



HARVARD Kennedy School

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PROJECT ON MANAGING THE ATOM

The evolving role of tactical nuclear weapons

Francesca Giovannini

USPID, 19TH Castiglioncello International Conference

10.22.2022

Happening now

jt The Japan Times

North Korea trumpets training for 'tactical' nuclear strikes

"The North Koreans say these are training exercises and have conducted some at night," he said. "Kim held a (Central Military Commission)..."

1 week ago



g The Guardian

North Korea says missile tests simulated striking South with tactical nuclear weapons

Kim guided exercises by the country's nuclear tactical operation units over the past two weeks, involving ballistic missiles with mock nuclear...

2 weeks ago



CNN CNN

NATO and Russia to hold long planned exercises of nuclear forces as tensions over Ukraine remain high

He added: "I don't think there's any such thing as the ability to easily (use) a tactical nuclear weapon and not end up with Armageddon." After...

5 days ago



Los Angeles Times

Op-Ed: How the nuclear weapons taboo is fading

Adding to the danger is the sense that the nuclear taboo against possessing or even using nuclear weapons is fading, with the passage of...

3 days ago



Reuters

Analysis: What is Russia's policy on tactical nuclear weapons?

The United States has said the world faces the gravest nuclear danger since the 1962 Cuban Missile Crisis because of remarks by Russian...

4 days ago



Bulletin of the Atomic Scientists

Rhetoric in Ukraine has reinforced the fallacy of limited nuclear exchange

Since the end of the Cold War, Russia, the United States, France, and China have continued to possess and develop nuclear weapons below the...

21 hours ago



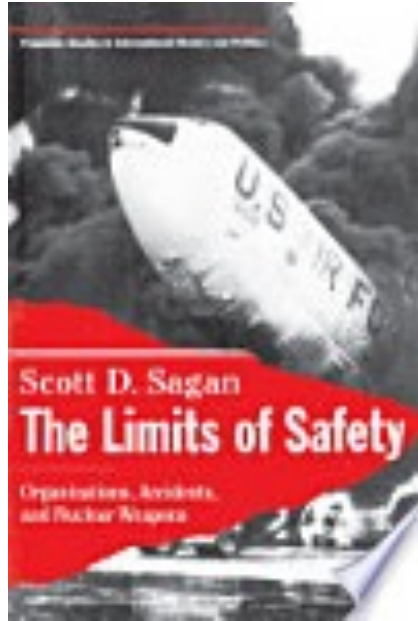
The perfect storm has arrived

- An aggrieved nuclear weapon state moved by uncompromisable vital stakes
- A high-risk gambling leadership style
- Tactical nuclear weapons

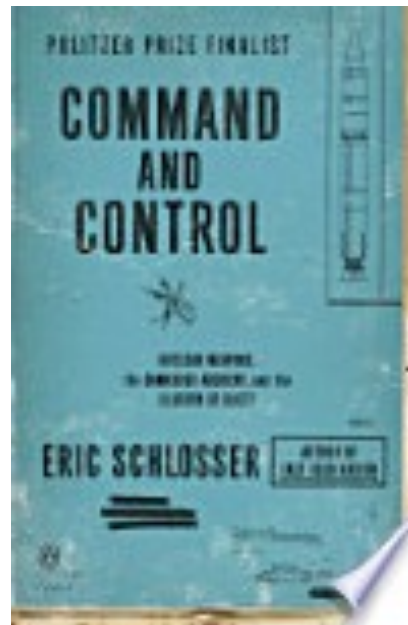


A hurting stalemate? The risks of nuclear weapon use in the Ukraine crisis

By Francesca Giovannini | Nuclear Risk, Nuclear Weapons



60 years after Cuban Missile Crisis, nuclear threat feels chillingly immediate



Tactical Nuclear Weapons in Cuba: New Evidence
By Svetlana Savaranskaya

TACTICAL NUCLEAR WEAPONS continue to escape any serious policy evaluation

- Almost all nuclear near-misses or potential accidents involved tactical nuclear weapons
- The greatest threat of nuclear escalation was presented by the high concentration of tactical nuclear weapons in Central Europe

- Making escalation more manageable and deterrence more credible
- Tactical nukes were introduced during the bipolar moment and as part of a nuclear deterrence strategy

