

# Conference on Disarmament

20 September 2017

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## **Note verbale dated 15 September 2017 from the Permanent Mission of the Republic of Korea to the Secretary General of the Conference on Disarmament**

The Permanent Mission of the Republic of Korea to the United Nations Office and other International Organizations in Geneva presents its compliments to Mr. Michael Møller, Secretary-General of the Conference on Disarmament, and has the honor of transmitting to the Secretariat the briefing document presented by a representative of the Republic of Korea on "Nuclear and Missile Threat from the North and ROK Military Countering Posture" at the Conference on Disarmament on 30 August.

The Permanent Mission of the Republic of Korea would appreciate the Secretariat's assistance in issuing and circulating this document as an official document of the Conference on Disarmament.

The Permanent Mission of the Republic of Korea to the United Nations Office and other International Organizations in Geneva avails itself of this opportunity to renew to the Secretary-General of the Conference the assurances of the highest consideration.



# Nuclear and Missile Threat from the North and ROK Military Countering Posture

2017.08.30



대한민국 국방부  
Ministry of National Defense

# Agenda

- I . nK's Provocations**
- II . nK Nuclear Threat Assessments**
- III. nK Missile Threat Assessments**
- IV. ROK Military Countering Posture**

# **I . nK Provocations**



# **nK Provocations ( 1950s )**



**nK's Invasion; Korean War (1950.6.25.)**



**Occupation of Seoul in 3 days since the beginning of the war (1950.6.28.)**



**nK Tanks in Seoul (1950.6.28.)**



**Destroyed Han-gang bridge and displaced civilians**

# **nK Provocations ( 1960s~1980s )**



**President Assassination Attempt  
(1968.1.21.)**



**Digging tunnels for Invasion  
(1974.11.15.)**



**Axe-murder incident in Panmunjom  
(1976.8.18.)**



**Terror Attack in Burma Killing Cabinet  
members( 1983.10.9.)**



# nK Provocations ( 1990s~2010s )



**Infiltration of Armed Spy in Gangneung  
(1996.9.18.)**



**Torpedoing of ROKN Corvette Cheonan  
(2010.3.26.)**



**Shelling of YP-do (2010.11.23.)**



**Residents of YP-do evacuated via ships**

## II . nK Nuclear Threat Assessment

- **Development Progression**
- **Threat Assessment**
- **Nuclear Strategy and Doctrine**



# Development Progression



## 1950s~1960s

1954, Established "Nuclear Weapons Division" under MPAF  
1959.09, nK-USSR Nuclear Power Agreement  
1965, Introduced Research-purpose nuclear reactor;  
**established basis for the nuclear development**

## 1970s~1980s

1970, Nuclear Physics Department made in University of Kim Il-sung  
1980.07, Began Yongbyon Nuclear Reactor(25MWt) Construction  
1986.10, Yongbyon Reactor Operational, **Plutonium Production**

## 1990~2005


1992.01, Signed IAEA Nuclear Safeguard Agreement  
1993.03, NPT Withdrawal Claim / '94.10., Geneva Agreement  
2002.10., US Special Envoy visit to nK, nK admitted **the Highly Enriched Uranium Program (HEU)**  
2005.05., Yongbyon Nuclear Reactor withdrew 8,000 spent fuel rods

## 2006 ~

2006.10.9, **1<sup>st</sup> Nuclear Test**  
2009.5.25, **2<sup>nd</sup> Nuclear Test**  
2013.2.12, **3<sup>rd</sup> Nuclear Test**  
2016.1.6. / 9.9, **4th / 5<sup>th</sup> Nuclear Test**

YONHAP NEWS

# Threat Assessment



1st Nuclear test	2nd	3rd	4th	5th
Yield : 1kt>	Several kt	6~7kt	~6kt	~10kt

- Nuclear Material**
  - Plutonium ( Pu ) : Suspected of in possession of ~50kg**
    - Considering their nuclear development progress, ~6kg or less is enough to produce a nuclear weapon
  - Highly Enriched Uranium program has also made a substantial progress**
- Miniaturization**
  - Considering precedent of other nuclear powers' miniaturization timing ( 2~7 years ) and nK's 1st Nuclear test in 2006, nK's miniaturization technology should be considerably matured

