

## CSDS News and Analysis 1484 (Feature Report: "Leveraging Complexity in Great-Power Competition and Warfare," RAND)

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Welcome to <u>USAF Center for Strategic Deterrence Studies</u> News and Analysis! As part of the CSDS mission to develop <u>U.S. Air Force</u>, <u>Department of Defense</u>, and other <u>government</u> leaders to advance the state of knowledge, policy, and practices within strategic defense issues involving nuclear, biological, and chemical weapons, we offer the government and civilian community a source of contemporary discussions.

### **Feature Report**

"Leveraging Complexity in Great-Power Competition and Warfare". RAND, Aug. 26, 2021.

RAND: "The complexity lens, developed by RAND Corporation researchers, can be applied to warfighting by leveraging emerging multidomain operations (MDO) concept of operations (CONOP) from recent wargames and surveying historical case studies. The authors also provide four concrete example vignettes to examine." Read Report.

# Nukes and Deterrence, Counter-WMD, and Arms Control in News and Research

#### NUCLEAR WEAPONS AND DETERRENCE

- <u>Policy Roundtable: The Future of Trans-Atlantic Nuclear Deterrence</u> (Texas National Security Review) There are questions today about the relative importance of nuclear weapons in the NATO context.
- <u>HASC Chairman's Mark Adds 12 Navy Super Hornets, Preserves Navy Nuclear Cruise Missile Funds</u> (USNI News)

The mark keeps \$10 million in the FY 2022 request for the Navy to develop a low-yield nuclear surface-launched cruise missile.

- Extended Deterrence beyond Europe (Real Clear Defense)
- There are now three hostile nuclear-armed states in the Asia Pacific area that have strategic and nonstrategic nuclear weapons Russia, China and North Korea.
- <u>STRATCOM: China's Pursuit of Nuclear and Hypersonic Weapons Adds Urgency to U.S. Deterrence</u> (USNI News)

Adm. Charles Richard said the U.S. has never before "faced two peer opponents" with extensive nuclear weapons arsenals and high-technology systems capable of operating across multiple domains.

• <u>Israel's Ballistic-Missile Programme: An Overview</u> (International Institute for Strategic Studies) Israel's strategic deterrence includes several cruise-missile systems, as well as short-, medium- and, reportedly, intermediate-range ballistic missiles.

#### COUNTER-WMD

- When Biosecurity Is the Mission, the Bioeconomy Must Become Government's Strategic Partner (CSIS) Biosecurity—protecting humans, animals, and plants from biological threats—is an essential government mission, the importance of which has been highlighted by the Covid-19 pandemic.
- <u>The Pentagon's Hyperfocus on Hypersonic Missile Threat</u> (Space News)
  The deployment of sensor satellites in low Earth orbit to fill blind spots in the U.S. missile defense system is finally moving from the drawing board to actual space hardware.
- Lockheed: New Missile Defense System Upgrades Will Produce More Comprehensive Battlefield Picture (Defense News)

The GMD system is a U.S.-based capability designed to defend the homeland against intercontinental ballistic missile threats, particularly from North Korea and Iran.

• <u>Soldiers Knock Down Airborne Threats with New Missile Defense System</u> (Defense News) The Army, working with the Israeli Missile Defense Organization, recently completed another step toward fielding the first of two Iron Dome defense system batteries.

#### **US ARMS CONTROL**

• <u>The State of Disarmament: NPT Progress since 2015</u> (NTI)
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The United States and China have not yet ratified the CTBT, and until it enters into force, unilateral testing moratoria are not legally binding.

- <u>Highlights of Iran's Perilous Pursuit of Nuclear Weapons</u> (Institute for Science and International Security) Iran remains on the brink of becoming a nuclear weapons power; its nuclear material production capabilities stronger than ever, its weaponization capabilities lurking under the surface.
- <u>End of an Era: The United States, Russia, and Nuclear Nonproliferation</u> (Center for Nonproliferation Studies)

Policy makers in both capitals must now decide whether the risks posed by the spread of nuclear weapons are great enough to merit their renewed engagement.

• Russia, the US and the Post-New START Agenda (International Institute for Strategic Studies)
The two will continue informal consultations in the coming weeks to solidify the agenda for the second plenary session. Likely topics include nuclear warheads and doctrine, verification, and space systems.

#### COMMENTARY

- What's Driving China's Nuclear Buildup? (Carnegie Endowment)
- "Besides silo-based ICBMs, China also is building more road-mobile ICBMs and strategic nuclear submarines, even as it introduces air-based nuclear capabilities."
- Germany and the Future of NATO Nuclear Sharing (War on the Rocks)
- "Nuclear weapons have made a return to the top of the agenda of world politics. All major nuclear powers have begun to invest in new capabilities or to modernize their arsenals."
- <u>How the Afghanistan Withdrawal Looks from South Korea, America's Other 'Forever War'</u> (VOA) "The messy U.S. retreat from Afghanistan, and the ensuing Taliban takeover, has intensified questions here about how much South Korea should depend on long-term U.S. military protection."

