

Lessons of 75 Years of Nuclear Weapons

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75 years: Difference b/w the Cold War Era and Current Environment

- Cold War

- Bilateral showdown between superpowers
- Mutual Assured Destruction with strategic stability
- Existential risk for human beings

- Current Environment

- Bilateral big nuclear power with second tier nuclear power
- Proliferation
- Complexities for strategic stability
- Retaliation and damage limitation
- No longer existential risk (except US-Russia)

Two School of Thoughts on Deterrence

- As long as nuclear weapon exists, it can have deterrent.
 - Assumption of existential deterrence: By retaliatory second strike capability
 - Retaliation based deterrence: Retaliation after receiving first strike
 - credibility of retaliation is the key
 - relatively cheap
 - Bernard Brodie; Thomas Schelling, and Robert Jervis
- Without serious preparation of nuclear utilization, deterrence would not work
 - Combination of “warfighting” capabilities: counter-force, missile defense, and civil defense
 - Even though deterrence fails, it seek to limit damage
 - Physical effect is the key
 - Expensive in general
 - Albert Wohlstetter, Harman Kahn, and Keith Payne
- Caveat for extended deterrence: Healey Theorem

“To deter Russians, 5 percent credibility is enough, but to reassure Europeans, 95 percent credibility is necessary.”

Nuclear Debate: Waltz vs Sagan

- Kenneth Waltz: spread of nuclear weapon would be better
 - Nuclear weapon acquisition makes the state more cautious
 - With moderate pace, nuclear proliferation will make the world safe
 - based on the first school of thoughts
- Scott Sagan: proliferation is dangerous
 - Proliferation of nuclear weapon will increase risk of trouble on command and control and other mechanical malfunction
 - it increases inadvertent nuclear utilization
 - based on second school of thoughts (or focus on risk from second school of thoughts)