※ nK is expected to attempt at securing 'de-facto nuclear state' status through nuclear capability sophistication via additional nuclear tests and increase in its nuclear arsenal

## 「Solidification of Nuclear State Status Act ('13.4.1.)」

- Defined nuclear use by 'Nuclear weapon can only be employed by the final order from the supreme commander';  
Created legal basis for KJU' s nuclear control ( Article 4 )
- Article 2 and 5 of the same act defines the purpose and conditions of nuclear weapons and its use – it also includes the possibility of nuclear use against non-nuclear states
  - ★ Clearly state the possibility of nuclear attack against ROKUS Alliance through the premise of: 'Nuclear weapons will not be used as long as there are no participation to invasion or act of aggression against the North Korea'

### III. nK Missile Threat Assessment

- **Program Development**
- **Threat Assessment**



# Program Development



## 1970s~1980s

1976~1981, Introduced USSR SCUD-B and Reverse Engineering  
1984.04, First ever nK SCUD-B Missile Test Launch  
1988, **Fielded SCUB-B/C Missile**

## 1990s

1990, First ever Nodong Missile test launch  
1998, **Fielded Nodong Missile**  
1998.08, Test launch of Daepodong 1

## 2000s

2006.07, Daepodong 2 Test Launch  
2007, **Fielded Musudan Missiles**  
2009.04, Long Range Missile(Improved Daepodong 2) Test Launch

## 2010 ~

2012.12, Long-range Missile Test Launch  
2016.02, Long-range Missile Test Launch  
2016.04~10, Musudan Missile Test Launches (8 times)  
2016.08. / 09, Nodong Missile Test Launch  
2017.04 / 07, **ICBM Range Ballistic Missile(Hwasung-14) Launch**

# Threat Assessment ( 1 / 2 )



## ■ **nK** is in possession of ~1,000 Ballistic Missiles

### SRBM

- KN-02 ( range: 120km ) / Fielded
- SCUD ( range: 300~1000km ) / Fielded

### MRBM

- Nodong Missile ( range 1,300km ) / Fielded

### IRBM

- Musudan ( range 3,000km< ) / Fielded

### ICBM

- Daepodong 2 ( range 10,000km< ) / test launched
- Hwasung-13 ( range unknown ) / in development
- Hwasung-14 ( range ~8,000km ) / test launched

### SLBM

- Pukkuksong (Polaris) ( range ~2,000km ) / test launched



# Threat Assessment ( 2 / 2 )



- Under KJU control, nK conducted total of 38 test launches with 58 ballistic missiles fired
  - \* 12 launches with 17 projectiles in this year alone, 6 launches since the new administration (05.10.)
- Latest Hwasung-14 launch in July 28<sup>th</sup> showed Intercontinental Range Ballistic Missile that is capable of reaching the continental US
- Since 2014, nK conducted ground and under-water ejection test of SLBM; also in development of Gorae-class submarines
  - \* nK is expected to field SLBM within 1 to 3 years through additional testing of missiles and long-range submarine operations capabilities
- ※ nK is also expected to focus national effort to secure re-entry vehicle and terminal guidance technology to complete its ICBM development

## IV. ROK Military Countering Posture

- **Basic Concept**
- **ROK-US Alliance Capabilities**
- **ROK's Independent capabilities**



# Deterrence and Response Concept against the North



## Basic Concept

Effective deterrence and response to nK nuclear and missile threats through the ROK-US alliance capabilities and ROK's independent capabilities

### ① Alliance Capabilities

- Utilization of all factors of DIME under the Tailored Deterrence Strategy
- Concept of ROK-US Alliance Counter-missile Operations ( 4D Operational Concept )

