

# END INFO

European  
Nuclear  
Disarmament

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# Expanding

# Nuclear

# Bootprint



*END Info* was launched in March 2019 to aid the work of the Bertrand Russell Peace Foundation in response to the collapse of the Intermediate-range Nuclear Forces Treaty and the attendant nuclear risks. The Russell Foundation and *END Info* played an important role in building the 'Nuke Free Europe' network ([nukefreeeurope.eu](http://nukefreeeurope.eu)), which brings together a range of peace organisations for a joint campaign to rid the continent of all nuclear weapons. In the following pages you will find a selection of articles from issues 32 and 33 of the newsletter. To receive future issues, by email or post, contact [tomunterrainer@russfound.org](mailto:tomunterrainer@russfound.org).

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## Expanding Nuclear Footprint

*Tom Unterrainer*

The potential return of US nuclear bombs to the UK was announced without fanfare and – more importantly – without any discussion, debate, deliberation or the opportunity for dissent within Britain's democratic institutions.

There was no official announcement from the British government. No ministerial statement to Parliament. No press conference with representatives from the US Department of Defense. There wasn't even a distinct press or

information release from United States government.

When the government was asked about this development by the Green MP, Caroline Lucas, the Parliamentary Under-Secretary for Defence James Heapey gave the following non-reply:

*"The is unable to comment on US spending decisions and capabilities, which are a matter for the . It remains longstanding and policy to neither confirm nor deny the presence of nuclear weapons at a given location."*

News of this development emerged only after Hans Kristensen, from the Federation of American Scientists, noticed the addition of the UK to the list of nuclear storage sites to be upgraded under NATO's \$384 million infrastructure investment programme. In the 2022 US Department of Defense budget, storage sites in Belgium, Germany, Italy, the Netherlands and Turkey were listed. In the 2023 budget, the UK appears on the list.

Let's untangle this a little. Nuclear developments have almost always operated under a veil of secrecy. For instance, Britain's atomic programme was done in secret, with not even the then-Cabinet of Her Majesty's Government being notified. More recently, the current government announced in its Integrated Review that it would "no longer give public figures for our

operational stockpile, deployed warhead or deployed missile numbers”.

Secrecy – or, at the very least a lack of transparency – extends to the arrangements under which the United States stations nuclear bombs elsewhere in Europe. The US and NATO have never been 100% clear on the numbers of nuclear bombs stationed under nuclear sharing arrangements.

When asked about the possibility of further US nuclear weapons coming to Europe under NATO auspices, NATO Secretary General Jens Stoltenberg said – in December 2021 – “we have no plans of stationing any nuclear weapons in any other countries than we already have these nuclear weapons as part of our deterrence and that ... have been there for many years.”

Stoltenberg’s comments have been interpreted as meaning that although Lakenheath’s nuclear storage facilities are to be updated, NATO has ruled out the stationing of US nukes for the time being. I do not think this makes very much sense. I would interpret Stoltenberg’s comments another way. Throughout, he is speaking as the head of NATO. When he says “we” and “our”, he is talking about the nuclear-armed alliance. In this context it is worth noting that the UK’s nuclear weapons are counted as part of NATO’s ‘nuclear capabilities’ and have been for

“many years”. This response from Stoltenberg is typical of the prevalent opacity when it comes to nuclear questions.

RAF Lakenheath was the place where the US Air Force stored nuclear gravity bombs. By the early 2000s, 110 B61 bombs were stored there and US F-15E aircraft were stationed there for the purpose of dropping these bombs on command of the President of the United States.

These bombs were removed – without fanfare – in the later 2000’s and it was only in 2008 that their total removal was confirmed. For the first time since 1954, the United States did not store nuclear weapons in the United Kingdom.

It had already been announced that Lakenheath was to become the first location in Europe for the new US Air Force nuclear-capable F35 fighter-bombers. These arrived in December last year. 24 of them are stationed at the base and the US Air Force is scheduled to commence training for the use of the new generation of guided nuclear bombs, the B61-12’s in the coming year. These bombs will go into production very shortly. According to Hans Kristensen, these bombs look set for shipping to Europe in 2023 where they will replace the B61-3 and 4’s already stationed.

So, it looks almost certain that the US intends to station nuclear bombs in the UK again. This is a major development and one that should

be taken very seriously indeed. We are not alone in taking this development seriously: our friends in the European and wider peace, anti-war and anti-nuclear movements are alert to what is happening and they stand with us in our opposition.

Even without the massively increased nuclear tensions that have been developing over the past few years, and which have become even more acute over the past months, our opposition would be sharp.

We know that even in the most stable of times, increasing the US's nuclear footprint would create instability. We are not living through particularly stable times.

We know that regardless of other circumstances, a nuclear storage site and an airbase for nuclear capable bombers becomes a target for a nuclear strike. We need to make everyone aware of this risk and link it to all of the other very good reasons for opposing nuclear weapons.

We know that every new nuclear development brings with it new risks, new dangers and new threats in local, regional, national and international contexts.

## Sweden: Social Democratic Women uphold their 'No to NATO'

*Annika Strandhäll, Sweden*

**Annika Strandhäll is the Minister for Climate Change and the Environment in the Swedish government. She is the federal board chair of Social Democratic-women, an organisation with a long and proud history of campaigning for peace, disarmament and non-alignment. Social Democratic-women voiced strong opposition to government plans to join NATO. Here Strandhäll upholds this opposition and considers what will come next.**

After intense and thorough discussion, the Social Democrats announced their decision on the NATO issue: the party believes that Sweden should join the defense alliance. It was an expected decision, but it was not the outcome we Social Democratic-women fought for. If the application is approved by NATO, unilateral reservations against the deployment of nuclear weapons and permanent bases on Swedish territory must be expressed.

Social Democratic-women have made a long historical struggle for peace, disarmament and a world free of nuclear weapons. Our starting point has been that

freedom from military alliances has served Sweden well. In the party's internal discussions, we have therefore chosen to stand up for our 'no to NATO'. At the same time, we have said that we respect the decision made by the party board - such a major security policy issue is, of course, made democratically.

In the situation we are in now, it is important to look ahead. We will continue to work for solutions in an increasingly threatening world. Dialogue and collaboration must always be our main tools for creating stability and security. NATO membership and military rearmament must not be at the expense of our pursuit of peace and disarmament, in particular nuclear disarmament.

It was thanks to the struggle of Social Democratic-women that the Swedish government in the 60s chose to phase out the Swedish atomic bomb program and sign the non-proliferation agreement. That position must be taken further by the government signing the current UN Treaty on the Prohibition of Nuclear Weapons. Sweden must clearly remain a nuclear-weapon-free zone, in both peacetime and possible wartime. The possibilities of adopting national legislation against the introduction of nuclear weapons in Sweden should be reviewed. Sweden must also work for NATO to become a military alliance without nuclear weapons.

Furthermore, Sweden's feminist foreign policy must be firmly

established and strengthened. A holistic approach must be taken to build secure and functioning states governed by the rule of law, reduce poverty and meet basic requirements such as health, healthcare, schools and education. Equal development assistance is crucial. In order for development assistance to be strengthened, development assistance money must not be used as a reinforcement of the state budget. The money must always go to international efforts, with a clear focus on humanitarian efforts and educational efforts.

Nationally, too, it is important that investments in peace and relaxation go hand in hand with efforts to strengthen welfare, gender equality and the environment. We must ensure that the costs of NATO membership and military rearmament are not borne at the expense of other important policies that are crucial to a sustainable and equal society.

A broad political consensus is needed on these issues. We therefore want to see a cross-party working group working for this in the Riksdag. In troubled times, it is more important than ever that we put peace, freedom and feminism first. This is our common future!

**Translated from the Social Democratic-Women website**  
<https://s-kvinnor.se/>

**US Nuclear Weapons  
Volkel, Netherlands**  
Up to 20 nuclear bombs are stored in The Netherlands and will be 'delivered' by Dutch air forces when required. No other nuclear capabilities.

**UK Nuclear Weapons  
Faslane, Scotland**  
The UK housed US nuclear bombs until 2008. There remains the UK's so-called 'independent' nuclear capability, *Trident*, leased from the US. Four submarines rotate at sea.

**US Nuclear Weapons  
Lakenheath, England**  
Lakenheath hosted US nuclear weapons until the late 2000s and looks set to host them once more. Lakenheath is already home to the nuclear-capable US F35A aircraft. The RAF will not be tasked with 'delivering' the US nuclear bombs.

**US Nuclear Weapons  
Kleine Brogel, Belgium**  
Up to 20 nuclear bombs are in Belgium, which is also home to NATO HQ. Bombs will be 'delivered' by Belgian air forces when required. No other nuclear capabilities.

**Key**

-  Austria, