launched land attack missiles to bombard Taiwan's command systems, political and economic centers of gravity, decisive critical nodes, and symbolic targets, and gradually escalate and intensify its offensive against Taiwan in order to achieve the objectives of delivering punitive strikes and disrupting Taiwan's solidarity, or gaining an upper hand in military actions by collapsing Taiwan's will to fight.

4. Asymmetric warfare

In conjunction with low-damage, high-efficiency, quick, and decisive military actions, the PLA may employ special operation forces and hidden agents to conduct decapitation operations. Furthermore, the PLA may employ cyber and information operations, and other feasible measures to disrupt Taiwan's critical political, economic, military infrastructures, and information systems, so as to debilitate C^4ISR systems and cripple the ROC Armed Forces' counter strike capabilities

5. Rapid landing

The PLA may combine the employment of its Second Artillery Corps with its armed forces to wage a large scale triphibious invasion against Taiwan, emphasizing quick fighting and quick victory, with the objective of forcing the ROC to plead for peace before possible foreign powers' intervention and creating an irreversible *fait accompli* to block international intervention.

From the aforementioned analysis of possible PRC military

activities and given the fact that the PRC currently does not possess sufficient capabilities to conduct an amphibious landing assault against Taiwan and prevent foreign intervention, if the PRC does employ military actions to achieve its political ends in the near future, then it is more likely to employ approaches that include strategic intimidation, partial blockades (including seizure of offshore islands), strikes against critical nodes, or asymmetrical warfare. In the future, when the PRC acquires the capabilities to seize Taiwan, or, when certain circumstances so urgently require, it may directly wage a large-scale invasion on Taiwan.

Section 3 Driving Force and Dynamics of Defense Transformation

I. Impacts from New Military Technologies and Patterns of War

Because of rapid advance in modern technology, the effectiveness of weaponry is increasing day by day, especially in military applications of aerospace surveillance, electromagnetic frequency mapping, digital information, nanotechnology, precision guidance, and high energy lasers technologies. Advanced states around the world are motivated to develop operational concepts such as transparent battlefield, electromagnetic attack and defense, joint air and ground operations, long-range elimination of enemies, and precision strike, thereby resulting in the gradual evolution of the pattern of modern warfare, and shaping a wave of global military reforms. Having looked at the effects of modern technologies in military applications and their developmental

trends and witnessed the Persian Gulf War (1991), Kosovo War (1999), Afghanistan War (2001), and US-Iraq War (2003), the Armed Forces have been keenly aware that modern high technology warfare has undergone several characteristic changes, including:

1. Multi-dimensional battle space

   The battle space of modern warfare had gone from the traditional three geographical dimensions (ground, sea, air) to a multi-dimensional one to include space, electromagnetic dimension, network dimension, and psychological dimension. Therefore, the undertaking of war is no longer confrontations between two parties in a single dimension. More emphasis needs to be placed on the relationship and effective integration of multi-dimensional capabilities, and achieving victory through joint operations.

2. Information advantages and battlefield awareness

   Modern information and electronic technologies have advanced rapidly, allowing those with information advantages on the battlefield to lift, to a certain extent, the fog of war, and further cut off the enemy's information and communication networks, thus monopolizing information on the battlefield. In the future, battlespace will become more transparent, and awareness for battlefield situations will become much more important. The ability to accurately and quickly capture and process battlefield intelligence will be essential for precision strikes on the weaknesses of the enemy's forces and ensuring success of operations.

3. Precision destruction and attacks on center of gravity

   Because of the weapon systems developments in surveillance,

precision guidance technologies, modern warfare increasingly emphasizes precision strike on the enemy's strategic center of gravity, with the intention of disrupting the enemies' psychological balance and collapsing their will to fight and subsequent warfighting capabilities. The relative advantages of this operational pattern can reduce the duration of a war, personnel casualties, and collateral damage to non-combat personnel and facilities.

4. Non-contact warfare

Great improvement in the penetration capability, strike power, and precision of modern weapons is blurring the traditional distinction between front-line and rear areas. By utilizing long-range strike weapons, information operation and network attacks, one can directly penetrate or infiltrate an enemy's defense systems and execute effective strikes against that enemy's critical political, economic, or military targets while avoiding direct contact and engagement.

5. Asymmetric warfare

After the end of the Cold War, advanced industrialized states have enjoyed military advantages. Their potential enemies have thus developed asymmetrical methods in hopes of overcoming these advantages while striking at their weaknesses. The result was the 9/11 Incident and other terrorist attacks, along with unconventional warfare doctrines, such as "unrestricted warfare". Currently, asymmetrical warfare has become an approach to conquer an enemy. The core idea focuses on employing innovative operational tools or tactics to conquer large forces with smaller ones, and gain an advantage against a militarily advantaged adversary.

6. Combat command requires swiftness and adaptability

Under the development of modern command, control, and communication technologies, military decision-makers and battlefield commanders are able to rapidly assess enemy situation, issue orders, and direct operations. Especially, since the modern battlefield is more fickle and complex than before, tactical opportunities may emerge and disappear swiftly. Therefore, the emphasis of operational command has changed from detailed pre-planed actions to controlling battlefield contingencies and flexibly to adjust missions. Future warfare will rely more and more on rapid and accurate early warning, battlefield awareness, command, control, and real-time communication capabilities.

7. Infrastructure security and defense

As societies and economies develop in the information age, states are increasingly dependent on critical infrastructures to maintain the functioning of political and economic systems. Therefore, the vulnerability of these infrastructures makes them important targets for attacks during military conflicts, affecting the sustainment and utilization of a state's overall warfighting potentialities.

8. Immediate reserve mobilization and combat deployment

The operational environment of the Taiwan Strait defense is unique, with characteristics such as shorter warning time, faster operation tempo, and broader sources of threats. In order to rapidly respond to sudden and urgent operational situations, the maneuver and deployment of reserve forces have to satisfy the requirements of immediate mobilization and rapid operational

support.

Facing the wave of global revolution in military affairs, the ROC Armed Forces are fully pushing for military transformation. This is not only a necessary course of action to address the operational pattern in this information age and capture the characteristics of modern warfare, but also the key to successfully forestall the enemy and overcome stronger enemy forces with inferior defense forces. The opportunity for the ROC Armed Forces lies in capitalizing on the current innovation juncture, practically assessing current force structure, and accelerating the transformation of critical warfighting capabilities, so as to cope with the challenges of future warfare.

II. The Challenge of Maximizing Efficiency of the Defense Budget

The defense budget is an important basis for executing national defense policy as well as the financial source for implementing force planning and development. The amount of national defense investment is determined by the government's overall policy objectives and the intensity of external security threats. As a nation, Taiwan needs to assess external military threats and appropriate investments in national defense development in order to safeguard the fruits of political and economic development. Under the framework of the overall national economic development and allocation of financial resources, how the MND can most effectively allocate and apply limited defense resources, and utilize today's budget to address tomorrow's threats, would require reasonable calculation and cautious planning.

In the next several years, the Armed Forces will face the challenge of maximizing benefits of the defense expenditure. In order to construct "Hard ROC" national defense capabilities and take into

consideration overall national developmental factors, the Armed Forces need to undergo a series of transformational planning and reform measures to establish the most appropriate force level. The Armed Forces also need to improve defense planning mechanisms and procedures, including increasing the forward looking of strategic planning, discreetness of formulation requirements, integration of weapon procurements, and appropriateness of resources allocation and prioritization.

In addition, the MND needs to adhere to the spirits of "precise planning and proper utilization of national finances" to consolidate its strategy for utilizing defense resources. And in order to effectively reduce the nation's overall financial burden, the MND needs to use methods such as future financial projections, defense planning assessments, and cost-benefit analyses to carefully plan and allocate defense resources, reasonably budget for defense requirements, and cut back on unessential expenditures. In particular, personnel maintenance budget is legally mandated as an obligatory expenditure, which should be accurately budgeted and allocated. The operational maintenance budget should first satisfy demands such as weaponry and equipment availability and readiness exercises that are essential to maintain warfighting capabilities. The military investment budget will be predicated on enhancing the overall joint warfighting capabilities of the Armed Forces, with priority given to the construction of critical capabilities and urgently needed items for readiness, so as to ensure credible defense capabilities.

III. Incorporating the Needs of National and Social Development

The reforms of the Armed Forces mutually interact with changes in the social environment; and the situation of national domestic affairs and economic development also have a major impact on the Armed Forces' development and readiness. According to the "Projections of Population for Taiwan, ROC: 2008 – 2056", published by the Council for Economic Planning and Development of the Executive Yuan, Taiwan's birth rate will continue to decrease from 205,000 births in 2008 to 135,000 births by 2056. In other words, the supply of draftees will decrease dramatically in the future. The current military service system and the current force level will eventually face shortages of draft-eligible men.

Therefore, the Armed Forces need to streamline force level, and gradually replace the conscription system with the volunteer system, so that volunteer soldiers with longer service periods can achieve greater professionalism, more robust psychological caliber, and more stable adaptability, thus enabling a numerically smaller but high quality force to exert greater warfighting effectiveness. The implementation of an all-volunteer force, however, is not only a revolution in military affairs but also an important plan for the nation's human resources. In the future, when the active force are replaced by volunteers, the eligible draftees who have received their short-term military training as required by constitutional obligation could then return to society for further education, employment, or research work, so that the driving force and dynamics of the nation's development and social progress can be developed in tandem.

In addition, because defense expenditure and military investment are relatively large to other outlays, they place considerable burden

on central government finances and furthermore severely challenge overall national finances in the face of current global economic crisis. If the benefits and effects of defense investment can be expanded to strengthen the nation's overall economic development, then defense and civilian needs can be addressed simultaneously, jointly creating a value chain that allows defense development to also create economic benefits and contribute to the people's livelihood.

For example, long-term and stable investments in military technology research and development can contribute to the improvement of dual-purpose (military and civilian purposes) technologies and assist with the enhancement of the nation's overall technological capabilities. Meanwhile, the establishment of long-term and stable capabilities to indigenously manufactured defense weapon systems could collaborate with the government's policy of expanding domestic demands to increase the value of the nation's existing investments and industrial production, encourage economic prosperity, and assist in alleviating unemployment problems. Therefore, the MND has to continue improving armaments development mechanisms, defense technology research and development, armaments investments, and system life cycle management, so that, as the Armed Forces undergo transformation, defense development and national development can be combined together to create a win-win situation.

Section 4 Major Tasks of Defense Reform

Warfighting capability development for the Armed Forces needs to be adjusted according to security threats and national defense strategy. Therefore, in the face of complex strategic environment

and multifaceted mission challenges, the MND's organization, mechanisms, and procedures, as well as the functionality, organization, and structure of the Armed Forces should be systematically evolved to enhance organizational effectiveness and accomplish national defense missions. As the Armed Forces gradually implement the important processes of transformation, several reform issues should be taken as key priorities for the MND in the next few years, including:

1. modifying the MND and services HQs organization to boost organizational efficiency;
2. planning for force structure adjustment to enhance the quality of forces and improve overall warfighting capabilities;
3. implementing an all-volunteer force and recruiting professional manpower to develop a competent force;
4. improving the force planning mechanism and consolidating strategic planning and force development functions;
5. reviewing the armaments development mechanism, and establishing comprehensive scientific research and weapon acquisition and management functions;
6. refining the joint operations mechanism to establish unified command functions for both peacetime and wartime; and
7. reforming the mechanism for human resources development to cultivate professional civilian and military personnel.

I. Adjust National Defense Organization

Since the implementation of the National Defense Act and the Organization Act of the Ministry of National Defense (simplified as the "Two Defense Acts" hereafter) in 2002, the MND has been carrying out national defense organization re-structuring projects,

and has essentially ascertained an organizational framework for the division of labor among military policy, operations, and armaments. The organization and functions of policy staff, joint staff, and service HQs have achieved expected efficiencies after comprehensive reviews and adjustments. However, despite several partial adjustments, some newly established units still exhibit operational problems, which need to be fundamentally resolved or improved in order to attain better efficiencies. Because defense organizations are large with complex functions, it is necessary to utilize modern management methods and tools to carry out appropriate reforms in existing organizational conventions. This will ensure improvements in organizational efficiencies under the precondition of preserving optimal operational experience in organization.

In the future, modifications to MND agencies should adhere to the spirit of the Two Defense Acts to undertake more practical designs. The MND will adhere to the function-oriented principle in other words, adopt the logic of ensuring functional requirements, establishing units and agencies, devising required specialties and posts to make appropriate assessments and cautious planning to proceed with measured organization re-structure, as opposed to indiscriminate organizational downsizing, and construct modern organizations that satisfy the unique national needs. Relevant principles include:

1. The organizational adjustments of the MND's agencies should abide by the spirit of the Two Defense Acts, carefully considering professional functionality, authorities and responsibilities among military policy, operations, and armaments branches, and proceeding with unit establishment, merger, or deactivation according to function-oriented principles.

2. In accordance with the principle of "accountability and specialization", perform comprehensive reviews on the divisions of authorities and responsibilities of all systems, and work procedures to adjust various specialty staff systems, functions, and responsibilities.

II. Plan for Adjustments to Force Structure

The size of the Armed Forces has always been dictated by operational requirements and strategic ideologies. Since 1949, the large offensive forces intended for "offensive operations at the right time" and "unity of offense and defense" have gradually changed to a medium scale defense force intended for defensive defense and "resolute defense". For several decades, the level of the Armed Forces has trended downward with streamlining, and the force structure of army troops as the mainstay, and Navy and Air Force as auxiliaries in the earlier years has changed to a more balanced development among ground, air, and naval forces according to mission characteristics. In recent years, the Armed Forces continue to review force structure and mission requirements according to enemy threats and military strategic concept in order to reduce force level and adjust the organizational structure of forces. The level of the Armed Forces has gradually shrunk from 452,000 personnel in 1997 to 400,000 in 2001, 385,000 in 2004, 296,000 in 2006, and 275,000 in 2008.

Currently, the MND is operating on the military strategic concept of "resolute defense and credible deterrence" to fulfill Taiwan and Penghu defensive missions. In coordination with plans for an all-volunteer force and weapon systems replacement and through validation by modeling and simulation and war gaming, the MND will

be able to determine the functionality and organization of all forces and define the compositions of key force elements (main combat forces), so as to establish proper force structure (including type, organization, number, and balanced ratio for forces of all services) and construct an efficient and competent armed forces to fulfill requirements for defense operations.

III. Implement an All-Volunteer Force

Because the ROC population structure is trending towards having fewer children, the number of draft-eligible men will continue to decrease in the future. Furthermore, in recent years, the mandatory military service period has been shortened, which results in a great increase in the soldier turnover rate and causes fluctuation in the curve of readiness training, making it difficult to maintain readiness levels. Seeing that modern armed forces need to face multifaceted threats and multifarious missions, and at the same time, advanced armaments increasingly require higher quality of integrated systems, procedures, professional knowledge, and operational skills, the ROC Armed Forces urgently needs to increase the more qualified and of volunteer personnel to act as the mainstay force, in order to retain the efficiency of training and combat. In the future, the ROC has to establish a "small but smart and strong" active force that can immediately engage in combat missions to cope with wars that occur without warning, and ensure adequate time for reserve forces to complete mobilization and pre-combat training, thereby accomplishing the objective of homeland defense.