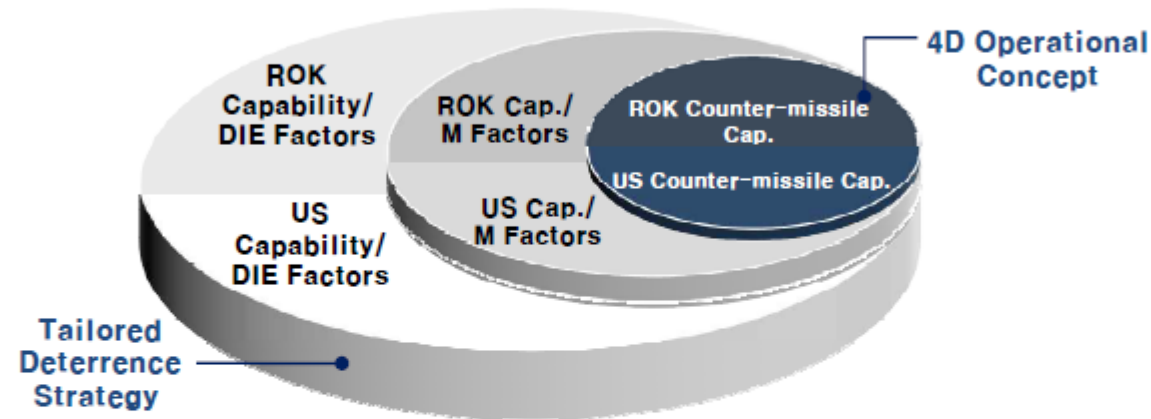
### ② ROK's Independent Capabilities

'Korean Conventional Triad' of deterrence including Kill Chain, KAMD, and KMPR

# ROK-US Alliance Capabilities ( 1 / 2 )



## ● Alliance Tailored Deterrence Strategy( TDS )

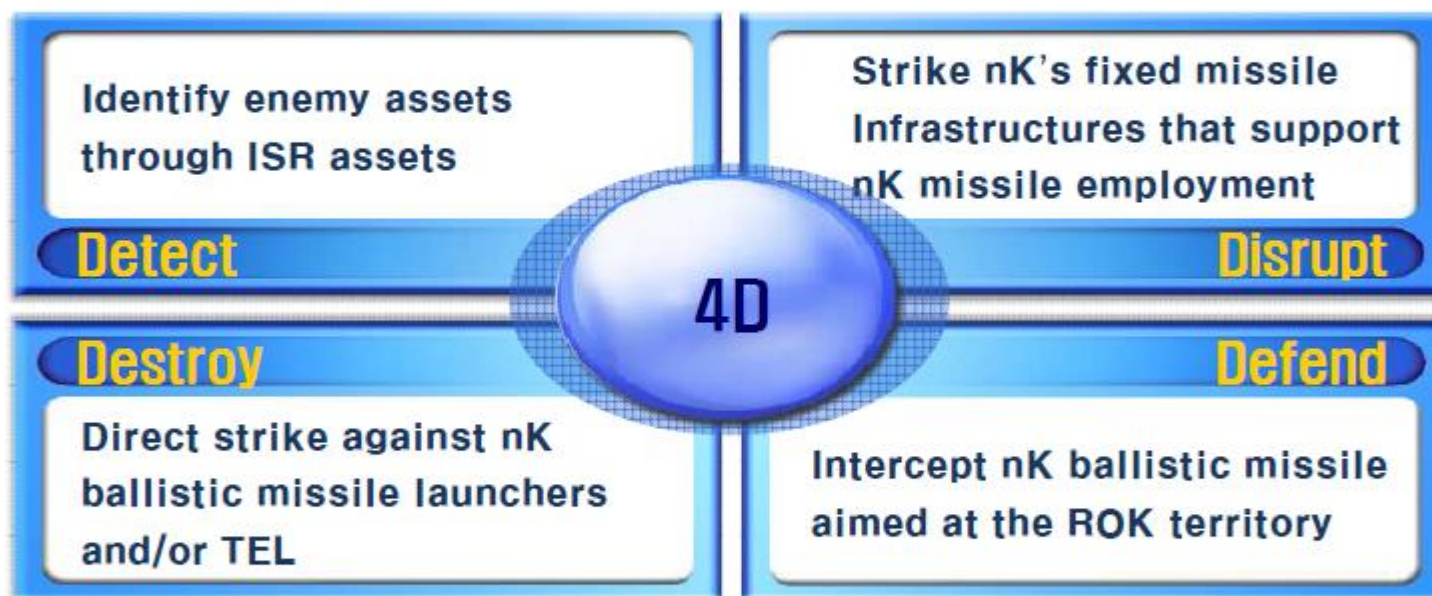


- ROK-US Combined deterrence and response strategy most optimized to the KORPEN situation in consideration of characteristic of nK regime and nK nuclear and WMD threats
- Military factors such as US nuclear umbrella, ROK-US conventional strike forces, and MD combined with ROK-US DIE factors to deter and respond to North Korea's nuclear and WMD threats