Recent Debate: Deep Cut vs Limited Nuclear Option

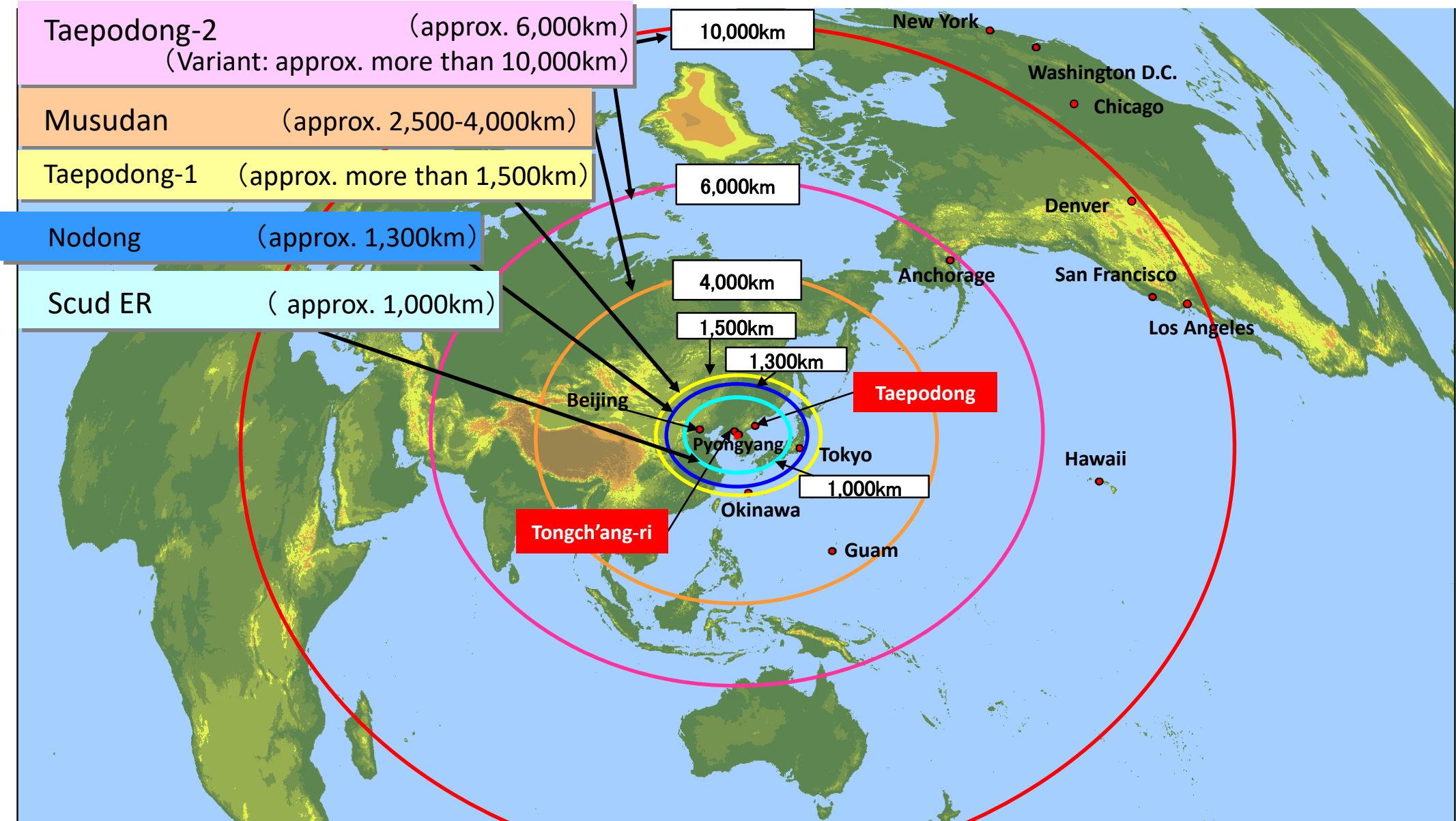
- Deep Cut

- Prioritized threat should be nuclear terrorism
- Growing cyber threat increases the risk of nuclear command and control
- US should deeply cut nuclear arsenal and rely on more smaller nuclear force
- De-alert should be promoted

- Limited Nuclear Option

- US is losing conventional superiority and need to prepare nuclear option
- To counter Russia and China's low yield nuclear weapons, US also need low yield nuclear weapons (penetratable against A2/AD).
- Current high readiness of nuclear force should be maintained.

Range of North Korea's Ballistic Missiles



※The figure above shows a rough image of the distance each missile can reach from Pyongyang for the sake of convenience.

Korean Peninsula:

Traditional Geostrategic Framework (1)

