Welcome to USAF Center for Strategic Deterrence Studies News and Analysis! As part of the CSDS mission to develop U.S. Air Force, Department of Defense, and other government 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**


RAND: "This report provides an analytic framework to interpret Chinese deterrence signalling and explores seven case studies of recent Chinese deterrence behaviour to illuminate what has stayed the same and what has changed in Chinese peacetime and crisis deterrence signalling." [Read Report](#).

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

**NUCLEAR WEAPONS AND DETERRENCE**

- **Deterrence through Education: From Harvard to Kirtland, AFGSC Has a Program for You** (AF Global Strike Command AFSTRAT-Air)
  Over the past decade, these programs have evolved into more than 20 nuclear education opportunities and eight avenues to either a bachelor’s or graduate degree.

- **B-21 Speeds To IOC; ARRW Test Slated For Next Month: Ray** (Breaking Defense)
  The Air Force has asked for $2.87 billion in its fiscal 2022 budget request for the B-21, an increase of only $30 million over last year’s appropriation.

- **Pentagon’s 2022 Budget Cuts Ships to Modernize** (The Diplomat)
  It also maintains funding for the Columbia-class ballistic missile submarine program, the sea-based leg of the United States’ nuclear deterrent

- **The Truth About Tripwires: Why Small Force Deployments Do Not Deter Aggression** (Texas National Security Review)
  Some scholars explored the possibility of making a credible nuclear deterrent threat, i.e., whether the promise of nuclear retaliation for an attack on an ally would be perceived as credible.

- **Biden Proposes $1 Billion for Nuclear Weapons Work** (Santa Fe New Mexican)
  ... a clear signal that President Joe Biden will echo his predecessors’ calls to modernize the nuclear stockpile to deter China, Russia, Iran and other adversaries that have growing first-strike abilities..
• **Mobile Chemical Laboratory Test Plays Key Role in Army Modernization** (U.S. Army)
The CARA deployed the system, analyzed chemical and biological threat samples, provided detailed sample reports to the test team, and prepared the system for redeployment.

• **The Missile Defense Agency’s $8.9B Budget Request Focuses on Next-gen Defense** (Defense News)
This includes plans to upgrade and replace ground system infrastructure as well as fire control and kill vehicle software, which leaders hope will contribute to a more reliable, capable and secure system.

• **ICYMI: DOD Experts Say There’s More Work to be Done to Counter Weapons of Mass Destruction** (DoD)
A critical mission of the Defense Department is to dissuade, deter and defeat actors who threaten to use weapons of mass destruction against the United States and its interests, four WMD experts told a House Armed Services Committee panel.

### US ARMS CONTROL

• **Seminar: Nuclear Arms Control with Nuclear Resonances** (Belfer Center)
Technologies are necessary for verifying the authenticity of the nuclear warheads undergoing dismantlement before counting them towards a treaty partner’s obligation.

• **Missile Proliferation Poses Global Risk** (Arms Control Today)
It [the statement] exhorted all states to “unilaterally adhere” to the 1987 Missile Technology Control Regime (MTCR), a voluntary export control regime designed to prevent the spread of missiles and materials used for missiles that could deliver weapons of mass destruction.

• **Before US-Russia Summit, Measure Demands any New Missile Treaties include China** (Defense News)
China, with the world’s biggest nuclear arsenal after the U.S. and Russia, has about 200 warheads and plans to double them, according to a recent Pentagon report.

• **US Tells Russia It Won’t Rejoin Open Skies Arms Control Pact** (AP)
The announcement comes ahead of a meeting between President Joe Biden and Russian President Vladimir Putin on June 16 in Geneva, Switzerland.

### COMMENTARY

• **Pipeline Hack Reveals America’s Vulnerability to Biological Attack** (USA Today)
"None of our nation’s 16 critical infrastructure sectors (including the health care and public health sector and the food and agriculture sector) has planned adequately for biological incidents.”

• **US Must Strengthen Israel’s Deterrence** (Defense One)
"The [U.S.] should cooperate with Israel on mutually beneficial research and development programs for improving the Iron Dome and other potential air defense technologies, such as directed energy”

• **Biden’s North Korea Plans Come into View** (The Interpreter)
"The Biden administration has opted to emphasise the words 'denuclearisation of the Korean Peninsula', rather than the denuclearisation of North Korea."