AN ESCALATION LADDER
A Generalized (or Abstract) Scenario

AFTERMATHS	
CIVILIAN CENTRAL WARS	44. Spasm or Insensate War 43. Some Other Kinds of Controlled General War 42. Civilian Devastation Attack 41. Augmented Disarming Attack 40. Countervalue Salvo 39. Slow-Motion Countercity War (CITY TARGETING THRESHOLD)
MILITARY CENTRAL WARS	38. Unmodified Counterforce Attack 37. Counterforce-with-Avoidance Attack 36. Constrained Disarming Attack 35. Constrained Force-Reduction Salvo 34. Slow-Motion Counterforce War 33. Slow-Motion Counter-"Property" War 32. Formal Declaration of "General" War (CENTRAL WAR THRESHOLD)
EXEMPLARY CENTRAL ATTACKS	31. Reciprocal Reprisals 30. Complete Evacuation (Approximately 95 per cent) 29. Exemplary Attacks on Population 28. Exemplary Attacks Against Property 27. Exemplary Attack on Military 26. Demonstration Attack on Zone of Interior (CENTRAL SANCTUARY THRESHOLD)
BIZARRE CRISES	25. Evacuation (Approximately 70 per cent) 24. Unusual, Provocative, and Significant Countermeasures 23. Local Nuclear War—Military 22. Declaration of Limited Nuclear War 21. Local Nuclear War—Exemplary (NO NUCLEAR USE THRESHOLD)
INTENSE CRISES	20. "Peaceful" World-Wide Embargo or Blockade 19. "Justifiable" Counterforce Attack 18. Spectacular Show or Demonstration of Force 17. Limited Evacuation (Approximately 20 per cent) 16. Nuclear "Ultimatums" 15. Barely Nuclear War 14. Declaration of Limited Conventional War 13. Large Compound Escalation 12. Large Conventional War (or Actions) 11. Super-Ready Status 10. Provocative Breaking Off of Diplomatic Relations (NUCLEAR WAR IS UNTHINKABLE THRESHOLD)
TRADITIONAL CRISES	9. Dramatic Military Confrontations 8. Harassing Acts of Violence 7. "Legal" Harassment—Retortions 6. Significant Mobilization 5. Show of Force 4. Hardening of Positions—Confrontation of Wills (DON'T ROCK THE BOAT THRESHOLD)
SUBCRISIS MANEUVERING	3. Solemn and Formal Declarations 2. Political, Economic, and Diplomatic Gestures 1. Ostensible Crisis
DISAGREEMENT—COLD WAR	