To address demands for competent personnel to cope with high technology warfare, and incorporating economic developments and

societal changes, the Armed Forces are gradually increasing the ratio of volunteer soldiers by reducing conscription demands annually and accordingly increasing volunteer soldiers' posts. In addition, by recruiting competent and motivated personnel of appropriate age, and developing towards an all-volunteer force, the ROC will construct a professional, competent, and all-volunteer force. The efforts to develop an all-volunteer force need to be coordinated with assessments and appropriate planning on force requirements, organization and equipment, overall force level, current manning ratios, budgetary support capabilities, defense manpower replenishment, force training, and legislation refinement, so as to gradually and successfully transition to an all-volunteer force without causing gaps in readiness. Additionally, in order to deal with the reduction of the active force level after transformation, the MND should also review enhancements to mobilization, organization, training, and employment of reserve forces, so as to utilize the warfighting capabilities of all-out defense during wartime.

IV. Refine Force Structure

The Armed Forces' regulations and procedures for strategic and force planning is the planning and budgeting system. That system was devised in 1968 with reference to the spirit of the U.S. military's "planning, programming, and budgeting system (PPBS)", and has now been in place for over 30 years since its formal implementation in 1975. During this time, the U.S. military has undergone several important reforms, and revamped its system in 2003 as the "planning, programming, budgeting, and execution system (PPBES)", which reintegrated planning procedures for defense strategy and military

strategy, refined the complex and time-consuming procedures during the planning stage, and enhanced post-implementation efficiency assessment and review. The ROC Armed Forces' planning and budgeting system was, since it was implemented, revised twice respectively in 1983 and 1993, and furthermore subjected to procedural reviews and amendments in 2004 and 2007, in coordination with the organizational adjustments and authorities and responsibilities refinement as a result of the implementation of the Two Defense Acts.

In terms of design principles behind the system, the Armed Forces' planning and budgeting system contains systematic and logical relevant procedures, covering environmental assessments, strategy formulation, resources allocation, planning, budgeting, policy implementation, and evaluation and control, setting a systematic foundation for the ROC's policy implementation and force developments, so as to provide sufficient flexibility for the Armed Forces' strategy planning and force acquisition mechanisms, effectively address environmental and threat changes, and accomplish effective allocation and strict control of defense resources. In the future, the MND should continue to coordinate organizational adjustments to devise operation procedures that are capable of achieving modern managerial efficiencies, so as to enhance the interconnections among strategy, planning, budgeting, and execution, increase the efficiency of defense resources employment, and accomplish the objectives of force planning.

V. Review the Armaments Development Mechanism

The development of advanced technologies has not only changed the mode of warfare, but also affected the development of weapons and

the direction of force development. With the advent of high technology warfare, the Armed Forces have focused on establishing a system for advanced weapon research, development, production, purchase, repair, and maintenance in recent years, in hopes of combining military and civilian technological capacities to fulfill future warfare requirements. Also, as dictated by Article 22 of the National Defense Act, the Armed Forces should seek to gradually accomplish the objective of creating a self-reliant defense establishment. However, there are obvious insufficiencies in the ROC's independent defense technology developments, meaning that domestic military and civilian technology exchange and international armaments cooperation have yet to be integrated in order to stimulate normal armaments development, increase capabilities of the defense industry, and fulfill the Armed Forces' weapon acquisition requirements.

In the future, the Armed Forces' armaments development mechanism should integrate with national economic developments, devise forward-looking armaments procurement strategies through systematic armaments investments in order to fulfill the Armed Forces' readiness requirements. Simultaneously, transformation of the Chung-Shan Institute of Science and Technology and integration of military and civilian defense industry resources should be undertaken, so that military and national technology developments can be mutually utilized to create a win-win situation. In terms of foreign weapon procurement, it should effectively support national defense strategy and the military strategic concept, and flexibly adopt either the "US Foreign Military Sale" or "Direct Commercial Sale" approach, so as to rapidly and reliably acquire advanced and needful defensive armaments from external sources, upgrade armaments in the shortest time possible, and

secure mutual benefit and cooperation with international industries. In terms of autonomous research and development, the ROC should increase the budgetary ratios of high-tech military research and development, extensively recruit technological talents, increase the standards of defense technology, prioritize the establishment of rapid response capabilities, and autonomously develop highly functional and highly precise weaponry, so as to gradually accomplish the objective of a self-reliant national defense.

VI. Improve the Joint Operations Command Mechanism

Modern warfare emphasizes speed and timeliness. Battlefield situations may be complex, ambiguous, and unstable. Joint operations command requires simplicity and efficiency in order to seize opportunities on the battlefield and defeat enemies. In recent years, the organization and operational procedures of the Armed Forces' joint operations command mechanism has rapidly accelerated the speed of command, as validated by the Han-Kuang series exercises throughout the years. However, whether or not the joint operations command mechanism satisfies future defense operations requirements remains to be evaluated. In addition, it should be repeatedly tested and validated through computer war gaming and field training exercises to ensure its validity and effectiveness. Article 13 of the National Defense Act stipulates that the General Staff Headquarters (GSH) is the joint operations command mechanism for the Armed Forces. The GSH should have complete joint operations command functions that satisfy both joint operations command efficiency and staff functions of military operations branch. Organization and operational procedures

of relevant mechanisms are important topics for future reviews and refinement.

In the future, the Armed Forces should still be striving to establish a joint operations command mechanism that is "consistent and accountable in both peacetime and wartime," and is able to sufficiently utilize the effectiveness of joint operations. The mechanism should also establish a network system that allows direct command and control of strategic execution at all levels through the Armed Forces' joint operations command center, so as to be characterized by "simplicity in command of force employment", "shortened chains of command", and "rapid and precise command".

VII. Defense Human Resources Development Reform

Other than high-tech weapons, the most important key to victory in modern warfare is the competence of personnel. In their reform in military affairs, advanced states around the world all have placed great emphasis on fostering national defense personnel, with specific focus on more knowledge-oriented and professional training, in order to effectively address the requirements of high-tech warfare and future defense challenges. As the division of labor for Taiwan's national defense affairs becomes more and more precise, personnel requirements will accordingly emphasize more on professionalism. Besides, because of reduction in the size of national defense organizations and the overall force level trending downwards, the MND will be in more urgent need than the past to foster and employ talented individuals, retain competent personnel, and remove unqualified ones. Therefore, it is necessary for the MND to

appropriately review and reform systems and policies, in coordination with the personnel management system (including career management transferring and promotion), regarding professional military education, including basic education, intermediate education, and advanced education, and problems relating to refining the system of and improving the quality of non-commissioned officers and soldiers.

Furthermore, since implementation of the Two Defense Acts, the MND has started to introduce civilians (civilian officials for national defense) into the national defense system. Although this has nominally fulfilled legal requirements, due to imperfections in the initial planning and follow-up execution, it has led to problems such as uneven civilian personnel quality, job posts not being performed with required skills, newly employed personnel not receiving basic defense knowledge training, and high-level civilian officials being unable to receive advanced strategic education. Therefore, the utility of introducing civilian personnel has not reached expectations, which requires comprehensive reviews and the establishment of forward-looking and all-encompassing training, education, and management systems for defense civilian officials, so as to foster a truly competent defense civilian force to contribute to defense affairs.

Chapter 2
NATIONAL DEFENSE STRATEGIC GUIDANCE

Article 137 of the Republic of China's Constitution stipulates, "It shall be the objective of the national defense of the Republic of China to safeguard national security and preserve world peace." In addition, Article 5 of the National Defense Act states, "The Republic of China Army, Navy and Air Force (ROC Armed Forces) shall abide by the Constitution of the Republic of China, swear allegiance to the nation, protect the people, and perform assigned duties in order to ensure national security."

On the aforementioned basis, the ROC's defense establishment aims to defend national security, safeguard the public's livelihood and sustainable development. Assessing the current strategic environment, threats and challenges, the ROC Armed Forces, in accordance with the concept of "preventive defense", shall actively build modern defense capabilities to effectively defend national territories, deter war, maximize opportunities for the nation and minimize threats, and act as a solid buttress for the government in its efforts of pursuing cross-strait peace, maintaining regional stability, and creating national prosperity.

In the international community and Asia Pacific region, the ROC is striving to maintain peace in the Taiwan Strait, promote regional stability, and play the role of "peacemaker". The purpose of ROC's force development is to defend national security, preparing for but not seeking war; absolutely not provoking or launching attacks; and abiding by international norms against developing nuclear weapons or other weapons of mass destruction (WMDs). The ROC will never

pose a threat to any other country. In addition, the ROC seeks to avoid military confrontations through participation in regional security cooperation, promoting cross-strait military CBMs and other conflict prevention measures; and maintaining peace and stability together with other countries in the region.

Section 1 National Defense Policy

The MND has developed its national defense strategy and military strategy in accordance with the President's national defense policies of building a "Hard ROC" defense force and establishing comprehensive defense capabilities that "cannot be intimidated, seized, devoured, or crashed", as the foundation for planning national defense transformation and the direction of future warfighting capability development. Concrete means are intended to achieve the following six objectives:

1. Establish an elite force: Enhance defense capabilities, push for defense transformation, strive for peace in the Taiwan Strait, and ensure sustainable national development and prosperity for the people.
2. Promote an all-volunteer force: Gradually establish an all-volunteer force, devise and implement relevant complementary measures, appropriately adjust force structure, and streamline the military organization.
3. Strengthen intangible combat capabilities: Consolidate national identity, shape solid military discipline, push for administrative reforms, foster military virtues, and cultivate the military personnel's sense of honor.

4. Refine the armaments mechanism: Acquire necessary weapon systems, elevate defense technology research and development, effectively utilize technology transfers and industrial cooperation, and build a self-reliant defense.
5. Enhance cooperation with friendly countries and allies: Promote military exchanges, strive for strategic cooperation, expand sources of intelligence and early warning, observe regional situations, and ensure national security.
6. Improve benefits for military personnel: Improve welfare for military personnel, realize benefits for military dependents, provide assistance to civilians, consolidate support for military dependents, and boost the morale of the Armed Forces.

Section 2 National Defense Strategy

I. National Defense Objectives

In accordance with the President's overarching concept on national security, Taiwan's defense strategy deploys in strategic planning and concrete measures to implement the "Hard ROC" defense policy. In order to ensure national security, the MND has devised defense strategy and defined objectives and methods to direct the formulation and implementation of military strategy. Current objectives of national defense are:

1. war prevention;
2. homeland defense;
3. contingency response;
4. conflict avoidance; and

5. regional stability.

II. Actions to Achieve the Objectives

1. War prevention

(1) Build "Hard ROC" defense capabilities

Warfighting capability preservation and infrastructure protection should be enhanced to strengthen sustainment after the enemy's first strike. Joint operations capabilities should be fully exploited and favorable force, space, and time conditions seized to annihilate enemies in pertinent sea areas and airspace. In addition, reserve mobilization capabilities should be developed proactively and all-out defense practiced to effectively defend our homeland.

(2) Establish "credible deterrence" capabilities

Defensive countermeasures capabilities will continue to be enhanced, asymmetrical warfare capabilities researched and developed, technological superiorities integrated, self-reliant defense realized, and information technology-driven suppression capabilities established, so as to employ "credible deterrence" capabilities to achieve the objective of "resolute defense".

(3) Establish cross-strait military CBMs

In the current stage, the MND is undertaking relevant planning in accordance with the government's overall policy guidance, and issues and agendas of cross-strait negotiations. Thereafter, as conditions mature in domestic and overseas environments, and in cross-strait situations, the MND will adopt "steady, pragmatic, and incremental" approaches and

follow the short, mid, and long-term agenda to gradually establish cross-strait military CBMs for preventing conflicts in the Taiwan Strait and lowering the probability of war.

(4) Promote regional security exchange and cooperation

Interaction with countries in the Asia-Pacific and other friendly nations will be enhanced, regional security cooperation proactively supported, and bilateral or multilateral cooperative relationships developed, so that Taiwan can play a more active role in pursuing security order in the Asia-Pacific, and contribute to maintaining regional security.

2. Homeland defense

(1) Build elite armed forces

In order to address the demand for highly skilled manpower for high-tech warfare, and considering changes in economic and social conditions, the MND will develop an "all-volunteer force" by employing gradual approaches to annually decrease the number of draftees and accordingly increase the number of volunteers. Concurrently, the MND is also pushing to amend laws and regulations and adjust manning, equipping, and organizations in order to effectively increase the competence of military personnel and establish elite armed forces.

(2) Enhance early warning capabilities

To cope with rapid changing global situations and the expansion of China's military capabilities, the Armed Forces is accelerating the integration of existing intelligence, surveillance, and reconnaissance (ISR) capacity to enhance early warning systems. Simultaneously, intelligence exchange

with neighboring and friendly nations will be enhanced, and international military situations, enemy threats, and high-tech weapon system developments will be closely monitored to increase strategic and tactical early warning capabilities.

(3) Enhance warfighting capability preservation

Warfighting capability preservation measures in response to the threats of the enemy's sudden high-intensity assaults should be enhanced, and backups for operational functions of all major systems established. Paralysis caused by combat damages during the early stages of operations and subsequent compromising of the Armed Forces' sustained operational capabilities should be prevented. In addition, necessary support should be provided to ensure continued operation of critical infrastructures, such as telecommunication, transportation, energy, water supply, and nuclear plants. Protection of critical military infrastructures should be enhanced in order to maintain sustained operational capabilities.

(4) Establish efficient joint operations capabilities

Given the objective of elevating the efficiency of joint operations, various operations capabilities should be developed, and joint operations command mechanisms improved in order to create relative advantages in military operations, execute joint defense operations, and deter enemy incursions.

(5) Consolidate all-out defense capabilities

The all-out defense education should continue to be promoted, public support for an all-out defense rallied,

relevant ministries and agencies coordinated, and defense mobilization realized to establish a comprehensive all-out defense system.

3. Contingency response

(1) Enhance surveillance, awareness, and monitoring capabilities

In the face of multiple security threats, intelligence from relevant ministries and agencies should be effectively combined and a comprehensive systematic monitoring framework established, so as to integrate intelligence, timely warning, and early response measures to effectively defuse a crisis.

(2) Refine contingency response mechanisms

When the nation faces threats of terrorist activities or sudden attacks from hidden enemies, the joint operations command mechanism should, immediately deploy rapid response units to support responsible agencies and local governments in quickly quelling crises to accomplish the objectives of "preventing internal jolts and external assaults".

(3) Build effective disaster relief and response troops

Under existing organization and force structure, response units capable of immediate response and disaster relief capabilities should be assembled. Once the nation faces a major disaster, appropriate forces through legal procedures to support disaster relief operations should be dispatched as requested or assigned by local governments or responsible authorities in order to protect the people's lives and property.

