

The Triad: Now, But Maybe Not Forever

AMERICA'S nuclear arsenal has profoundly changed since the late Cold War. Every President since Reagan has sought to eliminate nuclear weapons, albeit in a manner that protects US interests. Absent a new threat, further reductions are likely, but reductions in both warhead numbers and delivery systems must be made deliberately and with great care.

In 1987, the US had about 13,600 strategic nuclear warheads ready for use against the Soviet Union. As of Sept. 1, 1,688 remained operational, a reduction of 88 percent. The US is headed down to 1,550 deployed warheads by 2018, to meet the terms of the New START agreement.

In the 1990s, there were 500 missiles sitting in hardened silos; the inventory is heading down to 420. The Air Force's 10-warhead Peacekeeper ICBM is gone. Minuteman III ICBMs used to carry up to three warheads; soon they will all hold a single weapon.

The story is similar on the bomber front. The B-1 bomber sat out the 1991 Persian Gulf War because it was strictly a nuclear weapons platform. Today the B-1, active over Afghanistan for conventional operations, has no nuclear mission whatsoever. USAF in recent years retired the stealthy Advanced Cruise Missile and cut the Air Launched Cruise Missile inventory.

There have been similar changes and reductions to the Navy's fleet of Ohio-class ballistic missile submarines and their Trident missiles.

The Air Force, the Navy, and the nation have continually studied and adjusted the US nuclear force structure to address changing conditions, budget limitations, and arms control requirements.

Specific weapon systems have come and gone, but since 1960 the nuclear Triad has endured. The Triad, which refers to the ability to deliver nuclear weapons via bomber, land-based ballistic missile, and submarine-launched ballistic missile, provides the nation with a versatile and secure deterrent.

As US nuclear weapons numbers decline, however, the necessity of the Triad is frequently questioned.

"I'm a believer in the Triad," said Gen. Mark A. Welsh III, Air Force Chief of

Staff, in a November meeting with defense reporters. "I think the three legs of the Triad really do give us flexibility, responsiveness, and survivability in a way that you might not get with any one or two legs."

Indeed, each leg of the Triad offers unique benefits.

Sea-launched ballistic missiles make up the bulk of the nation's strategic arsenal. Boomers silently roam the world's

Each leg of the Triad offers unique benefits.

oceans, carry massive weapon loads, and can launch from relatively near their potential targets. They are considered the most survivable leg of the Triad.

The land-based ICBMs are responsive—they can hit a target anywhere on Earth in 35 minutes. They are relatively inexpensive to maintain and demonstrate extraordinarily high reliability. ICBMs are also stabilizing, as an enemy would have to use two or three nuclear weapons against each US silo to be reasonably sure of destroying a single American nuclear weapon. There is little incentive to target them.

Bombers offer flexibility. They can stage from bases worldwide and attack from various directions and altitudes, complicating an enemy's defensive plans. B-2s are stealthy, and B-52s can utilize both gravity bombs and nuclear-tipped cruise missiles. Bombers also send powerful signals—governments notice their presence on Guam or when they appear over places like South Korea. They can also be recalled even after being launched for an attack.

All three legs of the Triad will need replacement over the next few decades. "We are studying options to recapitalize the responsive land-based ballistic missile capability," Air Force Gen. C. Robert Kehler, then head of US Strategic Command, stated in recent testimony. "We are developing a modern long-range penetrating bomber and replacement cruise missile while ... proceeding with the Ohio-class replacement program to maintain an assured and survivable at-sea capability."

To preserve the Triad, the US will need to produce new bombers, subma-

rines, ICBMs, and cruise missiles over the next 20 years. This will foster even more discussion about what is needed and what can be afforded—hopefully in that order. "I think the whole nuclear deterrence strategy is something that we should be thinking about all the time," said Welsh. "I think it constantly evolves."

If fewer weapons are needed to meet future security needs—a good thing—the numbers of weapons will continue to come down. But large modernization costs could then spell the end of the Triad in the 2030s.

Many useful systems have been retired over time, and the Air Force has made clear in recent years that much more money can be saved by retiring entire fleets than by making across-the-board reductions in capabilities.

"The cost of modernizing the nuclear infrastructure is not small, and so I think that will lead to a very honest debate about where can we afford to invest, where must we invest, and how does that relate to a strategy going forward," said Welsh. For example, USAF's next generation bomber may be fielded as a conventional weapons platform first and add nuclear capability at a later date.

"We will likely have at least one, hopefully two, legs of this [Triad] to execute for quite some period of time, and we have to do it well," Welsh said.

The massive, state-on-state great power conflicts that characterized the first half of the 20th century became a thing of the past with the advent of nuclear weapons. Since 1945, the wars involving nuclear powers have been limited. Nuclear weapons have made the world a less-deadly place because of their incredible destructive power and the nightmare scenarios associated with nuclear war.

The US has removed 12,000 strategic nukes and many platforms from service over the past 25 years. Another 25 years brings today's delivery systems past their useful lives.

Until Russian, Chinese, and anyone else's nuclear weapons are considered as benign as British and French nukes, however, the US will require a safe, reliable deterrent. Whether this will include a Triad over the long term remains to be seen. ■