How tactical nuclear weapons **have changed** our thinking about nuclear weapons

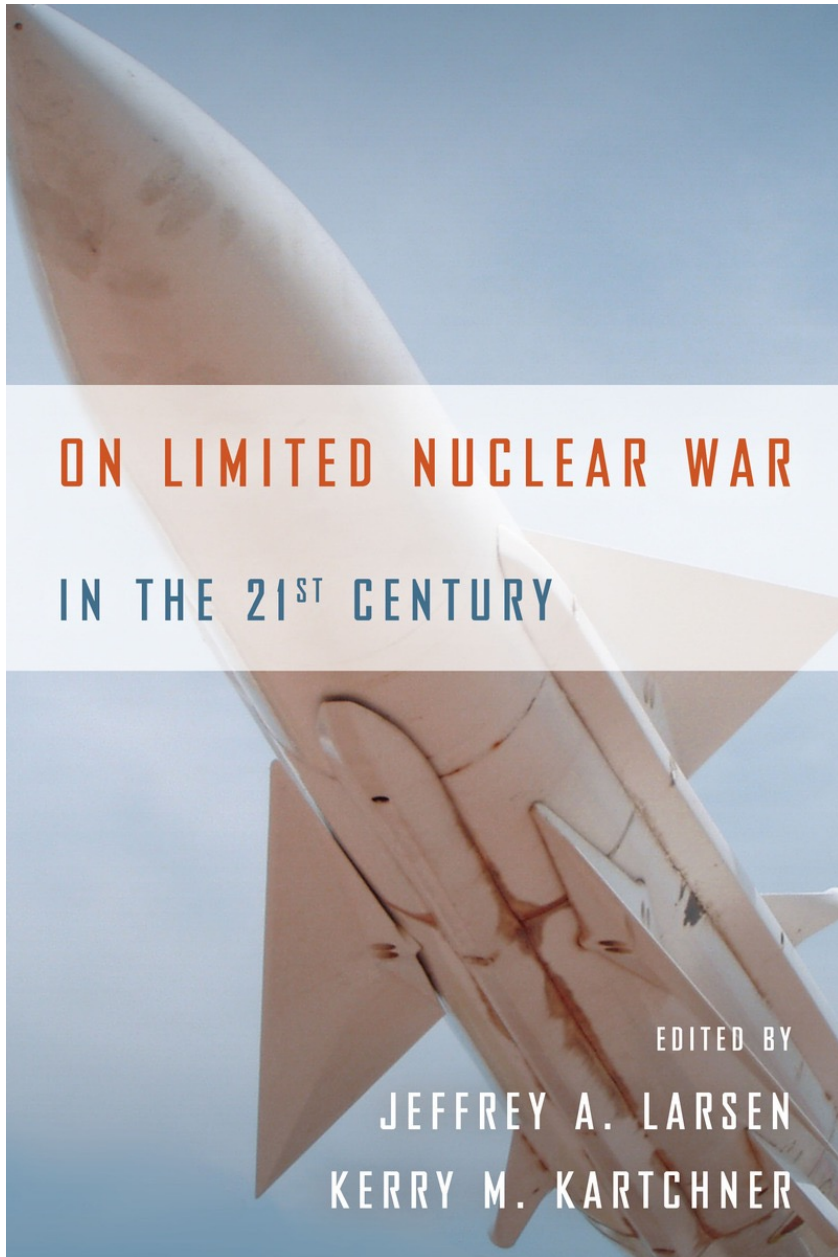
The nuclearization of everything

suitcase bombs, nuclear mines, nuclear artillery shells, missiles, short-range missiles fired from planes, and air-dropped bombs.

The blurring distinction between conventional and nuclear (and the conventionalization of nuclear weapons)

- a mere firecracker
- Only .01–.02 kilotons — just a *baby*! From a physics perspective, you're talking about a warhead that weighed 51 lbs yet put out the explosive equivalent of 10 to 20 tons of TNT —
- US arsenal is the MOAB, which has a blast yield of some 11 tons of TNT





From nuclear deterrence to nuclear war-fighting

Gray warns in his 1979 commentary that “there could come to power in the Soviet Union a leader, or a group of collegial leaders, who would take an instrumental view of nuclear war.”¹⁵ The Cold War saw no such development, but since the turn of the century, Russian strategic thought has been leaning in this dangerous direction. Jacob Kipp, in his chapter “Russian Doctrine on Tactical Nuclear Weapons: Contexts, Prisms, and Connections,” describes how Russian strategists have applied their own frameworks to Western conceptions of the “generations of warfare.” Russian scholar Alexei Fenenko, in particular, authored an influential article in 2004 advocating the use of tactical nuclear weapons in precision strikes,

The impossibility of victory makes deterrence less credible

How Ukraine changes the way in which we think about tactical nuclear weapons



Where tactical nuclear weapons are really effective today

- Nuclear coercion (barely explored)
- Changing the relationship between nuclear weapons states and the rest of the world
- Predatory behavior but with more flexibility in targets and proportionality (land grabbing)
- Nuclear blackmail – The Hiroshima model

World Nuclear-Weapon-Free Zones

■ Nuclear weapon state
■ Nuclear-weapon-free zone

Central Asia Nuclear-Weapon-Free Zone Treaty
Came into force in 2009 with 5 countries