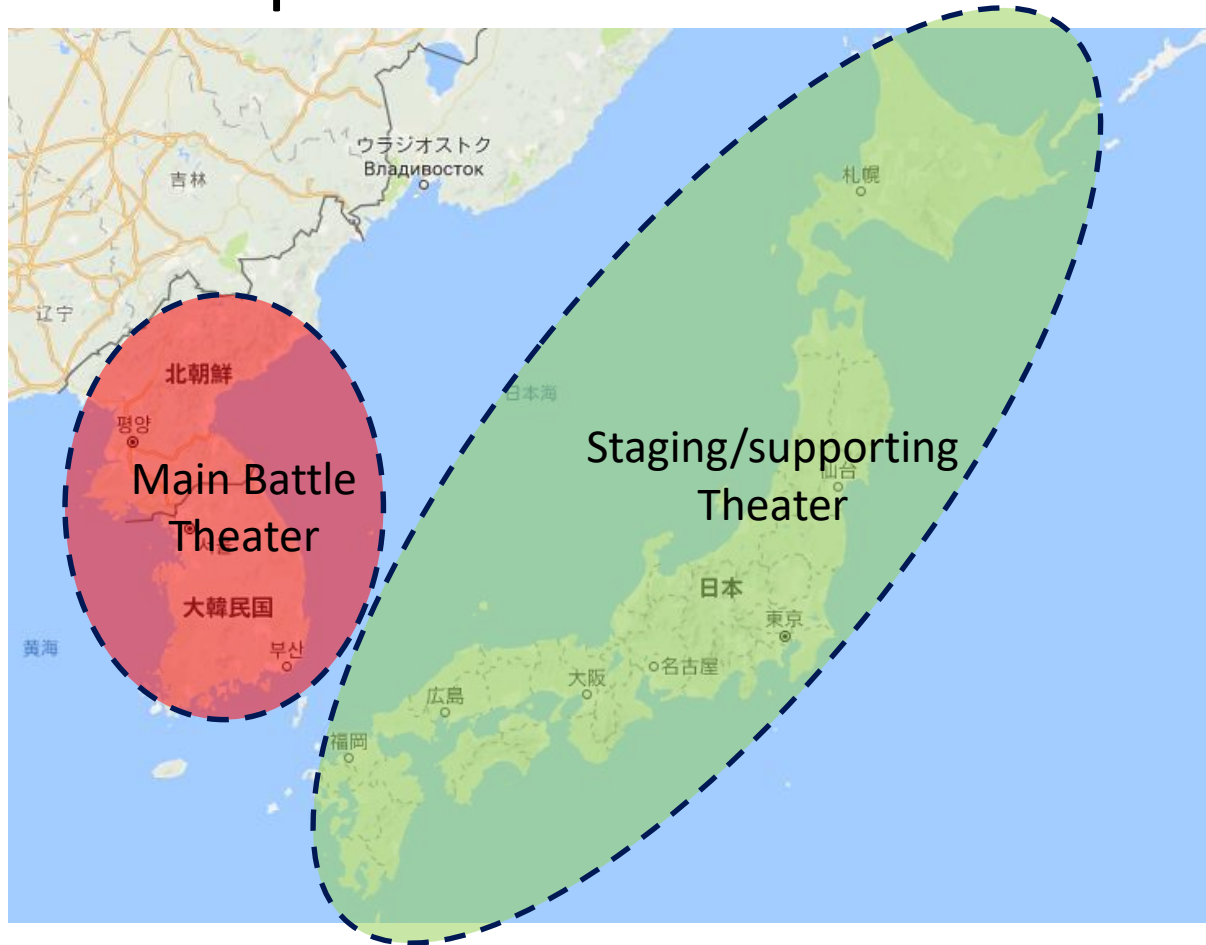
- The 1950 Korean War



- Japan (geographic term) played critical role to support US operation in Korean Peninsula
- North Korea lacked capability to strike Japan

Traditional Geostrategic Framework (2)

