Conventional Strategic Arms: Implications For Strategic Stability And Proliferation

Alexei Arbatov,
Carnegie Moscow Center
Center for International Security
Institute of World Economy and International Relations
Russian Academy of Sciences
Steady Growth Of The PGM Role In Local Wars:

2% of the total munitions used in the Vietnam War of 1964-1972,
8% in the first Gulf War in 1991,
30% in the war against Yugoslavia in 1999,
50% in Afghanistan in 2001-2002,
60% during the second war in Iraq in 2003.
Strategic PGMs - The Ones That Can Be Used To Attack Strategic Targets And Delivered By Strategic Systems:

- medium-range and intercontinental ballistic missiles;
- medium-range cruise missiles of all basing modes;
- medium and long range aircraft;
- boost-glide Prompt Global Strike systems.

Assumed medium range 1,000 – 5,500 km
Strategic (intercontinental) range > 5,500 km
For Example:

• modifications of the guided gravity bombs (GBU) dropped from B-1, B-2 and B-52 strategic bombers;

• air-launched cruise missiles (AGM-130, AGM-158, AGM-86C/D);

• sea-launched Tomahawk cruise missile in various modifications (Block I—IV) deployed on submarines and surface ships;

• future supersonic (4,5-6M) cruise missiles: Naval “ArcLight”, Air Force “WaveRider”;

• Prompt Global Strike systems: “Trident-2” (CTM) SLBM, HTV-2 (Hypersonic Technology Missile), AHW (Advanced Hypersonic Vehicle), CSM (Conventional Strategic Missile) ICBM.
Strategic Nuclear Warheads And Treaties’ Ceilings (Corresponding Counting Rules)
Future Strategic Nuclear and Conventional Arsenals

![Graph showing future strategic nuclear and conventional arsenals for the USA and Russia in 2012 and 2020. The categories include Tactical Conventional Weapons (ships, SSNs), Strategic Conventional Weapons (heavy bombers, SSBNs), and Nuclear Strategic Forces.](Image)
Unquestionable Military Effectiveness Of PGMs In Local Wars.

• US targets with PGMs 30% of strategic target list in Russian and 50% in China.
• Questionable utility of strategic PGMs in strategic wars – between nuclear powers, foremost the United States and Russia.
• Is conventional counterforce strike feasible?
A Myth Of Conventional Weapons Catching Up With Nuclear By Destructive Power
(Smallest tactical nuclear artillery shell of 0.01 kt as powerful as the largest 13 tons conventional GBU-57A/B bomb.) Comparative effectiveness of conventional and nuclear munitions in destroying counterforce targets:

- hardened ICBM silos (point defense)
- ground-mobile launchers in route, in shelters (point defense)
- submarines at sea, in port
- bombers in flight, at the airfields
- command bunkers
- C3I systems
- nuclear storages
- tactical nuclear systems
Main Advantages Of Using PGMs:

• moral barrier (nuclear taboo)
• ecological consequences
• dilemma of nuclear retaliation
Main Deficiencies Of Using PGMs:

• lengthy and visible preparations (even operations against much weaker adversaries, such as Iraq, Yugoslavia and Afghanistan, required several months);

• the other side would have plenty of time to put its strategic nuclear forces, missile attack warning systems, command systems and general forces on high alert;

• relying on hidden platforms (submarines at sea) and fast-flyers (ICBMs and SLBMs) greatly reduces the attacking force size.
Other Deficiencies Of Using PGMs:

• The attack using PGMs would take much longer to carry out (many hours or even days rather than 1-2 hours);
• It would be impossible to coordinate simultaneous hits due to lower speed of even supersonic missiles (<6M compared to 20M of ICMB);
• No assurance of penetrating defenses, reaching the targets, destroying the targets, which implies post-attack target reconnaissance and follow-on strikes;
• The aggressor would first have to suppress the adversary’s anti-aircraft defenses, air force and navy, and this would also take time and use up large stockpiles of PGMs.
Main Deficiencies Of Using PGMs:

• The other side will have an opportunity to use its surviving strategic nuclear forces during the operation in accordance with its stated military doctrine;

• It is more difficult to launch a nuclear strike in response to a strike by a nuclear power using only conventional weapons than in response to a nuclear strike, but...

• The aggressor can never be sure that its attack using conventional weapons only would not provoke a nuclear strike in response (the warning systems would not be able to distinguish between a conventional and a nuclear attack);

• The aggressor using much less effective conventional (rather than nuclear) counterforce attack would have to gamble on not receiving much more destructive nuclear retaliation;

• The potential aggressor would also meet retaliation by sea- and air-based strategic nuclear forces and tactical nuclear weapons of the opponent, which are much harder to find and destroy rapidly;

• The huge risk of nuclear escalation set off by attacking a nuclear power using PGMs is completely out of proportion with the real or imagined advantages to be gained from such operation many decades after the end of the cold war in a world of growing great powers’ economic interdependence.
A Special Case Of China:

- Smaller nuclear force;
- No-first-use nuclear doctrine;
- PGMs and BMD arms race in Western Pacific;
- High danger of local conventional conflict escalation (over Taiwan or other disputable islands).
• The growing technical counterforce capability of PGMs in the U.S., and, in perspective, probably in other countries, would make strategic and non-strategic (tactical) nuclear arms control and disarmament more difficult.

• The same goes for de-alerting strategic forces.

• The same goes for enhancing nuclear nonproliferation regime.

• Both recent arms developments: kinetic BMD and PGM systems were originally developed to combat enemies at the regional and local levels and to counter WMD proliferation and international terrorism.

• However these weapons have begun to have a destabilizing effect on military and political relations between the U.S., Russia and other great powers.

• In so doing they are starting to undermine the nuclear disarmament and nonproliferation regime.
• But if the parties concerned show political will, they can resolve or reduce the problems created by PGMs through a range of possible agreements and legal means.
• Precedent of the new START Treaty – PGMs, PGS systems.
• Other possibilities could include a ban on basing attack aviation in certain areas, limits on the areas of submarines’ patrol, confidence building measures, joint military exercises.
General rule as applied to new BMD and PGM systems: if developed and deployed unilaterally or on an alliance basis - they undermine nuclear disarmament and non-proliferation. If limited by agreements and confidence building measures, developed and deployed cooperatively by the great powers – they would facilitate disarmament and enhance non-proliferation.
Thank you