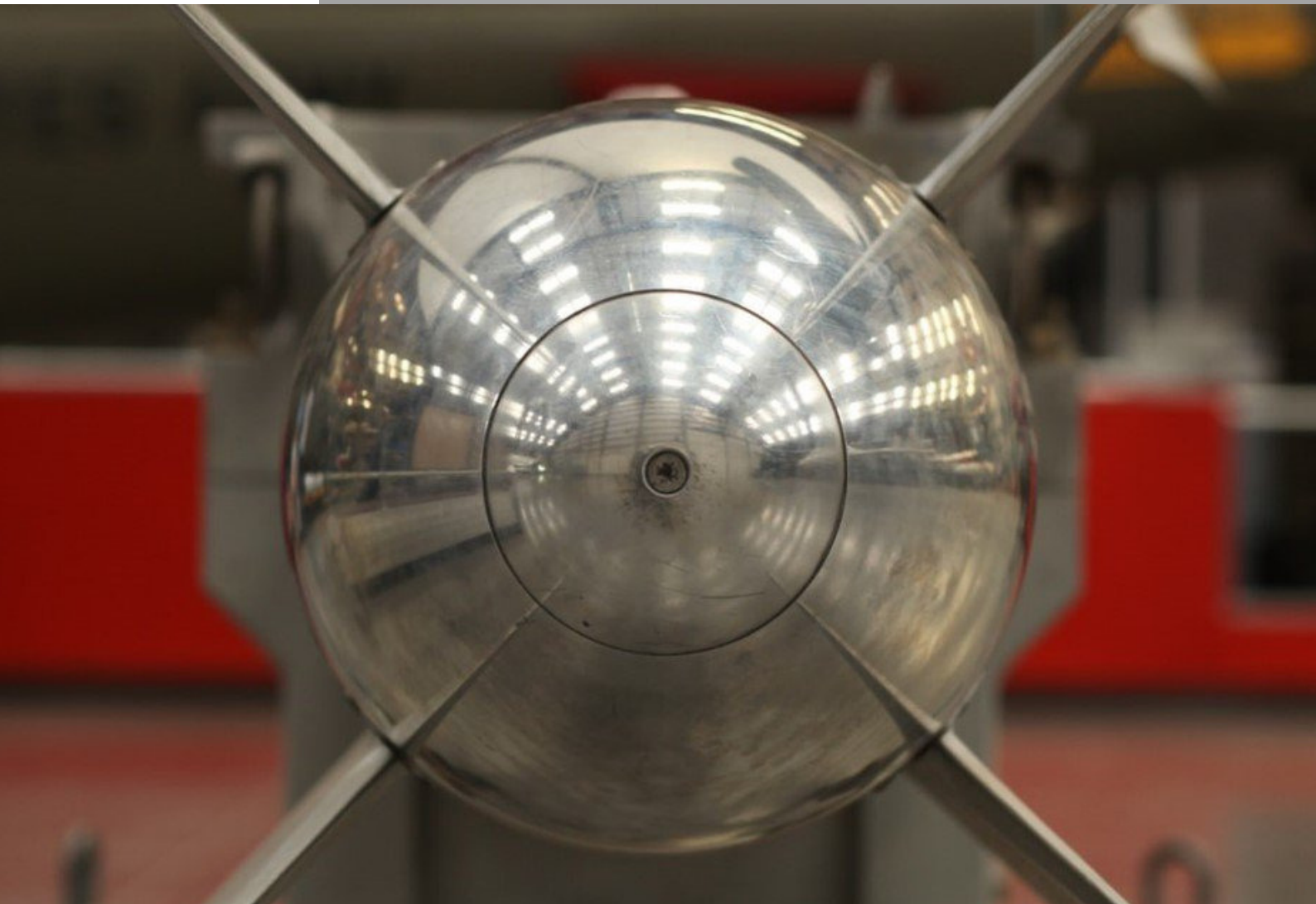


ORG EXPLAINS #5

NATO NUCLEAR SHARING



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Subject

This primer explains the role US-owned B61 tactical nuclear weapons (TNW) play in Europe as part of NATO's nuclear sharing arrangements. It considers these weapons in terms of their economic, political, diplomatic and security significance, including internal NATO dynamics, US-Russia relations and international arms control, non-proliferation and disarmament regimes.