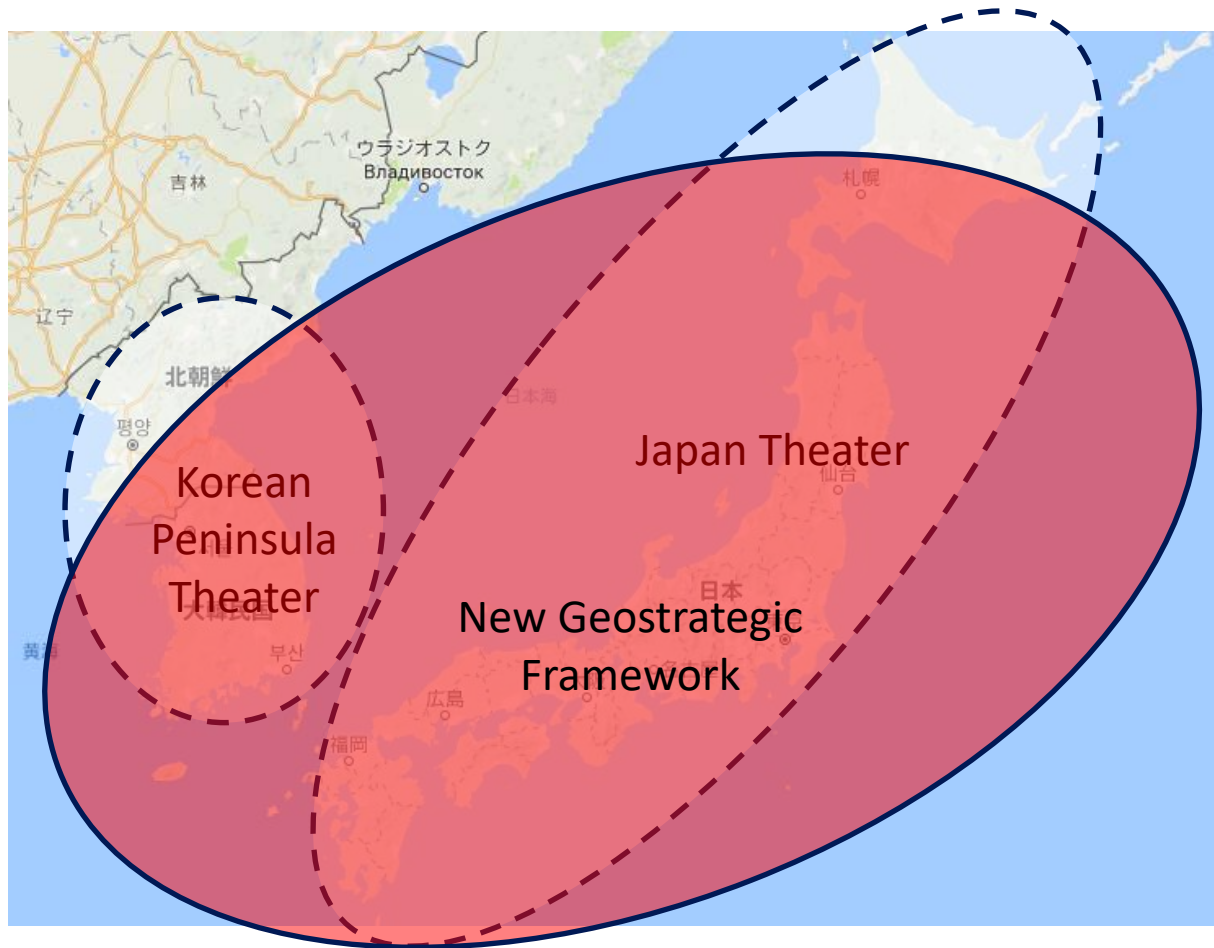
- Two separate sub-theater



- Strategic assumption was: Korean Peninsula as main battle theater and Japanese Islands as staging/supporting theater.
- Since NK lacked capabilities to strike Japan (except SOF) until very recently, Japan theater was regarded as “safe” staging theater.
- 1997 US-Japan Defense Guidelines described Japan’s “rear area support” for US. (* Defense Guidelines are not the plan against any regions and countries)

