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**


GAO: "The Department of Homeland Security started its BioWatch program in response to the 2001 anthrax attack. The program is intended to provide early warning of similar terrorist attacks. A prior effort to upgrade the BioWatch system proposed using sensors that couldn't distinguish particles like pollen or dust from dangerous agents—causing false alarms. The current effort aims to improve results by using the sensors with new technologies, including machine learning." [Read Report](#).

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

**NUCLEAR WEAPONS AND DETERRENCE**

- **Nuclear Deterrence and Stability in South Asia** (International Institute for Strategic Studies) Any failure of nuclear deterrence leading to the first offensive use of a nuclear weapon since 1945 would potentially escalate into a broader nuclear exchange.

- **Air Force DevStar: Agile Software Development And Innovation For The B-21 Bomber** (Breaking Defense) DevStar is a software-development philosophy championed by the U.S. Air Force to field effective warfighting capabilities by eliminating process bottlenecks.

- **Conversation with the Authors - China's Strategic Arsenal** (Journal of Indo-Pacific Affairs) This volume brings together an international group of distinguished scholars to provide a fresh assessment of China's strategic military capabilities, doctrines, and political perceptions ...

- **CBO: US Nuclear Arsenal to Cost $634B over 10 Years** (The Hill) "The cost estimate for the nuclear forces from 2021-2030 represents a 28 percent increase compared to the last CBO 10-year cost estimate two years ago."

- **Biden Nuclear Nominee Would Continue Trump-era Plutonium Pit Production Plans** (Defense News) Senate Strategic Forces Subcommittee Chairman Angus King, I-Maine, prompted Hruby to affirm that the 80-pit goal is part of nuclear maintenance and modernization vital for deterrence and peace.

**COUNTER-WMD**
• **2 Companies to Build Digital Models of New Space Force Missile Warning Sensors** (C4ISRNET)
  Next Gen OPIR is ... to succeed the Space Based Infrared System as the nation’s premier missile warning satellite constellation, detecting and tracking ballistic missile threats all over the world 24/7.

• **Army Biological Defense Strategy** [PDF] (U.S. Army)
  Biological threats and hazards can constrain mobility and freedom of maneuver, degrade readiness, and challenge the Army's ability to fight and win the Nation's wars.

• **Air Force Tests New Suits to Protect Aircrew from Biological, Chemical Attacks** (Military.com)
  "This item will service aircrews for the U.S. Navy, Marine Corps, Army and Air Force, so our testing phase is critical," said 2nd Lt. Gunnar Kral.

**US ARMS CONTROL**

• **The UC Interview Series: Prof. Robert Legvold** (Center for Nonproliferation Studies)
  Hanna Notte recently interviewed Robert Legvold on the state of the US-Russia relationship, nuclear deterrence, the notion of limited nuclear options, prospects for arms control cooperation ... .

• **DTRA’s Denuclearization Legacy to Remember** (DTRA via DVIDS)
  SOAE continues to support the cooperative elimination of WMD delivery systems, related materials and infrastructure, and has evolved its capabilities and authorities ... .

• **New Technologies and Nuclear Disarmament: Outlining a Way Forward** (SIPRI)
  This report sheds light on the impact of recent military-technological advancements on nuclear deterrence and disarmament.

**COMMENTARY**

• **Missile Defense Is Not a Substitute for Arms Control** (War on the Rocks)
  “The United States and Russia are at a critical juncture, and the next steps will determine whether the two countries escalate the arms race or chart a more stable path.”

• **National Security through Telework: Remote Collaboration to Protect the Joint Force** (Defense News)
  “The military seemed unprepared by the chemical, biological, radioactive, nuclear or explosive (CBRNE) requirements associated with COVID-19, despite having responded to pandemics as national security threats in the past.”

• **To Protect Against Weaponized Drones, We Must Understand Their Key Strengths** (IIIE Spectrum)
  “What is new is that rogue states, terrorist groups, and other malevolent actors around the world are seeking weapons that can do less damage but can still rival a WMD in effect.”