4. Conflict prevention

(1) Establish military conflict prevention mechanisms

Under the joint operations command mechanism, activities in Taiwan's surrounding sea areas and airspace should be strictly monitored, and factors of dynamic and static security threats identified to fulfill the "crisis prevention, situational awareness, contingency response, rapid management, and escalation avoidance" requirements.

(2) Abide by regulations on conflict avoidance

During execution of various missions, forces at all levels should abide by the principle and readiness regulations of "not provoking incidents, not escalating conflicts, and reducing hostile actions" to avoid military conflict caused by miscalculation or accidents.

(3) Enhance capabilities of contingency response and management

Rapid response simulations and exercises should be enhanced to familiarize procedures of handling various contingencies, so that should such incidents happen, they can be rapidly contained or resolved to reduce damage.

5. Regional stability

(1) Participate in regional defense and security dialogues

Participation in regional affairs should be proactive and security dialogue and exchange should be increased. More responsibilities in global security issues such as upgrading defense and security cooperation, preventing weapon proliferation, deterring of terrorist activities, and enhancing humanitarian assistance should also be assumed to make positive contributions to the peace and stability of the Asia-Pacific region.

(2) Contribute to securing regional sea and aerial lines of communication

Systematic channels for strategic communication and security cooperation with regional countries over security maintenance issues of sea and aerial lines of communication should be established in order to ensure freedom of movement of international transportation routes and play a key role in facilitating regional stability.

(3) Participate in regional anti-terrorism and humanitarian assistance activities

Unconventional security issues such as terrorism, piracy, natural disasters, and pandemic diseases have become severe threats to international security and stability in recent years. Upholding the belief of peacekeeping, the ROC will fully support counter-terrorism activities and assist with regional humanitarian relief efforts to fulfill its responsibilities as a global citizen.

Section 3 Military Strategy

I. Military Strategic Guidelines and Objectives

In view of factors such as the security environment in the surrounding areas, strategic postures of Taiwan and potential enemies, and future force developments, the ROC Armed Forces has adopted "resolute defense and credible deterrence" as its military strategic concept, under the defense strategy guidance of "war prevention,

homeland defense, contingency response, conflict avoidance, and regional stability". The armed forces have also adhered to the principle of "preventing war but not fearing war, and preparing for but not provoking war", and will never evoke wars. Only when war is inevitable will the ROC integrate its joint armed forces, combined with overall all-out defense capabilities, to engage in homeland defense to reject, repel, and annihilate the enemy, and ensure national security.

In order to implement the military strategic concept of "resolute defense and credible deterrence", the ROC Armed Forces need to effectively carry out the following missions:

1. Resolute defense—ensure the security of national territories

   In conducting defensive operations, the Armed Forces need to possess capabilities of surviving the enemy's first strike, averting decapitation, maneuvering forces to counter strikes, and sustained operations to achieve the objectives of "strategic sustainment and tactical decisiveness". Strategically, the Armed Forces will assume a defensive posture to fight for depth of defense and create advantageous conditions. Tactically, the Armed Forces need to sufficiently utilize favorable conditions on force, space, and timing, and apply the overall capabilities of all-out defense to resist enemy invasions and ensure territorial security.

2. Credible deterrence—maintain dependable warfighting capabilities

   The Armed Forces should effectively integrate the interoperability of weapon systems, upgrade effectiveness of joint operations, enhance defensive countermeasures capabilities, and faithfully execute combat training and

readiness missions, forcing the enemy to rationally calculate the costs and risks of invasions, thereby deterring any hostile intention to launch an attack.

3. Counter blockade—maintain sea and aerial lines of communication

   Most of the ROC's major strategic supplies and materials are imported, and thus sea and aerial lines of communication are critical to national survival. In peacetime, the Armed Forces need to maintain security in the surrounding airspace and sea areas. In wartime, it will integrate joint operations capabilities to counter the enemy's blockading forces, open safe aerial and sea transportation routes, maintain communications to the outside world, and ensure continuity of government functions.

4. Joint interdiction—block enemies from approaching the homeland

   When an enemy initiates an offensive, according to the guidelines of defense operations, the Armed Forces shall seize favorable conditions, apply defensive countermeasures to attack the enemy's important military targets and amphibious landing forces that are assembling or embarking in our ports. Consequently, as the situation evolves, focus should be placed on two key stages, namely, "joint interdiction operations" and "joint anchorage area attack" to stop and annihilate the enemy when its warfighting capabilities are relatively weak while transiting across the Taiwan Strait.

5. Ground defense—deny enemy landing and setting footholds

   If the enemy attempts an amphibious landing with its superior naval forces and air support, the ROC Armed Forces

needs to apply the overall capabilities of all-out defense, construct defensive systems in the entire "depth defense area", and execute multilayered interdictions to annihilate enemy forces before the lodgments of landed amphibious and airborne troops are secured, and achieve the objective of effective homeland defense.

Depth defense area is a geographical term that refers to the area between the coastal area and mountainous area of Taiwan.

II. Future Requirements for Defense Operations

In order to fulfill the missions defined in the military strategy and address the conditions of battlefields in the Taiwan Strait, characteristics of modern warfare, and developments in military technologies and weapon systems, the Armed Forces' preparedness for future defense operations needs to be developed according to the following principles:

1. Force planning, building, and deployment must focus on preventing the enemy's possible surprise, decapitation, paralysis, or other asymmetrical operations.
2. Warfighting capabilities for various battle dimensions, force structure, command mechanisms, military doctrinal concepts, and campaign tactics and techniques should continue to be integrated toward a joint operations pattern in order to multiply warfighting capabilities and create local battlefield superiority.
3. All major weapon systems and platforms should acquire a higher level of systematic links to reduce the time required for the cycle of "detection – processing – decision – action",

so that integrated warfighting capabilities can meet the objectives of effective and rapid command and control, real-time and uninterrupted communication, and precision and high effective firepower.

4. Capabilities that can stop or delay the enemy offensive and compromise enemy attempts to achieve quick victory should be planned and developed in order to force the enemy to practically assess the costs it will have to pay if it launches an invasion, thereby reducing the possibility of resorting to military means.
5. Facing the threats of high-intensity surprise attacks, the Armed Forces, in terms of defense operations, should emphasize redundant capacity and sustainability of operational functions, and enhance critical infrastructure protection to avoid main warfighting capabilities being paralyzed in the initial stage of military operations, and thereafter failing to achieve strategic sustainment.
6. Considering the reality of relative quantitative inferiority in defensive operations, the ROC Armed Forces, when developing various capabilities, should focus on the effectiveness of contingency operations and force mobility for swifter response and smarter maneuver in order to seize the initiative and reverse unfavorable conditions.
7. Asymmetrical warfighting capabilities tailored against the enemy's operational center of gravity (COG) and critical vulnerabilities should be developed. When conducting defense operations, advantages in time and space to paralyze or block enemy offensives and rout invading forces should be utilized.

Chapter 3
DEFENSE TRANSFORMATION PLANNING

Section 1 Defense Organization

I. Rationale for Defense Organization Reform

According to the National Defense Act and the Organization Act of the Ministry of National Defense, the MND is required to build professional and modernized defense organizations with all units structured on the principle of "accountability and specialization". To this end, the MND reviews the operations and responsibilities of different departments to better manage human resources and maximize organizational efficiency

II. Planning for Defense Organization Adjustments

1. Organizational structure

   Based on the principle of "accountability and specialization", the size of the MND Policy Staff and Joint Staff will be streamlined. The six military services HQs (Army, Navy, Air Force, Combined Logistics, Reserve, and Military Police) will be merged into three HQs (Army, Navy, and Air Force). The new structure will allow the services to focus on their specialties and enhance the efficiency of defense management.

2. Organizational functions

(1) The Two Defense Acts stipulate that the MND is responsible for defense administrative affairs, strategic planning, integrated assessment, resource allocation, human resources planning, reserve affairs, legal affairs, auditing, comptroller, military medical affairs, and armaments, as well as force development, readiness, warfighting preparation, training, formulating the order of battle, and devising and implementing operational plans and executing command authority.

(2) In order to facilitate operational command of the forces, special agencies such as electronic surveillance and intelligence are established, and missile and electronic & information combat forces, which are directly subordinate to MND's administrative command, are also established to effectively support overall operations.

3. Military services commands

The military service commands will be given comprehensive functions, force planning, warfighting preparation and training, troop management, and dedicated logistics in order to enhance force development and readiness capabilities. During peacetime, the service commands are responsible for major tasks of force development and readiness missions. In wartime, the military services support the Joint Staff in conducting warfare, and are also responsible for sustaining the warfighting capabilities of the forces of each military service.

Section 2 Force Structure

I. The Current Force Structure

Currently the ROC Armed Forces total 275,000 members. The key force units of each military service are respectively combined arms brigades for the Army, flotilla for the Navy, and fighter wings for the Air Force. The force structure is organized as follows:

1. Army HQs
   (1) Army command x 3.
   (2) Army aviation command (including airborne brigades x 2, special force command x 1).
   (3) Regional defense command x 4.
   (4) District command x 7.
   (5) Combined arms brigades x 7 (including mechanized infantry brigades x 3, armored brigades x 4).
2. Navy HQs
   (1) Fleet Command (including destroyer flotillas x 2, frigate flotillas x 2, amphibious & service flotilla, special service flotilla, Kidd class destroyer squadron, submarine squadron, Navy Aviation Command, Maritime Surveillance & Reconnaissance Command, Coastal Anti-ship Missile Group, and Anti-ship Missile Boat Group).
   (2) Marine Command (including Marine brigades x 3, Marine groups x 4).
3. Air Force HQs
   (1) Joint Air Operations Command (including Combat Control Wing, Communication, Navigation and Information Wing,

and Meteorological Wing)

(2) Tactical fighter wings x 5, mixed wings x 2.

(3) Song-shan AFB Command.

(4) Air Defense Command.

4. Combined Logistics Command

(1) Combined Logistics Support Command (including regional support commands x 7).

(2) Ordnance Readiness Center, Base operation bays x 2, and storage center.

5. Reserve Command

(1) Regional reserve commands x 3, county and city reserve commands x 21.

(2) New recruit brigades x 8, reserve training centers x 3.

(3) Wartime-regimented ground reserve troops, service reserve troops, political warfare operations reserve troops, navy reserve troops.

6. Military Police Command

(1) Regional military police commands x 4.

7. Combat Forces under the MND Administrative Command

(1) Regional reserve commands x 3, county and city reserve commands x 21.

(2) New recruit brigades x 8, reserve training centers x 3.

(3) Wartime-regimented ground reserve troops, service reserve troops, political warfare operations reserve troops, navy reserve troops.

II. Rationale for Force Structure Adjustments

1. The change of force structure is to adjust force level and organization in a timely manner through assessing the factors of enemy threats, the national security situation, and overall resources allocation. Based on the logic of "warfighting-equipping-organizing-training" and taking affordability as a prerequisite, the MND has to use available resources effectively to level the affordable force size and structure the most cost-effective force organization.

   The term "warfighting-equipping-organizing-training" implies that all equipment, organization and training are devised according to warfighting requirements.

2. The size of ROC Armed Forces shall be adequately measured by the warfighting requirements, as it should be large enough to safeguard the country but not too large to cause a financial burden. The goal for the ROC Armed Forces are to prevent enemies form landing and establishing lodgment. Defense resources therefore shall mainly be allocated to major combat forces, and applied to develop basic and asymmetric forces in order to ensure the sustainability of the total warfighting capability.
3. Taking "warfighting requirements", financial affordability and available human resources into consideration, the total size of the ROC Armed Forces are planned to be 215,000 to accommodate both available resources and the defense needs.

III. Scheme of Subsequent Force Structure Planning

The force structure planning of the ROC Armed Forces will be implemented in two stages, short term and long-term, as elaborated below:

1. Short-term planning

In accordance with the timeline of developing an all-volunteer force, the MND will implement and complete the first stage force level adjustment from 2011 to 2014.

(1) The existing commands (Army, Navy, Air Force, Combined logistics, reserve, and Military Police Commands) are to merge into three commands: Army, Navy, and Air Force.

(2) The force development logistics is to be integrated into the armaments system, operational logistics returned to military services, and the Armed Forces' general logistics assigned under the Army's responsibility.

(3) Reserve mobilization and recruit training missions will be centrally planned to incorporate the ground operations needs; reserve personnel service affairs and mechanism are planned to transfer to the Veteran Affairs Council.

(4) Military Police is to concentrate on military discipline and legal affairs. While also serving as a garrison to the political leadership, the military police force will be integrated as a part of the ground force.

(5) The structure and level of the Armed Forces' major combat forces should be maintained and defense resources should be centrally directed to major combat forces. Outdated and underperforming equipment, and forces unfitted to the operational requirements will be examined and reviewed to

determine if they should be retired, merged or dismantled.

(6) Administrative and logistic support works will be reviewed to take full advantage of the capacity of the private sector through expansion of contracting, outsourcing, civilian operation, and estimation contracting in order to diversify job posts and consolidate warfighting manpower.

(7) The ratio of civilian officials in the MND will be increased based on an annual review of the demand of work and specialties in agencies under MND headquarters to reduce the ratio of military officers and non-commissioned officers, and use military personnel to fulfill the demand for combat forces.

(8) The Chung-Shan Institute of Science and Technology is to be transformed into an "administrative incorporation".

2. Long-term planning

(1) The development of modernization of the Armed Forces is to be completed by 2023.

(2) The optimal option of force structure is to be decided by referring to the conclusions of the "modeling and simulation validation of future operational guidance" and "force structure assessment", followed by further reviews for implementation in stages.

Section 3 All-Volunteer Force

I. Rationale for the Transformation into an All-Volunteer Force

1. Pursuant to the Executive Yuan's policy guidelines, the military service system is to transform into an all-volunteer force, in

order to attract competent personnel who are committed for the long term, and build an elite armed forces.

2. After the transition is completed, the active force will entirely consist of volunteers, who will undertake major readiness and combat missions. Drafted men will receive basic military training and enroll in reserve personnel management after training. During wartime, they will be mobilized immediately to support homeland defense missions.

II. Planning for the Transformation into an All-Volunteer Force

1. Division of implementation stages

The entire project is planned to proceed from May 20, 2008 to December 31, 2014, implemented in three stages: "planning preparation", "project formulation", and "implementation and validation":

(1) Planning preparation stage: May 20, 2008, to June 30, 2009

a. Overall planning: Complete defense organizational adjustments (including organization and equipment, force structure, and billet ratios), military service transformation, personnel recruitment, troop training, mobilization mechanisms, logistics preparation, benefits and rights, retirement, and complementary plans.

b. Legislative amendments: Once complete amendment of major military service system related laws and regulations and core implementation action items have been thoroughly planned, complementary legislation will then be amended. Afterwards, as the project progresses, more legislative

amendments may be incorporated to control the schedule of legislative amendments.

c. Project initiation: Complete the formulation of the 12 essential measures (including organization and equipment) and execute project initiation.

(2) Project formulation stage: July 1, 2009 to December 31, 2010

Based on the results of implemented planning tasks from the first stage, complementary legislative amendments or additional legislations are then to be completed. After evaluating current defense financial conditions, wages, benefits, living quarters construction, and facility improvements on a timely and sequential basis should be implemented ahead of schedule, so as to increase recruitment incentives to help achieve recruitment targets in the "implementation and validation" stage with desired effects.