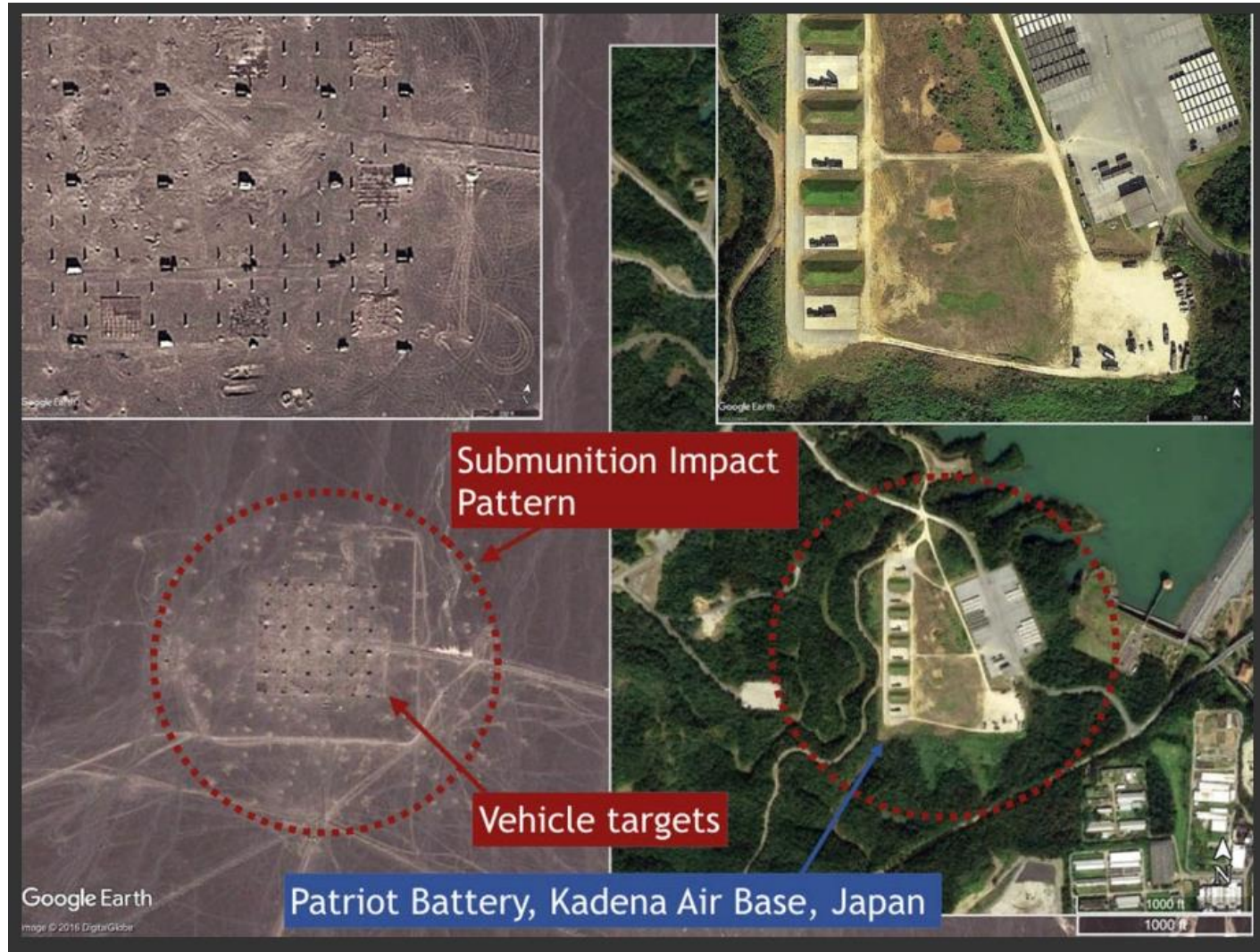
* These circles shows images of theater

NK's BM as a Geostrategic Game Changer



* These circles shows images of theater

China's Ballistic Missiles



Thomas Shugart, "Has China Been Practicing Preemptive Missile Strikes Against U.S. Bases?" (February 6, 2017) (<https://warontherocks.com/2017/02/has-china-been-practicing-preemptive-missile-strikes-against-u-s-bases/>)





U.S. naval base,
Yokosuka, Japan



Google Earth

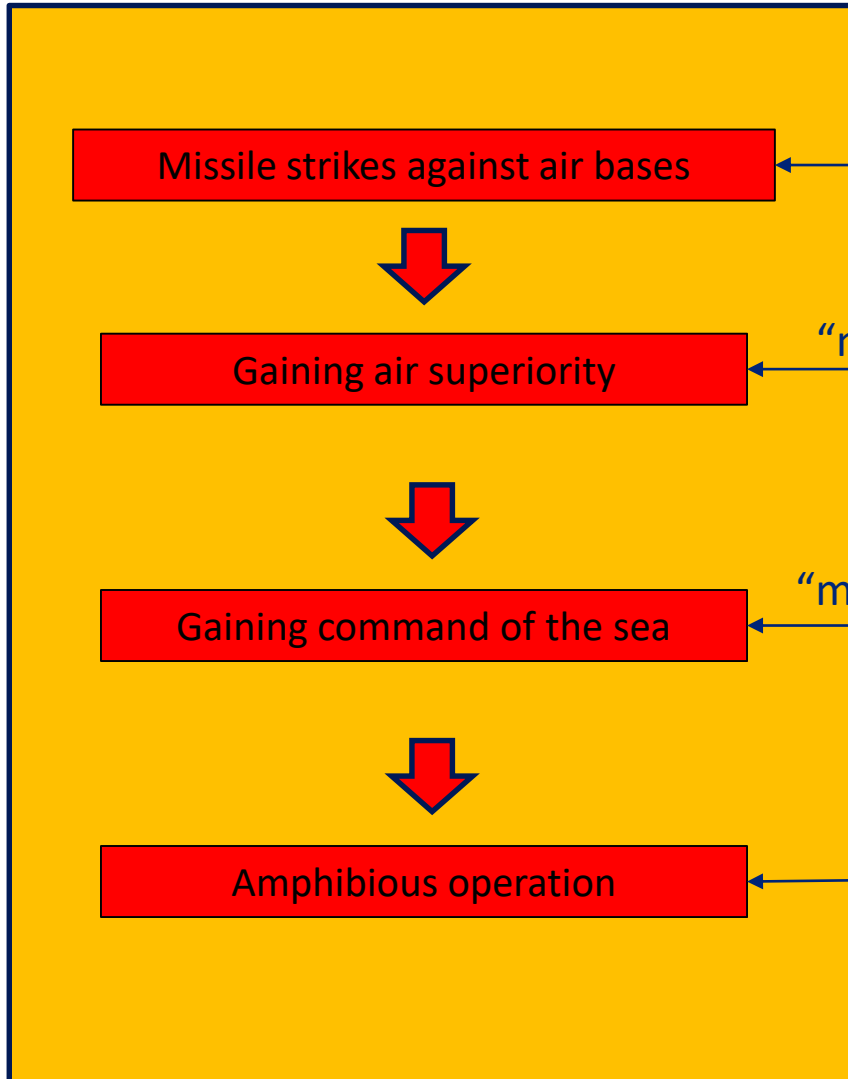


PLA Rocket Force ballistic
missile impact test range,
western China, August 2013

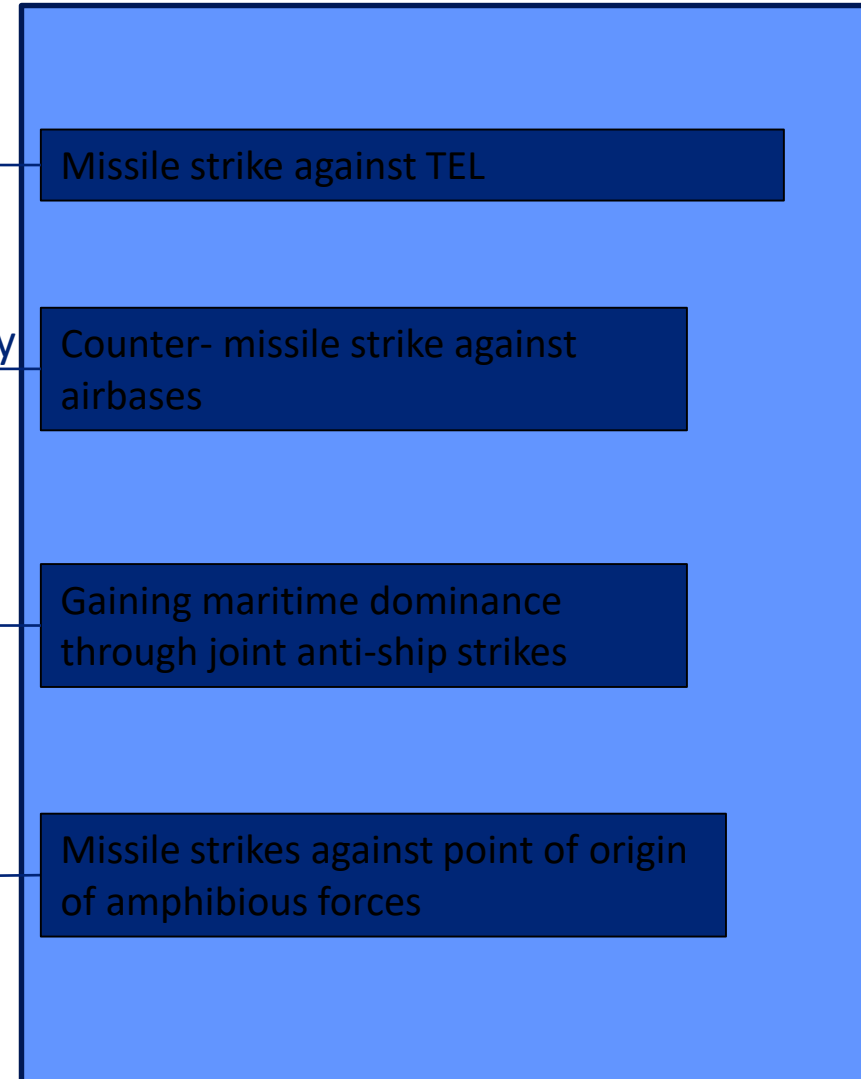
700 ft
700 ft

Theory of Victory against China's Theater Strike Capability

China's Theory of Victory



Ally's Theory of Victory (options)



Denial of first strike advantage

Missile strike against TEL

"no man's air" strategy

Counter-missile strike against airbases

"maritime dominance" strategy

Gaining maritime dominance through joint anti-ship strikes

"Prevent landing" strategy

Missile strikes against point of origin of amphibious forces