# ROK-US Alliance Capabilities ( 2 / 2 )



## ● Concept of ROK-US Alliance Comprehensive Counter Missile Operations (4D)

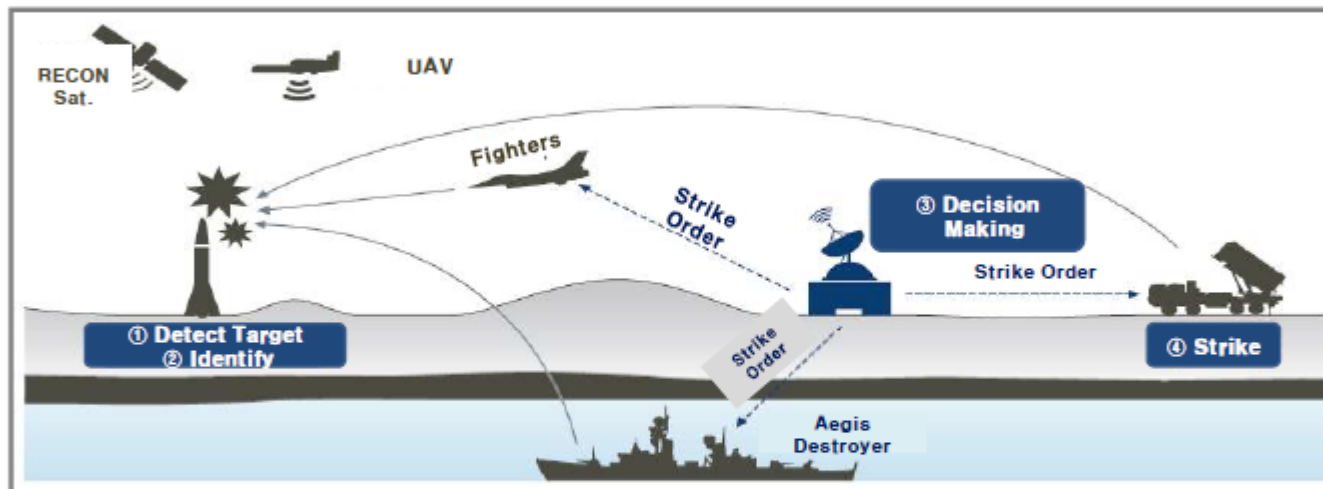


- 4D concept is applied to the Alliance decision making, planning, command and control, exercise and training, and capability development
  - \* THAAD deployment to USFK is a part of capability development measures for the ROK-US alliance missile defense capability