(3) Implementation and validation stage: January 1, 2011, to December 31, 2014

Set out annual targets for implementation, validation, and evaluation, and modify accordingly in order to reach the target of 100% volunteer recruits.

2. Complementary measures

(1) Combine military service obligations with sustainment of reserve warfighting capabilities

During the period of military service transformation, for the purpose of sustaining overall warfighting capabilities, the length of conscription service will still be one year. After achieving the goal of an all-volunteer force, the conscripts will receive four months military training and undergo

reserve mobilization training in order to continue building and maintaining reserve warfighting capabilities on both quantitative and qualitative bases for territorial defense.

(2) Improve working environments and benefits for military personnel

The quality of working environments and benefits for the troops are tied to the morale and support from military dependents, which affect recruitment and retention results. In the future, the MND will continue to evaluate and improve the forces' working environments, and design certain benefit and protection policies to attract more competent and professional youths to join military service, broadly recruit private sector elites, improve personnel competence, and also reduce existing concerns for currently serving soldiers so that they can fully focus on their jobs. Major items include to:

a. establish optimal working environments;
b. provide reasonable treatment, rights, and benefits for military personnel;
c. expand channels for further education and establish sound selection and training systems;
d. strengthen comprehensive protection for retirement assistance (welfare) service and emergency relief; and
e. enhance caring measures for military dependents.

(3) Budgetary requirement planning for an all-volunteer force

a. Budget for personnel maintenance should be carefully allocated annually based on the progress of implementation and future operational requirements of the "all-volunteer force", organizational adjustments, officer-to-enlistee ratios,

and benefits adjustments, and deliberated in association with the "Armed Forces' five-year financial guidance".

b. Based on the progress of implementation of the "all-volunteer force", additional funds required to improve servicemen's living facilities should be reviewed and incorporated into budget planning.

c. Annual budgetary requirements are to be deliberated and calculated based on the principle of not exceeding the ceiling of the total defense budget.

(4) Relevant legislative amendments

Review amendments to legislations involving the people's rights and obligations and the authorities and responsibilities of certain ministerial management agencies based on the progress of implementation of the "all-volunteer force", and process 22 legislative amendment initiatives on military service, service requirements, obligations, retirement assistance, military personnel benefits, and insurance coverage in two stages:

a. In the current stage, as far as the main and essential legislature for transforming into an "all-volunteer force" is concerned, the MND has completed four amendment drafts, namely, the Act of Military Service System, Service Regulations for Officers and Non-Commissions Officers in the Army, Navy, and Air Force, Military Service Regulations for Volunteers, Military Personnel Insurance Regulations, and submitted to the Executive Yuan for review. In the future, when the Legislative Yuan passes the amendments, complementary measures for an all-volunteer force will then be fully inaugurated.

b. Afterwards, implemented and validated results should be incorporated and actual requirements based on the progress of implementation of an all-volunteer force considered to comprehensively amend relevant legislations of the MND and other ministerial authorities before 2014, so as to perfect legal requirements for an all-volunteer force.

Section 4 Force Planning Mechanism

I. Principles for Refining the Force Planning Mechanism

With the Two Defense Acts as a legal foundation, actual steps are being implemented to enhance strategy device and force development planning. They include refining organizational structures to maximize efficiency, reviewing authorities and areas of responsibilities, adjusting operational procedures, and building function-oriented planning and budgetary procedures for the Armed Forces.

II. Plans for Refining the Force Planning Mechanism

1. Enhance organizational efficiency

The Two Defense Acts are used as a legal foundation to review organizational structure and realize professional division of labor between policy, command, and armaments branches. Thus, major defense policies will be supported by consolidated mechanisms and functions to cope with a rapidly changing environment.

2. Measures to improve military strategic planning

(1) Incorporate the Quadrennial Defense Review into the Armed Forces' strategic planning systems to serve as guidance for the Ten-year Force Planning Concept and Five-year Force Buildup Program.

(2) As guided by the Quadrennial Defense Review, and oriented by the Ten-year Force Planning Concept, Armed Forces' Military Capabilities Review and modeling and simulations are conducted to objectively assess the Armed Forces' joint operations capabilities and the overall allocation of defense resources, so that future warfighting capabilities requirements can be confirmed and serve as a reference for the Five-year Force Buildup Program.

3. Improve projects of military investment plans

(1) With limited resources, military investment plans are based on a "warfighting-equipping-organizing-training" concept and resources are mostly devoted to major combat forces, while basic warfighting capabilities of the Armed Forces will be sustained, force gaps avoided, and asymmetric capabilities developed. The objective is to maximize cost-effectiveness to build a defense force of high competence, appropriate size, and strong warfighting capabilities.

(2) Incorporate the Ten-year Force Planning Concept into the Five-year Force Buildup Program. Each service activates procedures for their projects based on the force buildup program, and completes the review of project documentation two years prior to the actual implementation, to ensure suitable and comprehensive investment plans.

(3) Enhance the evaluation mechanism of operational requirements. Other than guidance from warfighting requirements of joint operations, military policy and armaments branches should also evaluate factors such as forward planning, cost effectiveness, financial resources, and full life cycle management.

Section 5 Armaments Development Mechanism

I. Principles for Refining the Armaments Development Mechanism

Under the guidance of defense strategies, the armaments development mechanism adopts the military strategic concepts and future operational requirements to evaluate weaponry acquisition methods, schedules, and sources and fulfill force development and readiness requirements on a timely and effective basis under sufficient analytical considerations. Therefore, the MND needs to effectively increase the managerial efficiency of armaments development, incorporate national economic development and private sector capabilities, promote technology transfers, R&D, manufacture, maintenance, and marketing, in order to accelerate the introduction of advanced weaponry, increase logistic support capacities for the life cycles of weapon systems, and fulfill missions of force development and readiness.

To integrate armaments resources, increase defense self-sufficiency, establish life cycle management and support force

development and readiness missions, an integrated approach of armaments development is executed on three fronts—decision-making, management, and execution—with emphases of the following:

1. Decision-making: Incorporate needs of the force development plans, and proceed with decision-making to direct armaments developments based on the three major strategies of acquisition, technology, and logistics.
   (1) Acquisition strategy planning: Apply advanced managerial techniques and comprehensive acquisition management systems, so that weapon acquisitions can yield maximum utility in the most cost-effective and timely manner under the precondition of fulfilling warfighting requirements.
   (2) Technology strategy planning: Anticipate future operational requirements, evaluate technological capacities, integrate armaments resources, and establish development blueprints of defense technologies to support force development and readiness missions.
   (3) Logistics strategy planning: With defense industry self-sufficiency and a sustainable, credible force as a precondition, a system of full life cycle management is adopted to be complemented by supply chain management, strategic partnerships with the industries, and performance-based logistics.
2. Management: Standardized and interoperable practices are implemented, so that the requirements, concepts, and technologies of the Armed Forces are interfaced, laying the foundation for armaments development. Also, relevant education and training will be enhanced to improve the

professionalism of armaments personnel.

3. Execution: Information systems are to be established for armaments management, knowledge-based management and business intelligence applied to integrate all information related to armaments strategy development to support armaments decision-making and management.

II. Plans for Refining the Armaments Development Mechanism

1. Military investment programming

(1) In terms of the source of acquisition, the force development guidance and future operational requirements are used as foundations, while anticipating key technological developments and undergoing a cautious assessment, to decide whether domestic development, military sale, or commercial sale would be most ideal. Also, weaponry acquisition project management is enhanced to effectively manage and execute the planning, R&D, procurement, production, deployment, maintenance, or replacement, thus realizing expected performance of weapon systems to ensure force development and readiness missions.

(2) In terms of allocating military investment resources, a model of focused developments is emphasized, giving priorities to acquisition projects related to defense self-sufficiency. The weaponry deployment strategy should be devised in a gradual manner of "adequate, good and better" to meet operational requirements.

2. Defense technology development

(1) Future technology development trends should be anticipated,

joint operations requirements and existing core R&D capacities analyzed, systematic and focused R&D adopted. Domestic and foreign technological cooperation or technology transfer will also be facilitated to increase overall domestic R&D capacities.

(2) R&D funding for basic, applied, and critical technologies for system development should be increased to set the foundation for future weaponry development.

(3) Defense technology R&D will be based on an outlook of 15 to 25 years, incorporating domestic capacities and resources and engaging in advanced technological researches, such as aerospace, electromagnetism, fiber optics, nano technology, precision guidance, stealth, ramjets, low-altitude fire control radars, synthetic aperture radar counter measures, chemical warfare protection, and unmanned aerial vehicles (UAVs).

(4) High R&D value basic and applied technologies that are difficult to acquire or for which R&D capacities do not yet exist, will be commissioned to the private sector (academic or scientific research institutions). A mechanism will be established to monitor, evaluate and apply research results in support of overall weapon system development.

(5) For non-core and insufficient capabilities, production or technological cooperation through strategic partnerships with industries will be employed to foster defense industries and improve R&D standards.

3. International armaments exchange

(1) For advanced weaponry that cannot be domestically developed, armaments exchange with advanced states

will be conducted to gradually consolidate the domestic weapon R&D capacity. The priority is set on programs that incorporate technological cooperation and technology transfer. Purchasing off-the-shelf products would be a secondary choice.

(2) Professional personnel of international armaments exchange will be cultivated, while progress on force planning and project implementation will be considered when building sustainable armaments exchange mechanisms with advanced countries.

4. Acquisition project management

(1) Incorporate acquisition requirements into defense industry capacity developments, consolidate existing military and private sector capacities, and devise appropriate logistics strategies for project management to refine overall logistic support procedures and realize full life cycle management.

(2) Promote the logistics strategic guidelines such as full life cycle management, supply chain management, and industrial strategic partnerships for logistics transformation of the Armed Forces.

(3) Develop a standardized, unified, and integrated operation, and establish an integrated weapons database to increase efficiency of full life cycle management.

5. Transformation of the Chung-Shan Institute of Science and Technology (CSIST)

(1) In order to increase the technological development capabilities, expand the benefits of technology transfers, and make greater contributions for domestic economic

development, the CSIST will be transformed from a public entity into an "administrative incorporation", hoping to introduce corporate management, enhance organizational efficiency, and increase cost-effectiveness.

(2) Flexibility and efficiency in defense technology R&D should be increased to shorten system development timelines and fulfill operational requirements on a timely basis.

(3) Flexible organizations, human resources, and acquisition systems should be adopted to enhance adaptability in technology research, thus creating benefits for the Armed Forces and supporting future technology development.

(4) Core capacities will be improved. Transfers of dual-use technologies to the private sector will be expanded to drive domestic industry development and attract professional talents, thus promoting defense technologies and domestic economic development at the same time.

Section 6 Joint Operations Command Mechanism

I. Principles for Refining the Joint Operations Command Mechanism

As dictated by the Two Defense Acts, the Joint Staff is the Defense Minister's military command staff and the joint operations command unit of the Armed Forces. In the future, the MND will continue addressing organizational reforms, personnel streamlining,

defensive operations requirements, and consolidating the "joint operations command mechanism" so that it is consistent and accountable in peacetime and wartime and capitalizes on the command and control functions of joint operations.

II. Plans for Refining the Joint Operations Command Mechanism

The Armed Forces' joint operations command mechanism is the core of combat decision-making and command. Through the examination of annual Han-Kuang exercises, the organizational functions, inter-unit coordination, and software/hardware infrastructure of all functional centers have become well established. The organizational framework will continue to be refined according to MND high-level command blueprint and gradually establish digital data-link systems to improve adaptability on the battlefield. Primary improvements include:

1. Integrated C^4ISR for joint operations efficiency

   Integrated C^4ISR systems are being built to improve joint operations command, integrate modern systems and platforms, enhance battlefield management and command efficiency, increase overall warfighting capabilities, improve joint command capabilities of the Joint Staff in directing the Armed Forces.
2. Enhance information fusion and application

   Develop tools for synchronized information operations at all levels, enhance fusion, analyses, and transmission capabilities between units, and expand intelligence coordination functions to support joint operations.
3. Enhance overall information and electronic warfare capabilities

Integrate IO&EW capabilities, build system compatibility, and incorporate IO&EW capabilities into joint operations command mechanism to integrate soft and hard kill into the warfighting capabilities, so that all levels of IO&EW planning are integrated with operational guidance, thus building an integrated form of warfighting.

4. Simplify mobilization organization and mechanism

   Wartime mobilization mechanisms should be based on the principle of integrating national resources to support military operations. Authorities and responsibilities between administrative and military mobilization operations should be accurately divided, and mobilization processes simplified in order to achieve the effect of "unified command and control, and integration between peacetime and wartime".

5. Consolidate all-out defense capability coordination mechanism and training

   Each theater of operation will review and practice the set-up process for "all-out defense capability coordination centers" in coordination with regular military exercises. Also, the functions and applications of all-out defense capability coordination organizations should be incorporated into group education and training topics for officers and non-commissioned officers, so that all levels are knowledgeable and familiar with the mechanism, thus building effective coordination capability to support military operations.

6. Improve logistic coordination and support

   Each military HQ will establish operational procedures for military service logistic command and control, mobile

emergency repairs for all repair units, and emergency materials acquisition, validate them through exercises, and evaluate amendments to relevant plans and regulations, so that, in wartime, each military command can effectively execute logistic command and control and support the execution of defensive operations.

7. Improve offensive psychological measures and overall intangible combat capabilities

   Dedicated "political warfare centers" should be established, divisions dedicated to "public opinion psychological warfare" and "news broadcast" should be assigned to incorporate offensive psychological measures and enhance overall intangible combat capabilities in support of military missions.

Section 7 Human Resources Development

I. Vision behind Human Resources Development

The broad definition of defense personnel covers professional officers, non-commissioned officers, soldiers, and civilian defense officials, which make up the foundation of the Armed Forces' warfighting capabilities. Human resources development in the Armed Forces is based on the goal of "purpose-oriented and plan-based education", with the objective of fostering physically and intellectually capable, resolute, competent, and diligent personnel for the Armed Forces, and developing general and specialized personnel

for jobs in leadership, defense management, planning and evaluation, communication and coordination, operation execution, and technical duties. In the future, the MND will incorporate defense transformation requirements, assess current defense trends, military technology developments, and the mode of future warfare, continue improving education systems and refining education contents, and retain competent professional personnel, so as to improve the competence of the Armed Forces and enable the servicemen to contribute to national development and societal needs after leaving military life.

II. Plans for Human Resources Development

1. Training professional officers

(1) Enhance basic education and diversify the background of officers

a. This has the objective of developing modern officers who are well-educated in civilian and military affairs and professionally proficient and ethics sound. With the contents being sound university courses integrated with holistic individual education, proactive self-learning interests are to be cultivated to set the foundation for subsequent advanced education.

b. To address the disappearance of drafted officers after implementing the all-volunteer force, competent youths should be recruited to join the ranks of the Armed Forces to acquire appropriate replenishment for entry-level officer manpower. Diversification should be encouraged and personnel competence improved in the Armed Forces. The reestablishment of the Reserve Officer Training Corps

(ROTC) starting from 2010 should also be evaluated, with a planned initial requirement of 500 personnel. In subsequent years, amendments to the number of personnel to be trained annually should be reviewed to fulfill actual requirements and expand the source of professional officers in the Armed Forces.

(2) Improve advanced education, and standardize command and staff classes

a. The strategic and command and staff courses of advanced education should incorporate forward-thinking and macroscopically complete planning. In order to coordinate with organizational improvements and satisfy requirements for professional defense personnel, the competence of defense personnel across the board should be improved, defense educational capacity enhanced, adjustments towards American methods planned, and competence of officers raised based on the "standardized examinations and results-based assignments" principle.

b. The dual tracks of examination and referral system should be used for evaluation to annually inspect the planning situation with the National Defense University's training capacity increases and the Armed Forces' personnel downsizing, management, and evaluation results. Standardized examinations should be fully implemented to increase the competence of the Armed Forces' personnel.

(3) Improve education contents and enhance course design

a. An officer's characteristics and core aptitudes should be distinguished and emphasis placed on developing

leadership, military professionalism, and individual culture, and shaping proper values befitting military personnel.

b. Foreign languages (including military jargons in other languages), international affairs and regional security affairs classes in all levels of education should be enhanced. Personnel should also be trained for international military exchanges, regional security cooperation, and negotiation in order to fulfill the Armed Forces' mission requirements.

c. Political education is based on fostering professional military personnel with loyalty, awareness, and a passion for honor, based on patriotism, enemy concepts, and military ethics as the core.

(4) Combine requirements for joint operations development, and plan for professional education courses

Driven by the objectives of force development and employment, basic, intermediate, and advanced education courses on joint operations should be comprehensively planned in combination with information and electronic technology developments, new weapon systems, and the mode of future warfare, so that there is consistency in the courses to foster joint staff officers who would be familiar with future warfighting decision-making models.

(5) Stringent human resources management combined with educational policy

Strictly plan for career management, select competent personnel to participate in examinations and advanced education, realize the connection between professional and academic background, and adopt the spirit of "strict

examinations and eliminations" to manage personnel evaluation, so as to increase the competence of the Armed Forces' personnel, and realize the goal of purpose-oriented and plan-based education.

(6) Realize full time education and practical training

Realize full time education examination management mechanisms and assignment management systems for personnel applying for advanced education, coordinated with interviews, examination supervision, and evaluation procedures, so as to fulfill the objective of purpose-oriented and plan-based education and assignment.

2. Training professional non-commissioned officers (NCOs)

(1) Framework for NCO education

The NCO education system is primarily to cultivate college level NCO as main objection. Those NCO and enlistee turn NCO with vocational and high school education will fill basic company level requirements. In addition, each military command will train mid and high-level NCO staff and instructors for professional and specialized branch services to fulfill force development requirements, in coordination with developments in NCOs job training and NCO improvement systems.

(2) NCO development method

a. Basic education: This has the objective of fostering ethical and well-cultured NCOs with technical specialties. Its contents are comprehensive technical courses that educate both military and civilian skills to attain professional certificates and improve professional technical capabilities.

b. Intermediate education: This implements combat and tactical specialty courses that are methodically and procedurally oriented towards actual combat. They should be planned based on a military service's characteristics to focus on the unique specialty knowledge and skills of various military and branch services. The courses should also incorporate modes of future warfare and troop missions with supplementary courses in joint operations to provide the company-level staff with professional technical skills when performing missions.
c. Improve NCO standards: The five core criteria (promotions, assigning responsibilities, confidence building, professional training, and management development) should be used to push for building independent and comprehensive NCO development systems, so as to solidify company-level forces and consolidate overall warfighting capabilities. Plan of manning and equipping combat NCO and staff NCO posts is to be completed by 2009, gradually implemented starting from 2010 to separate officer and NCO jurisdictions and ensure the parallel functions of "officers plan and NCOs execute", using officers to assign responsibilities to NCOs and utilize the skills of the NCOs. The NCO system transformation is to be completed by 2014 to achieve the objective of parallel officer and NCO development.
d. Push for certification training: Cooperation with private sector skills and the Council of Labor Affairs should be undertaken to establish national certification standards and continue establishing "certification training classes for

the Armed Forces" in order to realize technical training. Servicemen are encouraged to participate, in association with their specialties and needs, in classes of public or private training agencies. This is so that NCOs and soldiers can acquire national technical certifications through full-time or part-time studies, thus improving the competence of the Armed Forces' manpower. After leaving their units, they can also immediately engage in the ranks of the national development and be of use to the society.

3. Cultivating civilian defense officials

Since the promulgation of the Two Defense Acts in 2002, the MND has formally introduced civilian officials to participate in national defense affairs, with the intention of relying on the characteristics, professional knowledge, and administrative experience of permanent defense officials to engage in work that requires continuity, planning, and professionalism, to assist with defense decision-making, execution, and evaluation. Civilian defense officials are an important asset of the Armed Forces, and need to be sufficiently planned and optimally utilized to yield the best utility. In the future, the MND will combine civilian official professions and human resources application and planning to establish comprehensive civilian defense official education and management systems, so as to foster competent cadres of civilian officials who could utilize their skills, and become a stable driving force for defense policy implementation.

The MND's relevant future improvement measures for civilian official training include:

(1) Review and realize education systems for civilian defense officials, open training classes for all levels as required, and empower civilian defense officials with familiarity in defense affairs through comprehensive pre-job education, basic education, joint staff education, and high-level civilian strategic education, consolidate professional finesse, and utilize the advantages of experienced civilian officials.

(2) Add billets for high-level civilian defense officials to participate in advanced officer education (strategic and command and staff education) as required by the MND's high-level staff operations, and combine predetermined job assignment conditions to make recommendations for training and plan for assignments.

(3) Plan for "general education for new MND personnel", and develop general education doctrines for civilian defense officials, so the doctrines can be incorporated into the Armed Forces' doctrine development systems, and a working consensus and basic aptitudes can be established for new civilian officials.

4. Training programs through FMS channels

(1) Regulate operational rules and procedures for Armed Forces personnel attending foreign military schools and military bases for training, and uniformly manage relevant affairs to realize the objectives of purpose-oriented training and employed right after training.

(2) When the Armed Forces cannot domestically acquire training, or that the Armed Forces' training capacity cannot fulfill demanded requirements for military equipments and

new weapon operation and maintenance, military sale venues will be sought and personnel will be dispatched abroad to receive training. Selected officers will be recommended to attend force development or combat command classes, and maintenance and technical level courses will be attended by selected NCO. Training includes:

a. Advanced education classes in foreign command & staff, and strategic studies institutions;
b. Command, Control, Communication, Computers, Information, Surveillance, and Reconnaissance classes;
c. New weaponry operation and maintenance classes; and
d. Participation in US exercises classes (including on job training).

5. Physical training and maintenance

(1) Modern warfare is unlike conventional warfare. High-tech weapon systems have become important factors in deciding victory or defeat. However, despite advancements in modern technologies, states around the world still greatly value physical training and competence for military personnel, so as to ensure the health of individual soldiers and the wielding of the troops' warfighting capabilities.

(2) Understanding the importance of physical capabilities, the MND has long been examining the physical standards of military personnel of nations around the world, and the Armed Forces' annual test data in terms of the troops' professional physical capabilities, incorporating the troop mission characteristics and engaging in appropriate adjustments and amendments. In the future, the MND will

continue to establish positive exercise environments, and employ reasonable standards, disciplined training, risk control and management, and fair and objective assessment methods to gradually enhance the physical capabilities of the soldiers, so that personnel can achieve a balance between physical and mental health, enhance efficiency at work or on duty, present a new face for the excellence of the Armed Forces, and set the foundation for strong warfighting capabilities.

Section 8 Defense Expenditure Management

I. Level of Future Defense Expenditure

National defense is part of the nation's overall policy development, and defense budgets are also part of the central government's overall budget. In the future, the level of defense budget should be adjusted according to overall economic development, major government policies, and the progress of the implementation of an all-volunteer force, which, in principle, will not be lower than 3% of the Gross Domestic Product (GDP). However, overall force development requirements exhibit unstable trends with highs and lows because of factors such as enemy threats and progress of force buildup which results in the defense budget not necessarily accounting for 3% of GDP each year. This is to avoid insufficient resources or surpluses affecting the nation's policy implementation and the stable progress of force development and readiness.

Future defense budgetary requirements should be based on the principles of "budgeting follows programming" and "pragmatic force planning and reasonable budgetary allocations". Limitation of medium and long-term resources should also be considered, national policy objectives collaborated and the Armed Forces' PPBES combined to prioritize allocation of resources to various force development and readiness requirements. Force development objectives should be accomplished in stages through management mechanisms such as financial projections, defense planning assessments, and cost-benefit analyses, thereby striving to yield maximum efficiency with the smallest investment of resources.

II. Planning for Defense Expenditure Management

In anticipation of the future defense environment and operational requirements, the Armed Forces will use modern management knowledge and techniques to proceed with resource management, with the objective of maximizing the utility of defense budgets. Also, resources are planned and allocated based on the Five-year Force Buildup Program, focuses of defense administration, and priority of force development and readiness. The principles of allocation are as follows:

1. Personnel maintenance: Fulfillment of personnel maintenance requirements will be prioritized by realizing the policy guidance of the all-volunteer force and adjusting through coordination the overall level of personnel including incorporating considerations for final force level, officer-to-enlistee ratios, and benefits adjustments.
2. Operational maintenance: Maintaining current warfighting

capabilities will be ensured through emphasizing increased equipment availability and sustaining readiness preparation training. Also, maintaining routine operations and exercises will be ensured through coordinating reorganization and review to reduce non-combat required needs and all ineffective expenditures.

3. Military investment: Joint operations capabilities will be improved by coordinating the progress of force development plans and the availability of medium and long-term financial resources, so as to continue acquiring new weapon systems, develop information and electronic warfare, joint counter air, joint sea control, joint ground defense, and asymmetrical warfighting capabilities.

III. Improvement of the Management and Application of Defense Financial Resources

The military has a high demand for force development; yet, the defense financial resources are limited. Therefore, the application of resource management mechanisms are urgently needed to increase the utility of the application of funding and to support overall force development plans. Improvement measures are as follows:

1. Establish projection models for financial supply

   The projection of defense financial supply is based on overall considerations of economic trends, governmental financial stress, administrative focuses, public opinion of external enemy threats, as well as public support of defense. It will also be based on the guidance of pragmatic force development plans to establish effective defense capabilities through formulating

comprehensive and sustainable force buildup plans.

2. Introduce cost-benefit and risk analysis mechanism

(1) Cost-benefit analysis mechanisms will be introduced during the programming stages for all projects to realize cost-benefit evaluation for the purpose of avoiding the effect of resource competition or scattering, affecting the effective application of defense resources.

(2) Risk assessment mechanisms will be established to review the feasibility of program planning and budgetary allocation. And alternatives will be introduced for high risk items, which will be activated when encountering difficulties and supply shortages. Then the original program and budgetary allocation schedule will be amended accordingly.

3. Establish schedule control for budgetary implementation

A comprehensive schedule control measure is to be established to inspect execution progress and the rationality of budgetary allocations of annual administrative plans, so as to utilize warning functions and risk management, effectively anticipate budgetary implementation capabilities, and retroactively adjust budgetary allocations in time to increase the utility of applying budgetary resources.

4. Eliminate parochialism and allocate budget appropriately

Service parochialism for budget allocations will be eliminated by incorporating the PPBES implementation results, allocating limited defense resources reasonably and appropriately for various force development and readiness needs, and planning budget requirements based on the Five-year Force Buildup Program in order to accurately reflect

actual defense requirements.

5. Realize cost accountability and inventory control

   Annual requirements should be reviewed based on the spirit of "zero base budget" and "no program, no budget" to ensure that major weapon systems and warfighting exercise and training mission requirements are maintained and treated as priority. The combat and training missions should be effectively supported and warfighting capabilities sustained through effective inventory control and promotion of cost accountability. Stored supplies for equipment that is planned for retirement should be reviewed to avoid "prepared but not being used" or "needed but not being prepared" situations.

6. Build cost responsibility management frameworks

   In order to comply with centralized system operations and enhance the wielding of joint operations and combined warfighting capabilities, plans should be made to establish the cost responsibility system as the foundation for resource allocation, management, application, and cost accountability, so as to facilitate evaluation of the effectiveness of defense policy implementations.

Section 9 Combining Defense with Civilian Needs

I. Industry Cooperation Program

1. Seize the opportunities of foreign military purchases, employ proactive and forward planning, integrate and ensure industry cooperation requirements in accordance with assessment results. Regulate the volume of industry cooperation and

prioritize negotiations for key items. Encourage domestic production, assembly, and transfer of maintenance technologies for defense articles, in order to upgrade technological levels and consolidate the foundation of defense self-reliance.

2. Industry cooperation will be imposed on any foreign weapon purchase costing over US $5 million dollars, and 40% of the total cost will be the minimal for industrial cooperation. The Ministry of Economic Affairs and military, public, and private technological and industrial agencies will be incorporated through the Integrated Product Team model. Domestic defense technologies and industrial resources will be integrated through technological capacity assessments, and then complete the comprehensive planning and execution of industry cooperation projects.
3. Over the years, industry cooperation volume accrued is valued at approximately 8.6 billion US dollar credits. Military procurement accounted for 6.2 billion US dollar credits, or about

Industrial Cooperation Credit is the money amount of agreed activities such as investment, procurement,R&D, training, technology transfer, marketing assistance, etc. while implementing industrial cooperation program. It takes "US dollar Credit" as its counting unit but not in real US dollar form.

72% of total volume. All the accrued volumes were under the Ministry of Economic Affairs' centralized utilization. Regarding the allocation of all the dollar credits, if categorized by how the funds were used, 50.2% of total volume was for technology transfers, and the remainder was for personnel training, domestic purchases, and other purposes. If categorized by the industry that the funds were allocated to, then 85.9%

of total volume was for the aerospace industry, such as the software technology transfer for the Mirage fighters, building factory capacity for the radars of F-16 fighters, and production of 40mm grenade launchers, which are very beneficial for Taiwan's aerospace and defense industries.

4. Currently, the MND has requested a minimum 40% industrial cooperation of the cost of defense items that the US Government agreed in October 2008. This includes attack helicopters, Patriot III missiles, E-2T upgrade, submarine-launched Harpoon missiles, and medium-range anti-armor missiles, which can potentially result in some 2.75 billion US dollar credits industry cooperation volume. These credits will be devoted to direct industrial cooperation projects, such as simulator assembling cooperation and building missile maintenance centers, which will enhance the capabilities of Taiwan's military industry.

II. Technology Transfer

1. Introduce technologies required by the ROC and transfer them to the private sector by technology transfer through industry cooperation, to fill domestic technological gaps. This will enhance and integrate capacity in research, development, and all levels of production and establish a comprehensive value-added chain in the defense industry, raising the capacity of the defense industry.
2. Apply measures such as strategic maintenance outsourcing, certification, manufacturing, and repair of military articles, and direct domestic purchase of parts, accessories, and components

to integrate the private sector's technological capacities and defense requirements, thus achieving the dual objective of establishing a self-reliant defense and supporting the domestic industry and economy.

3. Continue implementing dual-use technology plans, gradually transform defense technology capacities for industries, create ancillary civilian industrial uses from defense technologies, and improve contractors' capabilities in producing military articles and engage in research and development of armaments.
4. Assess domestic and foreign technological capabilities according to future operational requirements, and establish short, medium, and long term defense technology development roadmaps through integration of military and civilian technological resources, to provide optimal choices for defense procurement.

III. Defense Outsourcing

1. Pursuant to Article 22 of the National Defense Act, which directs the MND to consolidate efforts of the private sector to develop defense technology industries to establish an autonomous national defense infrastructure and the considerations for policies of driving economic growth, outsourcing has been proactively promoted, including research, development, production, maintenance of weapon systems and procurement of general military articles, which has the dual function of establishing a self-sufficient defense and supporting economic prosperity.
2. In accordance with the policy of "the Armed Forces will not

build capacities or make foreign purchases of goods that can be supplied by domestic producers", Armed Forces capacities that are "non-sensitive, ineffective for combat preparations, and non-essential" will be outsourced to private sector through "government owned and civilian operated" mechanism and "strategic maintenance outsourcing" to gradually foster the production and maintenance capabilities of military articles by domestic contractors.

3. Domestic purchases or contracting will be realized from the obtainable defense budgets deducting the part of requirements of "foreign purchases and maintenance of controlled weapons". From 2003 to 2008, there was approximately NT$ 690 million of production each year. In the future, through production of weapon equipments such as "large missile boats" and measures of "government-owned and civilian-operated military supply factories" and "strategic maintenance outsourcing" for maintenance of active weapon systems, it is expected to produce the value of NT$ 85 billion dollars, and benefit employment opportunities in the private sector, and increase domestic technological and industrial capacities.
4. Contracting out the research, development, and production of weapon systems required by the Armed Forces will be applied through the "domestic industrial production capacity assessment" mechanism to seek capable domestic contractors through arrangements with the Ministry of Economic Affairs' Industrial Development Bureau and industrial associations.

IV. Overall Military Bases Usage

1. Realignment of force deployments and a reduction in restricted areas will be reviewed based on considerations for the efficiency of overall national land development and local economic development needs, and to address balanced developments between national security, local development, and civilian needs, and under the precondition of not impacting defense readiness, in order to conserve manpower of land management, and release lands to provide for national political and economic development and local development, stimulate domestic economic growth and prosperity, and yield maximum benefits from the utilization of land resources.
2. Totally 1,500 hectares of military land has been released in recent years based on government policy and local development needs. Gradual relinquishment of appropriate military lands will be evaluated in the future, in conjunction with land use adjustment requirements of new forces, and considering force restructuring plans by the military property relinquishment policy team, referencing the "operational regulations for military property relinquishment", in order to fulfill national economic development and local development needs.

Chapter 4
Guidance for Joint Warfighting Capability Development

In accordance with the guidance of "defensive defense" and the military strategy of "resolute defense and credible deterrence", and to achieve the objective of "strategic sustainment and tactical decisiveness" to defeat the enemy's attempts in gaining quick victories, the Armed Forces need to establish warfighting capabilities that meet joint operations requirements. In other words, the development of all capabilities should help increase joint operations capabilities, and utilize the functions of an integrated entity, so as to create relative advantages, and achieve the objective of defense operations.

The ROC Armed Forces' joint operations is focused on establishing long range precision operation and synchronous joint engagement capabilities, so as to integrate the warfighting capabilities of the Armed Forces, and apply precision strikes, multilayer interceptions, anchorage area and beachhead attacks, and asymmetrical operations to effectively disable the enemy's operational center of gravity, and execute joint interdiction and anchorage area and beachhead elimination, thus effectively defend our homeland. Relevant capability developments include joint command, control, communication, computers, information, surveillance, and reconnaissance (C^4ISR), joint information operations (IO) and electronic warfare (EW), joint counter air, joint sea control, joint ground defense, asymmetrical warfare, reserve mobilization, Joint logistics, and overall intangible combat capabilities.

Section 1 Joint C^{4}ISR Capabilities

I. Vision

Joint C^{4}ISR seeks to establish integrated command and control (C2), real-time communication, and accurate intelligence surveillance, and reconnaissance (ISR) capabilities, build networked C^{4}ISR systems, improve electromagnetic spectrum management, and enhance the Armed Forces' C2 systems and communication and electronic protection capacities for important positions. This will ensure troops at all levels can utilize shared information platforms and common operational picture (COP) to manage battlefield intelligence so as to optimize the overall warfighting capabilities of the Armed Forces.

II. Current Developments

1. Command and control systems

(1) The Armed Forces have gradually completed the integration of existing sensors, advanced weapon system platforms, and communication and information networks in accordance with the joint operation requirements.

(2) Enhancement of weapon platforms, surveillance systems, and digital C2 and weapon control capabilities of command units in all levels of the Armed Forces continues to be carried out.

(3) When engaging in defense operations, the Armed Forces needs to establish shared C2 platforms to effectively integrate warfighting capabilities.

(4) Existing human resources information and logistics information systems are now widely used by operational units

in all levels to support all types of work and management requirements. However, they still need to be integrated with C2 systems.

2. Communication systems

(1) For joint communication systems, the Armed Forces are establishing fiber optics, digital networks, wireless networks, satellites, and public and private communication systems to form a multi-path, multi-backup, secure, and jam-resistant transmission network.

(2) Development and improvement of the Armed Forces' joint communication system is focused on the integration of transmission platforms, expansions of communication network bandwidth, continuous improvements in jam-resistance capabilities, enhancements in protection against electromagnetic pulse, and development and manufacturing of encryption devices.

3. Intelligence, surveillance and reconnaissance systems

(1) The Armed Forces' ISR systems are able to monitor air and maritime activities in the nation's surrounding sea and airspace. However, the warning capabilities against PRC ballistic missile attacks and cruise missile attacks should be continuously enhanced.

(2) The mobility of electronic (telecommunication) parameters collection equipment is yet to be enhanced and their frequency analysis capabilities increased to meet future operation requirements.

(3) Target detection rates of the Armed Forces' new radar systems have been improved, but it is still necessary to enhance the development of anti-stealthy technology and

capabilities in response to early warning threats and reaction time requirements.

III. Future Objectives

1. Joint command and control systems

(1) Planning and building of the networked C^4ISR systems will be continued. These advanced datalinks will enable troops at all levels to acquire real-time information and battlefield image and monitor real-time activities on the battlefield by increasing battlefield transparency.

(2) Functions of joint operation C2 systems will continue to be enhanced and decision support systems established to improve battlefield management capabilities, such as battlefield surveillance and control, combat planning and decision-making, and troop command and control, so as to achieve the objective of "being able to see, hear and command" throughout the whole theater of operation.

(3) Improve operational management system functions such as personnel, logistics, and communication, information, and electronics should be improved and integrated with C2 systems.

(4) The survivability and anti-jamming capabilities of the Armed Forces' joint operation command, control, communication, and computer facilities should be enhanced.

2. Joint communication systems

(1) Integrating communication transmission platforms

Complete the establishment of multi-path, automatic switch, secure, and stable optical fiber and microwave

communication and transmission backbone networks for the Armed Forces to connect and integrate strategic and tactical communication networks.

(2) Enhancing system security and backup capabilities

Establish integrated wireless communication networks with digital transmission, security, and anti-jamming functions for the Armed Forces, and construct emergency communication backup and support capacity for important positions and electromagnetic pulse protection capabilities for critical positions.

(3) Establishing capabilities to utilize public and private communication facilities and techniques

Establish database that contains all state and privately owned facilities which have military support applications, and plan practical means for taking over and supporting military applications, which will be validated through training and exercises.

(4) Planning for building new-generation satellite communication systems

In coordination with the policy of national satellite development and integration, the Armed Forces are planning to build new-generation satellites in order to construct satellite communication systems capable of secure communication, high survivability, and integrated application to fulfill joint operation requirements.

3. Intelligence, surveillance and reconnaissance systems

(1) Acquire various surveillance and reconnaissance equipment to effectively extend surveillance coverage and obtain all-

source early warning information of enemy situations, so as to provide early warning and protection functions.

(2) Procure electronic surveillance equipment and gradually upgrade mobile surveillance capabilities to ensure sustained operational capabilities.

(3) Continue improving counter-stealth techniques, extend threat warning and response time, and improve target identification rates to increase battlefield transparency and capture the intelligence and warning of the enemy movement and imminent threat.

Section 2 Joint Information Operation and Electronic Warfare Capabilities

I. Vision

Joint information operations (IO) and electronic warfare (EW) seek to establish "early warning, rapid response, effective countermeasures, and delaying enemy offensive" so as to defend the security of our C2 systems, weapon fire control, radar systems, and communication platforms, and to avoid enemy exploitation, paralysis, and sabotage. This will ensure comprehensive information and electronic security and advantages throughout the duration of defense operations.

II. Current Developments

1. Joint information operation capabilities

(1) In peacetime, IO emphasizes maintaining the security of information systems and networks, and continuously accumulating information security and protection capabilities. In wartime, information security is ensured and information advantages attained to utilize overall IO capabilities.

(2) Information security policies are being formulated and information security systems and backup mechanisms for all levels of forces are also being established. Mechanisms such as backup servers in alternate locations and backup data storage for important information systems are also being established to enhance system survivability. This will ensure proper continuity of information operations, and subsequently integrate information security systems as planned to achieve the objective of joint defense.

(3) Methods such as media, education, training, and certification will continue to be used to disseminate information security knowledge, and enhance personnel understanding and capabilities of information security.

2. Joint electronic warfare capabilities

(1) The Armed Forces have established various electromagnetic parameter databases, which are regularly amended or updated in order to fully employ overall warfighting capabilities.

(2) Currently the MND has undertaken necessary augmentation of all EW jamming equipment as planned to provide electronic shield for the entire Taiwan.

(3) Some critical C2 positions have already been established to

enhance protection capabilities for these positions as planned.

III. Future Objectives

1. Joint information operation (IO) capabilities

(1) All information security systems and mechanisms should be integrated to increase early warning and joint information security and protection capabilities.

(2) Security and protection measures of military networks should be uniformly planned and methods such as joint surveillance and reconnaissance used to closely monitor network information activities. Capacity of information security and protection networks should also continue to be enhanced.

(3) Safety inspection capacity for information facilities should be established in stages in accordance with international and domestic information security product inspection standards.

(4) Standardization of the Armed Forces' information organization and manpower allocation should be planned to educate and train professional information personnel, so as to enhance response capabilities for information security matters.

2. Joint electronic warfare (EW) capabilities

(1) The Armed Forces should establish projections for developing mid and long-term electronic warfare capabilities, incorporate EW development trends from various nations into the Armed Forces' EW development, and gradually increase and integrate future EW C2 platforms in order to consolidate overall warfighting capabilities.

(2) Establishment of initial EW capacity for the Armed Forces should be completed, and electromagnetic protection capabilities comprehensively planned to increase battlefield survivability.
(3) The constitution of threat warning capabilities for all major combat forces should be completed and electromagnetic protection capacities at all major positions integrated to establish comprehensive joint EW protection capabilities.

Section 3 Joint Counter Air Capabilities

I. Vision

Joint counter air operations seek to establish early detection and warning, long-range precision engagement, and joint multilayer interdiction capabilities with automated combat control as the backbone. Integration of all fighters, UAVs, missile defense and ground-based air defense weapons, and enhanced base and position defense and logistic support capabilities will ensure "accurate intelligence indication, flexible command and control, all theater defense, and all-weather combat". Vying for air superiority in desired airspace, gradually destroying or disabling the enemy's air warfighting capabilities, weakening the enemy's operation systems and sustainment capabilities, and ensuring the security of air defense over the Taiwan Strait.

II. Current Developments

1. Current counter air operations capabilities are developed through focusing on and following the order of IO, EW, joint force preservation, joint interdiction, and homeland defense, proactively building capacity for long-range surveillance and missile defense, and integrating C^4ISR systems to increase battlefield management capabilities, establishing long-range penetration, precision strike, and joint suppression capabilities, and enhancing overall air defense and comprehensive logistic support capabilities.
2. All primary fighters are equipped with short, medium and beyond-visual-range missiles, which can simultaneously engage multiple targets. The F-5 and IDF fighters are capable of conducting day time air to ground attacks, while the F-16 aircraft have all-weather air to ground attack capabilities, which facilitates joint interdiction missions.
3. In terms of homeland defense operations, the Air Force is planning, as battle situations dictate, to dispatch forces to fight for partial air superiority in combat zones, and coordinate the air defense forces and firepower to form core attack power in order to effectively conduct joint counter air operations.
4. Currently, the greatest threat to the ROC's air defense is the PRC's tactical ballistic missiles deployed across the Taiwan Strait. The Armed Forces are proactively building ballistic missile defense systems to defend critical political, economic, and military targets. In addition, combining the soon to be established missile warning centers, the joint operations center is able to effectively command the upgraded Patriot II air

defense missile systems, the Patriot III, and Tien Kung III anti-air missiles that are planned to be procured, thereby forming a comprehensive missile defense system.

III. Future Objectives

In order to prevent the enemy from using air and missile strikes to attack our important bases and positions, effectively maintain the operational functions of major weapon systems, and ensure the success of defense operations, capabilities required by future joint counter air operations include:

1. Surveillance, warning, and combat control capabilities
   (1) Perform replacement for fixed radars and capability upgrade for mobile radars, build ROCC (region operation control centers), renew automatic air defense systems, effectively integrate overall aerial intelligence and information, establish intelligence and information sharing environments, and increase the level of operational precision.
   (2) Upgrade capabilities of aerial warning aircraft to enhance early warning capabilities.
   (3) Enhance all-weather radar surveillance, missile attack warning, COP, radar decoys, and Identification Friend or Foe (IFF) capabilities.
2. Air interdiction and suppression capabilities
   (1) Sufficiently procure interim fighters before the acquisition of next-generation fighter aircraft in order to maintain counter air operations capabilities.
   (2) Procure missile systems with long-range and multi-target

engagement capabilities, anti-radiation missiles, and air-to-ground scattered and remote attack precision weapons to enhance air-to-air and air-to-ground combat capabilities for primary fighters.

(3) Procure EW aircraft and aerial refueling aircraft, and renew relevant software and hardware facilities to enhance the overall efficiency of counter air operations.

(4) Continue building advanced digital datalink systems and enhance digital C2 capabilities for existing fighter aircraft in order to enhance overall capabilities to secure air superiority.

(5) Procure next-generation fighters with EW, stealth, aerial refueling, short-range take-off and landing, beyond-visual-range attacks, and precision ground attack capabilities, and unmanned combat aerial vehicles (UCAVs).