Context

TNWs have been deployed by the US in Europe since the mid-1950s in an arrangement known as nuclear sharing. Following the end of the Cold War the number of these weapons fell dramatically but they were not completely withdrawn. Maintaining NATO nuclear sharing has been seen as a way of maintaining alliance unity as these weapons provide an important political link between Washington and European capitals. Since 2014, NATO-Russia tensions have provided the alliance with an opportunity to highlight the supposed role that nuclear deterrence plays in keeping the peace. Concurrently, the revived salience of TNWs (particularly in US nuclear doctrine), US plans to spend \$10 billion modernising its TNW arsenal, the huge cost of procuring next generation nuclear-capable strike aircraft (particularly for Germany and Belgium), and the fragility of Turkey-NATO relations, have all raised questions about the costs and benefits of NATO nuclear sharing.

Key Points

- The US currently deploys some 180 'tactical' nuclear weapons (B61 gravity bombs) across six bases in five European NATO member states: Belgium, Germany, Italy, the Netherlands, and Turkey.
- The existing B61 bombs are currently undergoing a highly expensive life extension (to the 2040s) and modernisation programme. This will make these weapons more accurate and, some say, more usable.
- Critics highlight safety and security fears surrounding TNW and the need for states to abide by their international non-proliferation and disarmament obligations.
- NATO nuclear weapons have not been part of strategic arms reduction negotiations between the US and Russia, despite civil society groups and some European NATO member states calling for their removal from the continent.
- The ongoing freeze in Russia-NATO relations and President Trump's commitment to nuclear modernisation means that achieving progress on nuclear arms control, non-proliferation and disarmament in this region is likely to be very difficult in the near-term.

What is NATO nuclear sharing?

NATO nuclear weapons sharing began during the early years of the Cold War when the US began basing so-called 'tactical' (relatively low yield, short range) nuclear weapons in Europe under the framework of collective defence. The justification given for the deployment of these weapons was the need to deter an attack on European NATO allies by the Soviet Union's conventional military forces. It was argued that Moscow's superior numbers of troops, tanks and artillery threatened Europe and had to be countered.

The US spread its nuclear weapons strategically across several bases in Europe, supposedly providing the alliance with a 'flexible response', meaning the ability to control escalation during a conflict, with the first use of nuclear weapons not ruled out. The nuclear sharing arrangement has a number of significant political implications. For example, alliance members have a degree of influence over nuclear strategy and responsibility for nuclear detonation. Furthermore, transatlantic solidarity was built regarding European defence—known as 'burden sharing'—which included NATO members contributing to the financial cost of the weapons. In addition, Washington reinforced political and security links with European NATO governments and, some argue, regional nuclear proliferation was prevented as potential nuclear powers had much reduced incentives to develop nuclear capabilities independently.

In terms of today's arrangements, whilst the US retains ownership of and control over use of the weapons, formal policy-making on nuclear sharing requires consensus between NATO's 28 member states. On a practical level, 15 nations are involved in NATO nuclear sharing and 27 nations (i.e. all alliance members except France) participate in the Nuclear

Planning Group, which discusses operational, deployment and management issues for NATO-assigned nuclear weapons.

Which countries are involved in nuclear sharing?

NATO is commonly referred to as a nuclear alliance, yet the majority of its members are non-nuclear weapon states and it does not, on an institutional level, possess any nuclear weapons. The three nuclear weapon states in NATO are France, the UK and US. The nuclear arsenal of each contributes to NATO's overall deterrence structure, although French nuclear weapons are not assigned to NATO.

The US is the only nuclear weapon state in the world deploying nuclear arms on foreign soil, maintaining an estimated 520 B61 nuclear bombs, some 180 of which are assigned to NATO, being hosted in six bases in Belgium (an estimated 20 TNWs), Germany (20), Italy (70), the Netherlands (20) and Turkey (50). One of these bases, Incirlik in Turkey, does not maintain nuclear capable aircraft whilst another, Aviano in Italy, hosts both US and Italian aircraft. The other bases: Kleine Brogel in Belgium, Büchel in Germany, Ghedi Torre in Italy and Volkel in the Netherlands use non-US, local aircraft at present. These are F-16 fighter-bombers (Belgium, Netherlands) and Tornado strike aircraft (Germany, Italy).

In addition to those European nations that contribute to NATO's nuclear mission as hosts, there is the Support of Nuclear Operations With Conventional Air Tactics (SNOWCAT) mission. This exists to allow other alliance members to bolster nuclear operations on an informal basis by providing conventional military assets. Participating countries have included: the Czech Republic, Denmark, Greece, Hungary, Norway, Poland and Romania. Their support tasks include air control

missions, reconnaissance, radar and communications support and refuelling.