## ROK's independent Capabilities ( 1 / 3 )



## Kill Chain



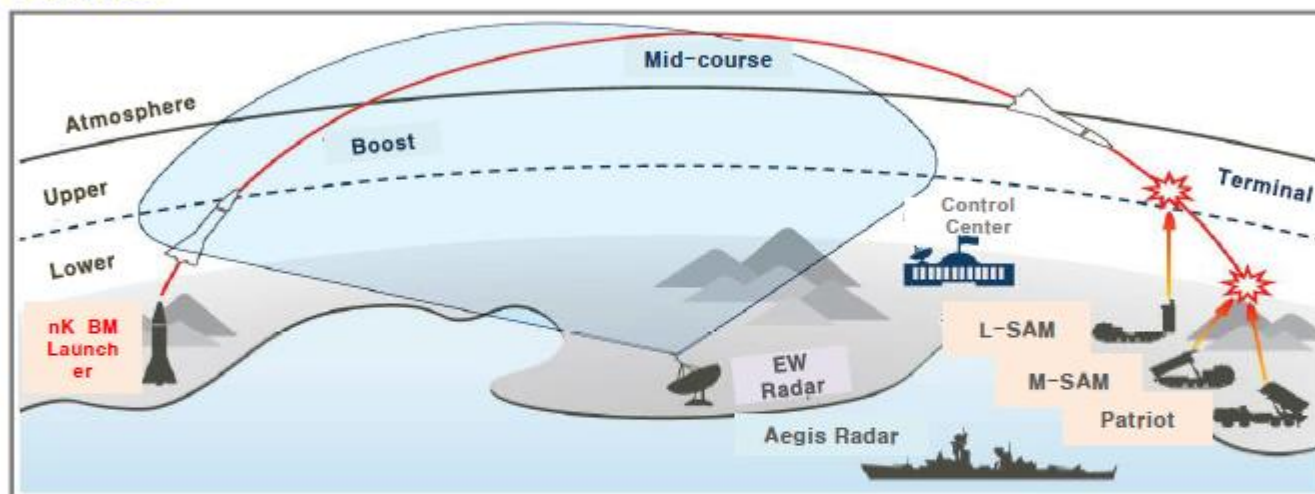
- **System to quickly detect and identify crucial HPT within the nK missile area of operations such as TEL and command post in order to make timely decision and to strike**
- **Improve detection, identification, and strike capabilities in and against entire area of North Korea**



# ROK's Independent Capabilities ( 2 / 3 )



## KAMD

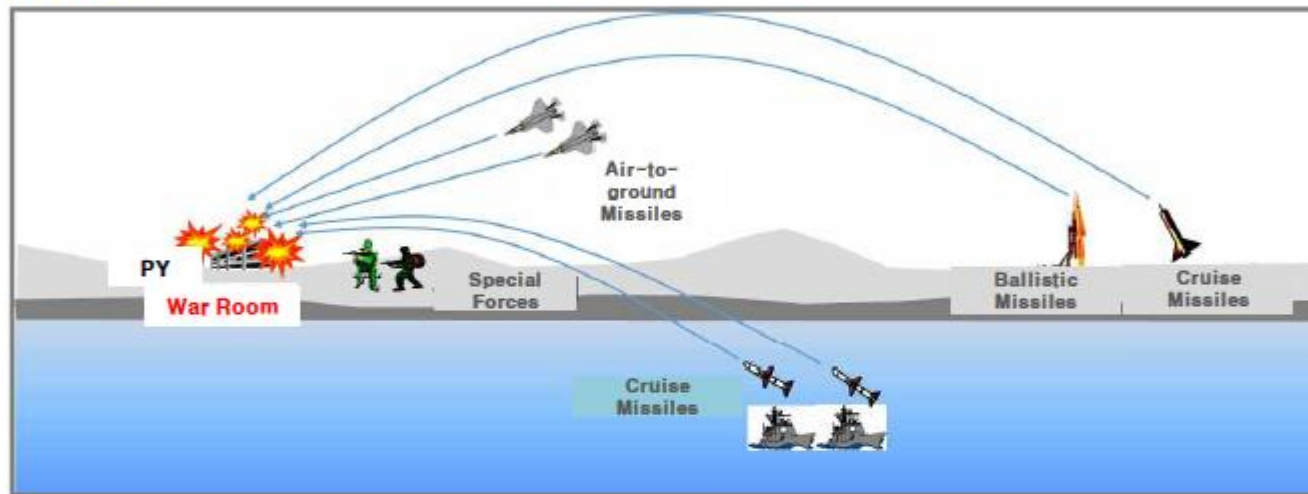


- **Missile Defense focused on terminal-phase lower atmosphere with overlapping capabilities in consideration of strategic environment on KORPEN**
- **Continue to improve detection, defense, and intercept capabilities**

# ROK's Independent Capabilities ( 3 / 3 )



## KMPR



- Delivering punishment and retaliation to nK leaderships via focused strike in case of nK nuclear use
- Maximize punishment and retaliation capabilities via development of high-powered warhead and organizing specialized elite forces