3. Joint air defense and missile defense capabilities

(1) Establish comprehensive missile defense systems, increase the Armed Forces' overall missile defense capabilities, continue implementing capability upgrades for the Patriot II missile systems; subsequently, incorporate the establishment of long-range warning radars, missile warning centers, and the procurement and deployment of Patriot III , Tien Kung III, and SM-II missile systems.

(2) Integrate various short, medium, and long-range air defense firepower, and build multilayer air defense interdiction networks to utilize comprehensive warfighting capabilities with "unified command, multilayer defense, and joint interdiction" characteristics, and ensure the integrity over national territories.

(3) Upgrade system functions for the 35-mm air defense guns, and develop new low-altitude and short-range air defense systems, and land-based air defense missile systems, so as to enhance overall air defense capabilities.

4. Protection capabilities for bases and positions

Harden defensive works, disguise, rapid repairs of runway and taxiway, and counter anti-radiation missiles, and improve redundant and resilient capabilities.

Section 4 Joint Sea Control Capabilities

I. Vision

Joint sea control operations seek to establish "high efficiency and performance, rapid deployment, and long-rang strike" capabilities. By utilizing integrated command, control, intelligence, surveillance, and reconnaissance systems, the Armed Forces will construct three-dimensional mobile maritime strike forces to control and prevent the enemy from exploiting our territorial waters, reject the enemy's invasions, and ensure the security of sea lines of communication (SLOCs) and freedom of movement.

II. Current Developments

1. Currently, the Armed Forces' sea control capabilities include land-based surveillance and reconnaissance sites, various types of primary and auxiliary combatant ships, amphibious ships,

mobile surveillance, reconnaissance and strike platforms, and airborne anti-submarine warfare (ASW) and reconnaissance forces. In coordination with early warning and mobile deployment, the Armed Forces are able to engage in counter strike operations against enemy maritime forces with three-dimensional, multilayer interdiction, and rapid response capabilities.

2. The purpose of the ROC maritime force is to ensure the control of area of maritime operation and maintain safe transition to foreign countries and the security of naval bases. At the initial stage of defense operations, the Armed Forces will utilize joint surveillance to monitor enemy activities and appropriate forces to open escort routes, so as to ensure supplies of civilian and military required materials. In addition, force deployment and employment are being adjusted as required by combat situations, air forces coordinated, and regional ASW and direct and indirect convoy escort employed to maintain safe maritime transportation to foreign countries.
3. In wartime, all kinds of surveillance measures to gain early warning and monitor enemy movement will be integrated in order to preserve forces. Then, as situation develops, maritime maneuver should be appropriately executed, and favorable timing and locations selected to occupy tactically advantageous positions, concentrate on partially superior forces in coordination with aerial and coastal forces to interdict the enemy's main combat forces and landing fleets, and support coastal strike forces to block and destroy the enemy's follow-up forces.

III. Future Objectives

In order to effectively block or delay the enemy's attempt to control Taiwan's surrounding waters, maintain sea and aerial lines of communication, and deny and destroy the enemy's invading amphibious forces, the planned objectives of the future development of joint sea control capabilities include:

1. Joint maritime and air operations capabilities

   Establish sea control capabilities with stealth, speed, long-range, mobility, precision, robust strike power, and superior protection capability, to execute mobile strike and anti-submarine operations, and eliminate the enemy in favorable waters. Major developments include:

(1) Plan for the procurement of submarines, large and medium surface combatant ships, and new generations of missile boats, and reinforce aerial ASW, minesweeping, and mine warfare capabilities to construct effective sea control and mobile strike forces in order to conduct counter blockade and joint interdiction operations.

(2) Integrate digital communication, digital datalinks, broadband satellite communications, satellite positioning, and command, control, communication, and intelligence systems, to construct advanced tactical datalinks and maritime and aerial intelligence, command, and control systems, so as to effectively monitor maritime and aerial intelligence surrounding Taiwan's waters.

(3) Enhance large area early warning capacity, establish surveillance capacity for large and important maritime regions surrounding Taiwan, and effectively integrate air,

maritime surface, and underwater forces to execute joint surveillance, training exercises, and combat missions.

(4) Build a new-generation integrated C2 systems, and upgrade existing capabilities in COP displays, fleet operational C2, operation decision support, and battlefield management.

(5) Procure air-launched stand-off precision anti-ship weapons in order to enhance maritime and aerial interdiction capabilities.

(6) Procure mine hunters and minesweeping helicopters to improve mine countermeasures capabilities and ensure the safety of SLOCs.

2. Logistics support capabilities

Enhance the capabilities of logistic support, rescue, recovery, and personnel evacuation, including procuring new fuel and munitions supply ships and salvage vessels.

Section 5 Joint Ground Defense Capabilities

I. Vision

Joint ground defense operations seek to establish "digitized, multi-dimensional, and agile" ground warfighting and special operations capabilities. In addition, in accordance with the principles of "depth deployment, rapid response, long-range engagement, and precise elimination of enemy forces" and the operational guidance of "anchorage area destruction, beachhead and landing field annihilation", joint ground forces must fully control and monitor battlefield

transparency throughout the duration of homeland defense operations, so as to eliminate enemy airborne assault, landing, special operations, and rear infiltration forces, and ensure the safety of defensive positions, bases, and facilities.

II. Current Developments

1. Current ground defense capabilities are focused on developing joint operation capabilities, and continuous enhancement of force structure, doctrine developments, and innovative tactics and techniques to address multi-dimensional battlespaces and incorporate overall requirements in rapid force and firepower projection, surveillance, and strike capabilities required in future defense operations. Currently the ground forces are proactively procuring new attack and utility helicopters to enhance overall ground and aerial warfighting capabilities and establish rapid mobile strike capabilities.
2. To counter the enemy's "decapitation, dismantling, and disabling" actions, the ground forces are enhancing special operations capabilities, proactively researching and developing special operations tactics and techniques, procuring special operations tools, and establishing training and education channels, so as to develop professional special operations forces. Also, in order to achieve the objective of "long-range engagement and precise elimination of enemy forces", the ground forces are now building short-range air defense weapon systems and new multiple-launch rocket systems, constructing long-range, precision, and high efficiency weapons required for joint interdiction, and enhancing ground-based counter air and

sea control capabilities, so as to attain warfighting capabilities required for attacking the enemy during maritime transit and eliminating the enemy at the beachhead.

III. Future Objectives

Ground operations require capabilities that meet the needs of various stages of combats, including joint anchorage area attacks, beachhead combat, counter strike operations, anti-airborne operations, and operations in depth defense positions. In addition, the ground forces need to enhance short-range, mobile surveillance, and target acquisition capabilities, as well as improving force preservation capabilities. Future objectives for ground force development are planned as follows:

1. Joint anchorage area attack capabilities

(1) In accordance with the operational guidance of "attacking the enemy at sea", the Armed Forces seek to achieve the objectives of strengthening "long-range systems, precision weaponry, and armed forces integration", effectively integrate C^4ISR systems, and establish early warning, long-range precision strike capabilities to eliminate the enemy during transition across the strait. Required capabilities include enhancing artillery (rocket) firepower, digitized howitzer firepower, army aviation attack capabilities, fire coordination capabilities, the capabilities of countering rapid amphibious landing platforms, and land-based mobile anti-ship firepower.

(2) The MND will continue acquiring new multiple-launch rocket systems and UAVs, and procure new utility and attack helicopters to execute joint anchorage area attacks.

2. Beachhead combat capabilities

(1) In accordance with the guidance of "determined victory at beachhead", the ground forces have to stop the enemy from landing and establishing lodgment by sealing ports, controlling beach areas, defending footholds and decisive barrage at landing ship line. Required capabilities include anti-armor and counter anti-armor strike capabilities, as well as capabilities to secure, block, and destroy sea ports.

(2) In the future, the ground forces need to be equipped with high-efficiency anti-armor missiles, short-range anti-armor rockets, new tanks, and so on.

3. Mobile counter strike capabilities

(1) Shortly after the enemy lands on a beach and has not yet built up sufficient strength, use "superior mobility, overwhelming firepower, and integrated air and ground" combat capabilities to counter strike and eliminate the enemy, to prevent the enemy from assembling their forces and advancing further. Required capabilities include enhancing troop mobility and fires coordination.

(2) Production of light and medium tactical wheeled vehicles and armored infantry combat vehicles will be initiated in the future, to upgrade mobile strike capabilities. Also, new self-propelled howitzers, new tanks, and armored cavalry combat vehicles will be built in order to fulfill warfighting capabilities required for conducting contingency and mobile strike missions.

4. Anti-airborne capabilities

Improve "surveillance and tracking, integrated air defense,

mobile sweeping" capabilities to disrupt enemy assaults, force concentration, and supporting landing operation. Required capabilities include enhancing command, control, communication, surveillance, reconnaissance, and theater level air defense.

5. Depth defense positions capabilities

   For urban, significant terrain defense and protection of critical infrastructure, in accordance with the all-out defense guidance of "independent defense, joint theaters of operations, and multilayer interception", the ROC ground forces will ambush the enemy and limit enemy activities, so that the enemy cannot penetrate and control depth defense positions of the ROC. Required capabilities include enhanced night combat capability, urban warfare capability, sniping capability, rapid interdiction capability, and obstacle placement capability.

6. Mobile surveillance and target acquisition capabilities

   Procure mobile air defense target acquisition radars, truck-mounted field air defense phased array radars, and night vision equipment in order to increase battlefield transparency and operational situation awareness.

7. Force preservation and employment capabilities

   Enhance force preservation measures, such as critical military infrastructure protection (airports, sea ports, command posts, positions, shelters, communication facilities, radar sites, and etc.), camouflage, concealment, and deception (CCD), dispersion, and mobile deployment, to increase battlefield survivability so as to endure defense operations.

8. Amphibious rapid response capabilities

Establish rapid support capabilities for all theaters of operation, and procure platforms and equipment for rapid reaction missions, such as airlift platforms, amphibious landing ships (dock and tank), amphibious assault vehicles, light and medium tactical wheeled vehicles, special operations assault boats, and utility landing crafts, in order to effectively support offshore island supplies and all theaters of operations when conducting ground defense and contingency response operations.

Section 6 Asymmetrical Warfare Capabilities

I. Vision

Asymmetrical warfare capabilities seek to establish capabilities that are able to make decisive attacks on the enemy's operational center of gravity (COG) and critical vulnerabilities, in hopes of cooperating with existing and future acquisitions of basic land, maritime, and air warfighting capabilities, and employing innovative tactics and means to strike the enemy's weaknesses or limit their advantages, so as to counter enemy invasions and effectively accomplish defensive operation missions.

II. Current Developments

The Armed Forces' "asymmetrical warfare" is based on the innovative idea to flexibly combine and employ warfighting capabilities other than the traditional land, maritime, and air warfighting

capabilities in order to maximize relative advantages to strike at the enemy's weaknesses or critical vulnerabilities, limit the enemy's warfighting capabilities or movements, and allow us to attain greater freedom of movement and secure military victory.

According to the enemy's current military developments and their possible future patterns of invasion against Taiwan, the Armed Forces need to use conventional and unconventional warfighting techniques to conduct defense operations. Currently, the Armed Forces are not only proactively developing basic warfighting capabilities, but also simultaneously researching and evaluating the establishment of asymmetrical warfare capabilities to increase overall defense operation capabilities, so as to achieve the objectives of conquering large enemy forces with smaller ones, and fighting outnumbered and winning.

III. Future Objectives

Currently, the Armed Forces are proactively researching the establishment of unconventional warfare capabilities, which will be coordinated with the development of operational concept and operational efficiency evaluations in the future, so as to develop tactics or identify tools that are required for asymmetric warfare to complement basic warfighting capabilities and effectively counter enemy invasions.

Section 7 Reserve Mobilization Capabilities

I. Vision

Reserve mobilization seeks to establish credible reserve warfighting capabilities with "on-site mobilization and engagement" and "timely mobilization and engagement" characteristics, incorporate the implementation of all-volunteer force and force structure adjustments, engage in reserve troops preparations, annually renew weapon systems for reserve forces, and merge reserve mobilization organizations. Under the coordinated support of the MND's dedicated reserve mobilization system and reserve mobilization agencies from government ministries and all local counties and cities, the reserve forces are able to consolidate and utilize overall national capabilities to support homeland defense operations.

II. Current Developments

Since 2004, due to the implementation of the Jing-jin (force re-structuring) Project and policy of "separation of roles and missions between active and reserve forces", the reserve forces have been adjusting their organizations. Current reserve forces include ground reserve troops (combat and combat support), service and political warfare reserve troops, navy and coastal reserve troops and combat attrition complement echelons, as well as regimented auxiliary military service teams, which account for a total of 460,000 personnel. Basic policy guidance for mobilization is as follows:

1. Assign younger reservists to combat units and more experienced personnel to technical units.

2. Regiment reservists who were discharged from active service within eight years in constant reserve units in order to retain training experiences.
3. For the selection of reservists, priority will be given to those whose domiciles are close to the assigned combat locations, and whose specialties are required for the billets in order to fully utilize the combat willingness of protecting their homeland. Should the manpower be insufficient, the reservist selection area will be circularly enlarged within the theater of operation and with the tactical location as the center.
4. "Replenishment for shortage of equipment" for reserve forces should first consider acquiring those that can be mobilized, and requisitioned. For equipment that cannot be acquired through mobilization, the reserve forces should prepare and stockpile by themselves.
5. The storage locations of various weapon systems for the reserve forces should be in line with the garrisoned locations.
6. Vehicles required for the replenishment of shortage of equipment are usually "requisitioned separately from their operators (drivers)". Other militarily required vehicles will be "requisitioned together with their operators". Heavy industrial machinery, ships, and aircraft will also be requisitioned together with their operators.

III. Future Objectives

1. Planning guidance

(1) Establish credible reserve warfighting capabilities in coordination with the implementation of all-volunteer force.

(2) Review and adjust reserve mobilization organizations in coordination with the Armed Forces' force structure adjustments.

2. Important measures

(1) Re-structuring reserve warfighting capability

a. To address implementation of the "all-volunteer force", the reservist selection mechanism will be adjusted, and existing system of "first select those who were discharged last" will be changed to a system of "manning then training" and "whole unit and replacement" to realize the "eight-year regular manning" and "compatibility between registered residence and tactical location", so as to fulfill the requirements of "on-site mobilization and engagement".

b. Expand the capacity of the new recruit brigades; enhance military training for enlistees in order to set the foundation for reserve warfighting capabilities.

c. Enhance education and training for reserve forces, and increase training duration and depth of education to ensure their warfighting capabilities.

d. Continue renewing weapon systems for the reserve forces, and enhance construction of storage facilities, so as to rapidly recover combat power during wartime, and achieve the objective of "on-site mobilization and engagement".

(2) Merging reserve mobilization organizations

a. The MND will establish a dedicated agency for reserve mobilization to coordinate and control the nation's overall capabilities to support military operations.

b. Ground reserve forces will be assigned to the jurisdiction

of one military service, to allow unified preparation and employment of reserve troops, so as to enhance homeland defense capabilities for each theater of operation.