From a historical point of view, the number of NATO nuclear weapons has decreased very significantly—by 97%—since their Cold War peak. For example, in the early 1970s some 7,300 weapons, in a wide variety of shapes and sizes, were based in the continent. Moreover, twelve of the thirteen weapon systems that were deployed (by the US Army, Marine Corps and Navy) have been withdrawn since the 1970s and the readiness of the remaining nuclear-armed aircraft has been reduced from minutes to months.

The UK long hosted TNWs, including about 100 B61 bombs at RAF Lakenheath in Suffolk, but these were removed between 2004 and 2008. These B61 were to be deployed on US aircraft; the RAF had its own TNWs at other bases until 1998. However, during the Cold War, the RAF, Royal Navy and British Army, all deployed US owned nuclear weapons of various formats including bombs, depth charges and artillery, under ‘dual-key’ arrangements. Canada also hosted US owned TNWs from 1964 to 1971 and took part in NATO's nuclear mission in Europe from 1963 to 1984 via its army and air force.

Greece was also an active participant in nuclear sharing from 1960 until 2001, when it retired the last of its nuclear-capable Vought A-7 Corsair II strike aircraft without procuring a nuclear capable variant of its F-16 successor. There was no obvious consequence for Greece's wider involvement in NATO from this development.

Turkey, which still probably hosts the largest number of TNWs in Europe at the Incirlik air base, may have ceased to participate in the potential delivery of such weapons, although it retains nuclear-capable F-16 aircraft at other air bases.

What modernisation is planned?

Despite former President Obama's much-publicised rhetoric on the need for concrete action towards a nuclear weapons free world, work on the modernisation of US B61 bombs began under his administration and is receiving continued support from President Trump. In addition, NATO has embarked on improvements to its security and infrastructure, which alliance members will pay for. These are taking place at the USAF base at Incirlik, in Turkey and at the USAF base at Aviano, Italy.

The B61 bomb modernisation programme is being driven by the US National Nuclear Security Administration (NNSA), which aims to upgrade and expand the lives of about 400 of the 520 B61 bombs in its inventory for approximately twenty years, through a Life Extension Program (LEP). More precisely, the NNSA plans to consolidate the four existing types or ‘MODs’ of the B61 bombs into one MOD—the B61-12. Key results of the planned modernisation will be to: make the existing ‘dumb’ bombs three times more accurate by adding a new tail kit and internal guidance system; allow the use of the weapons for both tactical and strategic missions; and for delivery by both fighter jets and long-range bombers. Completion of the first new B61-12 bomb is set for 2020, with work on the remaining bombs planned for 2024.

Such improvements, which, NATO argues, have been made to decrease the risk of radioactive fallout and result in fewer civilian casualties, have led to critics arguing that these weapons could be seen as more usable. Analysts such as Hans Kristensen have therefore concluded that the increased military capabilities provided by the new B61 bombs will signal to Russia that “it is acceptable for it to enhance its non-strategic nuclear posture in Europe as well”. Russia could do this by deploying its own TNW closer

to NATO's eastern border as well as keeping nuclear capabilities, which are, the US argues, in violation of the Intermediate-Range Nuclear Forces (INF) Treaty.

Critics have also pointed to the major costs involved in the LEP, estimates for which range up to \$25 million per bomb. Some also argue that the programme is unnecessary given the capabilities of the existing arsenal, simpler options for life extension and the possibility that the weapons could soon be withdrawn from service.

Controversy has also dogged the replacement of nuclear host countries' nuclear-capable aircraft, which are all set to retire in the 2020s. The Lockheed Martin F-35A is seen as particularly suitable for nuclear missions and can be modified to carry B61-bombs. However, whilst several NATO members, including Italy, the Netherlands and Turkey, have committed to purchasing the F-35A, nuclear host nations Belgium and Germany have proved more reluctant, both for cost reasons and because of their interest in procuring alternative, European-made aircraft. Like the Greeks in 2001, failure to procure suitable new aircraft could lead to them ceasing to participate and host TNWs.

What are the political dynamics of NATO nuclear sharing?

As NATO's Strategic Concept of 1999 explains, "the fundamental purpose of the nuclear forces of the Allies is political" since these weapons "provide an essential political and military link between the European and the North American members of the Alliance". The two key aspects of this 'link' are that it is: i) hierarchical, with Washington leading; ii) legitimating, so that political elites in NATO member states visibly assent to the dominant US presence and role in Europe.

A common objection raised by those who argue that NATO nuclear weapons should be removed from the continent is that the alliance's conventional superiority in relation to Russia means that there is no military need for these weapons. If these weapons no longer have a meaningful military role, it is argued, then they are no longer justifiable from a political perspective.