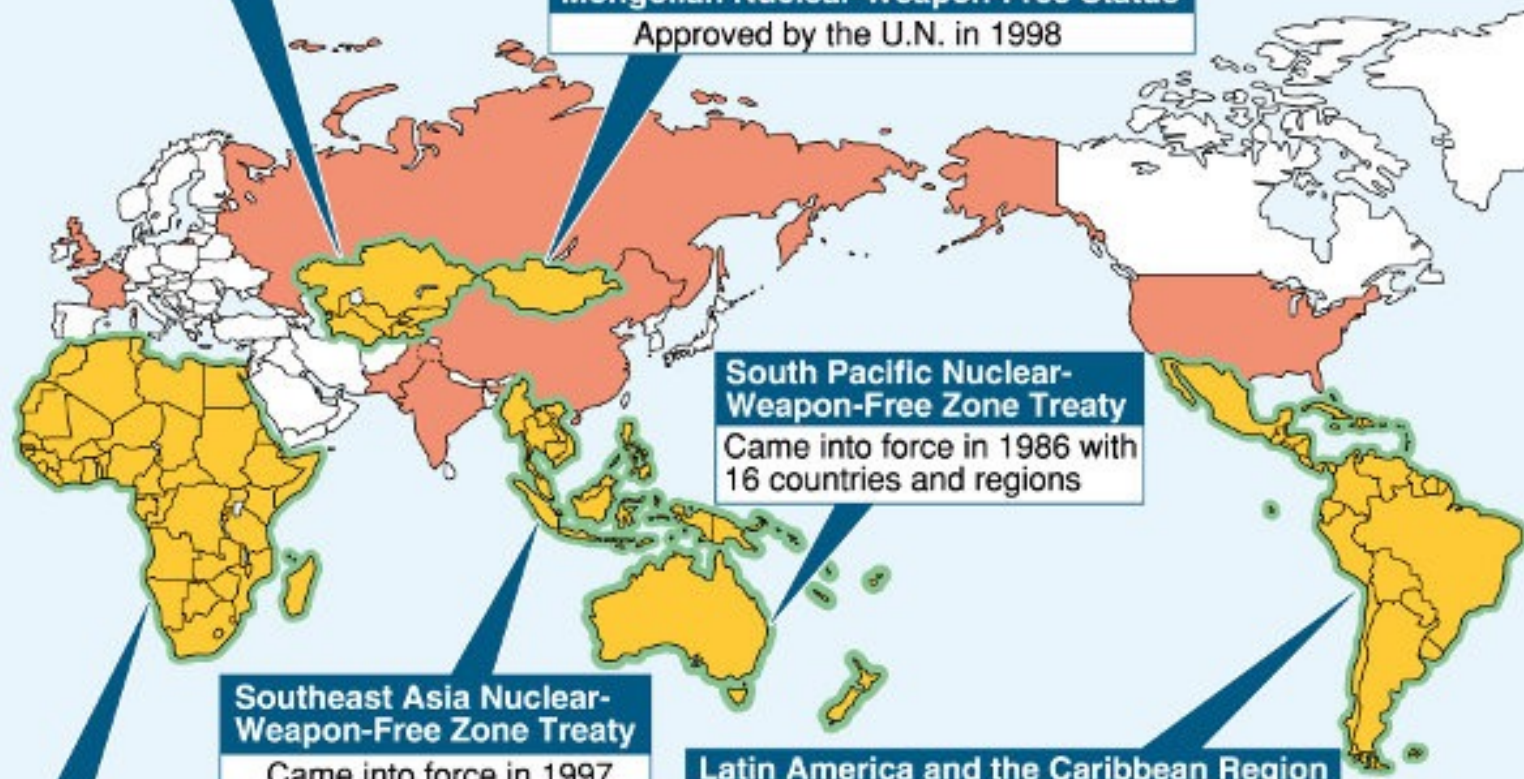
Mongolian Nuclear-Weapon-Free Status
Approved by the U.N. in 1998

South Pacific Nuclear-Weapon-Free Zone Treaty
Came into force in 1986 with 16 countries and regions

Southeast Asia Nuclear-Weapon-Free Zone Treaty
Came into force in 1997 with 10 countries

Latin America and the Caribbean Region Nuclear Weapon Ban Treaty
Came into force in 1968 with 33 countries

Africa Nuclear-Weapon-Free Zone Treaty
Came into force in 2009 with 54 countries



* Cited from "Japan's Disarmament and Non-Proliferation Policy" (Fourth Edition) by the Ministry Foreign Affairs of Japan and other sources.



A protection regime and an arms control agreement over tactical nuclear weapons

- NSA regime is no longer adequate
- Art 51 has failed
- Tactical nuclear weapons should become the venue for new cooperation between nuclear weapons states and non-nuclear weapons states

A PROTECTION REGIME

1. TRANSPARENCY = Swedish disarmament initiative (informal and limited)
2. ACCOUNTABILITY = UNGA after Ukraine (nonbinding)
3. RECIPROCITY = NPT (undermined)
4. INDIVISIBILITY = TPNW (non fully representative)