Section 8 Joint Logistics Capabilities

I. Vision

Joint logistics seek to establish "precise logistics management and rapid logistics support" capabilities; integrate logistic information and increase logistic operation efficiency through the control of military and civilian resources, so as to effectively support the Armed Forces' defensive operation missions.

II. Current Developments

1. Current status of logistics systems

(1) Mission

a. MND level

(a) Department of Resources: It is responsible for integrating and guiding the acquirements of defense materials; planning for defense technology and industrial development policies; and developing strategies for the cooperation between defense technologies and private sector and military industrial agencies.

(b) Armaments Bureau: It is responsible for policy planning related to armament development affairs, including weaponry acquisition, industrial development for defense

technologies, research, development, and application of dual-use technologies, production of military goods, overall logistics, industrial operation and production, military procurement, and testing and evaluation.

(c) Office of the Deputy Chief of the General Staff for Logistics (J4): It is responsible for the Armed Forces' policy planning, supervision, and implementation regarding combat readiness and operational logistics; proposing logistic preparedness requirements and recommendations for resource allocations to the military policy/armaments systems, and supervise the distribution, maintenance, and management of acquired military goods; direct the establishment of logistic centers for joint operation agencies, provide logistics assessments, logistics decision analyses, and devise and implement logistic support plans.

b. Service command headquarters level

(a) Each military service command headquarters is in charge of policy planning for relevant logistics and supply policy formulation, logistic preparedness, and contract compliance and purchase for the "repairs, maintenance, and support of dedicated equipment".

(b) The combined logistics command is responsible for logistics, supply and maintenance policies, contract compliance and purchase, and logistic preparedness affairs for "general equipment and service support".

c. Regional Command level

(a) The logistics/maintenance commands of each service

component are primarily responsible for the maintenance and supply of their dedicated equipment and related logistic activities, and also responsible for supervising the professional maintenance operation of their respective military service's array of logistic commands (and support commands), base factories, and warehouses.

(b) The combined logistic support command is responsible for managing and supervising supply, maintenance, transportation, munitions, and other general service for forward support operations.

(c) Regional support commands implement joint regional tasks, and are responsible for executing regional (theater of operation) supply, maintenance, transportation, munitions, health service, and other general tasks for frontline operations.

2, Current status review

(1)Logistic authorities

After the enforcement of the Two Defense Acts, logistic authorities are divided into the force development category and operational logistics category. However, on the military service level, they are separated into dedicated and general logistics, which are partially overlapping with the functions of MND-level agencies and combined logistics command, and are thus unfavorable for logistic management for forces at all levels.

(2)Combined logistics system

a. Currently, the Armed Forces' logistic information has not yet been effectively integrated, which affects the

implementation of joint logistics, and consequently undermines the effective integration and utilization of available resources.

b. Presently, inventory management and purchase for dedicated parts and accessories of each military service are not compatible with the authorities and responsibilities of base maintenance tasks, causing inconsistencies between planned maintenance/production and material requirements, which affects the accuracy of inventory management.

c. Purchase tasks for logistic military goods span across different military service command headquarters, which increases workload and operation time, and hence reduces support efficiency and the effectiveness of combined logistics.

(3) Structure of logistic organizations

The Navy and the Air Force both have maintenance troops responsible for equipment maintenance to ensure readiness. However, the Army Command Headquarters has not assigned maintenance troops for levels below army level command, so that their equipment maintenance and support activities are all assumed by the Combined Logistics Command. Organizationally, it lacks logistic support functions, which is liable to produce incompatibilities in logistic authorities and responsibilities, thus affecting overall warfighting capabilities.

III. Future Objectives

The ROC Armed Forces' logistic management will address the implementation of all-volunteer force and the force structure adjustments, clearly regulate the authorities and responsibilities of "operational logistics" according to the improved logistic management system, and incorporate business administration theories and concepts to build a modern logistics system for the Armed Forces. Concrete policy guidance includes:

1. Adjusting logistical systems and formulating/amending logistical operation procedures

   To address the implementation of an all-volunteer force and the force structure adjustments, the Armed Forces will review the improved logistic operation procedures, jurisdictional authorities and responsibilities, and C2 mechanism, and, by manning and equipping experiments, further adjust the structure of logistic organization and formulate and amend necessary logistic operation procedures and regulations. This is so that logistic systems are institutionalized, standardized, and professionalized, and logistics authorities and responsibilities of the Armed Forces will be clearly defined in order to fulfill force development and readiness requirements, and enhance logistic support efficiency.

2. Building comprehensive logistic mechanisms and enhancing emergency logistic support

   To implement an all-volunteer force, the Armed Forces will outsource service manpower, retain complete field logistic support capabilities, establish mobile logistic troops to provide immediate support, purchase mobile maintenance equipments,

enhance emergency repair training, and use traffic networks and logistics channels, so as to facilitate the transportation of various logistic materials to combat locations, and rapidly provide troops with logistic support.

3. Implementing logistics outsourcing transformation and introducing efficiency-based logistics

   In coordination with force streamlining efforts, the establishment of the Armed Forces' logistic capabilities will prioritize the fulfillment of core logistic requirements. Hence, the Armed Forces will coordinate the willingness and capabilities of domestic industries to identify appropriate logistic tasks and preserve suitable logistic maintenance capacity. It is expected that by establishing the private sector support mechanism through long-term contract and introducing performance-based logistics, the Armed Forces will be able to effectively lower logistic manpower requirement and cost, thus maximizing the efficiency of logistic support.

4. Integrating the Armed Forces' logistic information and enhancing logistic support efficiency

   Based on the "operational logistics management system", the Armed Forces will integrate existing logistic information systems to establish an information-sharing environment. Therefore, the overall state of the Armed Forces' assets and the efficiency of logistic operations, and the precision level and speed of logistic management can be accurately monitored and improved, so as to effectively execute various logistic support missions in both peacetime and wartime.

5. Improving logistical professionalism and increasing the efficiency of logistical operation

In accordance with the professional logistic skill requirements, the Armed Forces will consolidate logistics education and training provided in military technical schools, formulate professional skill standards, implement private sector certification systems, and establish robust force supervision systems. Therefore, the career management and exchange of professional logistics personnel can be realized so as to increase the efficiency of logistic operation.

6. Using logistics channel management techniques to improve supply and support operation

   By utilizing information technology and modern logistics channel management techniques, the Armed Forces will be able to establish central supply databases, improve the management and supply of inventoried military goods, simplify manual operation, and increase the efficiency of inventory activities. In addition, it is planned to develop regional (theater of operation) supply chains, implement the operational logistics management, and flexibly adjust and arrange logistic resources, so that the Armed Forces can receive precise supply and support.

Section 9 Overall Intangible Combat Capabilities

I. Vision

The overall intangible combat capabilities seek to “solidify

national identity, cultivate patriotic integrity, nurture honorable virtues, clarify military discipline, harness force solidarity, consolidate a winning determination, counter enemies' psychological warfare, and establish all-out defense", and establish a fierce armed force with a strong fighting willpower. In this way, the Armed Forces will serve as a stabilizing foundation for the society and combine the overall strength of an all-out defense to ensure national security.

II. Current Developments

The Armed Forces' political warfare operations are facing changes in the nation's security challenges, domestic politics, and societal environment. Hence, it is necessary to integrate with current trends and continuously innovate in order to fulfill the requirements of enhancing intangible combat capabilities and all-out defense. Currently, key tasks in developing intangible combat capabilities include:

1. Counseling

   The three-level guardians system is the core of the framework for the Armed Forces' counseling work. Necessary measures are being taken to prevent personnel injured from accidents caused by psychological problems. The measures include, in the first level, a guardian program of accident prevention, the second level, a program of providing counseling, and the third level a program of giving medical treatment. The purpose of counseling is to assist soldiers in solving problems and achieve preventative functions through educational promotions, counseling arrangement, sound response procedures, and research and development of effective

psychological evaluation tools.

2. Cultural publicity and political education

   In accordance with regulations from the ROC Constitution and the National Defense Act, servicemen are educated to be loyal to their nation, love the people, insist on the nationalization of the Armed Forces, adhere to the basic principle of "nation, responsibility, and honor", consolidate their willpower to "fight for the survival and development of the Republic of China, fight for the well-being of the people of Taiwan, Penghu, Kinmen, and Matsu", and at the same time seek the recognition and support of the population.

3. Psychological warfare techniques

   By analyzing intelligence on the PRC's three-front war (legal, public opinion, and psychological warfare), the psychological warfare units will be able to execute appropriate countermeasures. Furthermore, based on defense operations requirements, the organization and employment of psychological warfare units are being reviewed, psychological warfare equipment procured, and training of psychological warfare skill simultaneously enhanced, so as to increase the Armed Forces' overall intangible combat capabilities.

4. All-out defense education

   In accordance with the All-out Defense Education Act, the all-out defense education is separated into four major categories, including school education, on-the-job training in government agencies, social education, protection of historic defense relics, and public education. Based on five major educational themes, namely international situations, defense

policies, all-out defense, reserve mobilization, and defense technologies; and through formulation of education regulations, holding diversified activities, intensive cultural publicity, and public education; the MND will establish a comprehensive all-out defense education system in order to implement various educational tasks.

5. Upholding military discipline

   The MND is reinforcing education to enhance military discipline, promote integrity, and reinvigorate honor and morality of military personnel. In accordance with the Enforcement Regulations for the Armed Forces' Discipline, the Armed Forces will supervise and discipline violators, strictly uphold military discipline, establish complaint hotlines and pleading mailboxes, and handle accusations of criminal or illegal acts to maintain troop safety. In addition, Guidelines for Ethical Military Administration is being formulated to implement administrative reforms and build an ethical military force. The MND Procurement Audit Division is also being established to supervise procurement work so as to eliminate the occurrence of illegal activities.

6. Internal Security Management

   "Counter intelligence, counter infiltration, counter sabotage, and counter upheaval" is being focused to execute security and safety education, security work, safety inspections, intelligence, and safety maintenance, and establish peacetime and wartime security and safety operation mechanisms and functions, so as to effectively eliminate security threats and consolidate internal safety.

III. Future Objectives

Looking into the future, the development of the Armed Forces' intangible combat capabilities is oriented as follows:

1. Counseling

   The ability of staff at all levels to discover and respond to potential incidents and emergencies should be enhanced. The servicemen should provided high quality service through all kinds of educational opportunities, tailored assistance and response measures, and diversified interaction. In addition, the MND is working on increasing the Armed Forces' professional counseling capacity by incorporating social counseling resources and establishing regional counseling networks.

2. Cultural publicity and political education

   The MND's statements and publicity to external audiences should be based on professional evaluations and factual reports to avoid inflammatory and critical depictions in order to win the trust of the people. Internally, enhance patriotism education and readiness vigilance, so that servicemen can appreciate the importance of training and maintaining service proficiency in order to safeguard national security.

3. Psychological warfare capabilities

   The psychological quality of military personnel and willpower to fight enemies should continue to be enhanced, new psychological warfare equipments developed, theoretical foundations for psychological warfare established, and psychological warfare tactics and techniques devised in order to establish advantages in psychological warfare and enhance all-out defense capabilities.

4. All-Out defense education

   For the purpose of making the legislation more comprehensive, the All-Out Defense Education Act should be reviewed and necessary amendments made to areas where existing regulations are imperfect or not legislatively consolidated. Secondly, the all-out defense education system should continue to be improved to take advantage of various educational opportunities and activities, and media and publicity used to utilize positive educational functions and establish the people's consensus for a shared fate and all-out defense.

5. Upholding military discipline

   The Armed Forces will devise objective management and implementation guidelines, improve discipline and security evaluation and risk management, reinforce supervision and inspection, expand complaint and advisory service, and utilize warning and prevention functions to reduce security risk, ensure purity of forces and warfighting capabilities enhancement, and win the support and respect of the people.

6. Internal Security Management

   To address changes of overall environment and threats to the force, the Armed Forces will enhance security education, security mechanisms, and safety inspection, and incorporate knowledge of risk management into the construction of a robust security net to ensure force security and safety.

Afterword

The MND's first QDR has finally been completed after intensive review and discussion in line with the principle of "in-depth assessment and proactive foresight" and the needs of “future strategic environment analysis, strategy examination, organizational re-structuring, force planning, and resources utilization”. To ensure that all units under the MND maintain correct cognizance of the QDR, the writing and editing process was accompanied by continuous, complex communication and coordination among various units. Furthermore, the MND has striven to ensure that the content of the QDR achieves the best possible compromise among collective thinking, respect for different specialized professional skills, emphasis on innovation and foresight, and the need for prudence and pragmatism.

In order to compile this QDR, the MND organized a task force with personnel from staff units, service agencies, and the National Defense University. With assistance of a consultant group composed of experts and scholars from the private sector, and in accordance with the given defense strategy and force planning principles, knowledge and experience from a broad range of parties were collected to complete the review. During the compilation process, the MND has gained much valuable experience in areas such as forging a strategic framework consensus, functioning as a policy integrator, encouraging innovative thinking, and giving consideration to financial resource constraints, all of which can serve as the foundation for improving future QDRs.

The completion of the QDR indicates that the process of defense

reform has reached another important milestone in the wake of the implementation of the Two Defense Acts since 2002. The significance of the QDR lies in the timely fulfillment of the requirement of new Paragraph 4 of Article 31 of the National Defense Act, which is to be accountable to the Legislative Yuan and allow the law-making body to understand the defense blueprint planned during the President's term of office and oversee the defense policies on behalf of the public. In addition, the MND could also take advantage of this process to perform vertical communication and horizontal integration to secure a consensus on strategies and major defense policies. Therefore, both the "process" and "results" of compiling the QDR are of equal significance to the MND.

Looking ahead to the future, the MND must employ effective control and evaluation mechanisms in the next stage to ensure that the goals set forth in the QDR are achieved, and that the overarching defense concepts of the President and military strategic concepts of the defense minister are thoroughly realized. In addition, with the compilation experience of this QDR, the MND will clearly define the position of the QDR and compilation procedure in the Armed Forces' relevant guidelines and operation standards, which will enable all units to fully understand the function and substance of this strategic guidance document, and effectively cooperate in the implementation of relevant matters.

In summary, the content of this QDR primarily reflects the need to "promote defense transformation" and "establish professional armed forces". Starting from the mindset of "preventing war" and "resolute defense and credible deterrence," it is hoped that, with the support of adequate funding, structural reforms such as an all-volunteer force,

force level adjustments, integration of joint warfighting capabilities, reform of defense mechanisms, and human resources development could be realized, and future development of joint warfighting capabilities impelled. The Armed Forces of the future will gradually evolve into an all-volunteer active force. Currently, by means of modeling and simulation, war games, and exercise validation, the MND will determine the most suitable military force structure, and thereby achieve the goal of improving armed forces capacity and warfighting capability.

The MND looks forward to taking advantage of a relatively stable security environment in the next few years to accelerate the pace of reforms, reshape the capabilities and substantially transform the Armed Forces. We will build a ”Hard ROC” defense force with advanced equipment and a high degree of professionalism to ensure national security, safeguard peace in the Taiwan Strait, and provide a foundation for the sustainable development of the country, and a secure basis for the people’s livelihood and prosperity.

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