In response, the value of NATO TNW as a bargaining chip in arms control and disarmament negotiations with Russia is sometimes raised. Arguably, Moscow does not maintain its TNW in order to balance against NATO TNW, but because of the disparity it suffers in terms of conventional military forces in Europe. NATO's unwillingness to scrap its TNW also tends to warrant Moscow's inaction and opacity regarding its own TNW.

Various studies and opinion polls show that several alliance member governments as well as many experts, civil society groups and significant numbers of citizens want TNW removed from their countries. The Belgian, German and Dutch governments have all officially acknowledged that they favour the withdrawal of TNW from their territories. Yet they have qualified this position by stating that withdrawal can only take place if there is consensus on the move by all 28 NATO members. However, there is a range of different positions within NATO on nuclear matters, for example, on the value of deterrence and disarmament. Such dynamics help explain the alliance's inherent caution and conservatism regarding nuclear decision-making.

Other areas of political controversy involve safety and security issues. For example, the 2016 attempted coup in Turkey led critics to question how secure nuclear weapons were at the Incirlik airbase, which is also close to the Syrian border. Another possibility is that the command and control protocols for the

weapons preventing unauthorised use could be overridden. Such concerns have led opponents of the weapons, such as German President Frank-Walter Steinmeier, to describe them as ‘absolutely senseless’ and potential targets for terrorists.

Another notable dimension to nuclear sharing is that US allies in other regions—such as North East Asia—closely observe how Washington handles its extended deterrence relations with NATO. Some analysts have thus proposed that US nuclear sharing be extended to South Korea and/or Japan given current instability in the region. Again, the rationale of disincentivising these allies from independently developing nuclear weapons in response to nuclear-armed rivals (i.e. North Korea) has been advanced.

How does nuclear-sharing fit with arms control, non-proliferation and disarmament regimes?

A common view in Europe and beyond is that the continued deployment in Europe of US TNW is a contravention of the nuclear non-proliferation treaty (NPT), which commits its members to “further diminish the role and significance of nuclear weapons in all military and security concepts, doctrines and policies”. Despite pressure within several nuclear sharing states for change, both the conventional and nuclear arms control and disarmament agenda are frozen. This is mainly due to the poor relations between the US and Russia, as well as the lack of political will in NATO governments to push these issues forward. Civil society groups have long called for the US to realise its NPT non-proliferation and disarmament obligations by repatriating its TNW to US soil prior to their dismantlement.

Russia has a far larger number of TNWs than the US (approximately 1,830) and

Moscow insists upon the removal of US TNWs from Europe before it engages with Washington and NATO on accounting for and reducing these weapons. For its part, the US sees Russian TNW as threatening to its NATO allies, particularly in Eastern Europe and the Baltics. Russian and US experts have proposed a series of measures that could overcome existing reluctance and allow TNW to be included in wider nuclear arms reduction talks. For example:

- Former US Ambassador Steven Pifer has previously recommended that the two nations take: i) confidence-building and transparency measures; ii) parallel unilateral steps to freeze or reduce TNW stockpiles; and iii) begin negotiations aimed at a legally-binding TNW treaty with verification measures.
- Nuclear experts Pavel Podvig and Javier Serrat have recently argued that TNW should continue not being deployed during peacetime and that this should be codified into a “legally-binding, verifiable arrangement” to reduce crisis escalation and the risks of nuclear war.
- Other analysts such as Dr Andrew Futter have also highlighted the existence of other options, such as moving US TNW to bases in new countries or concentrating them in Italy and Turkey, but note that these ideas raise several problems.
- Russian analysts, meanwhile, argue that conventional arms control—such as an updated Conventional Forces in Europe treaty—would need to be implemented if Moscow is to further reduce its TNW.

In March 2011, NATO created a new Committee on WMD Control and Disarmament to provide oversight and policy discussion in this area, but it is unclear what this body has hitherto accomplished.

About the Author

***Tim Street** has been an Associate Fellow of the Sustainable Security Programme since January 2017, specialising in nuclear security and disarmament issues. From October 2015 to December 2016 Tim was Senior Programme Officer with this programme, focusing on the UK's defence, security and conflict prevention policy. Tim has been working on peace and disarmament issues since 2005. He has variously conducted advocacy, campaign and research work with groups including Nuclear Information Service (who he is also currently a Director of), Campaign Against Arms Trade, the International Campaign to Abolish Nuclear Weapons and Conscience. Tim recently completed his PhD exploring the politics of nuclear disarmament at Warwick University as part of a collaborative studentship with the British American Security Information Council, funded by the Economic and Social Research Council.*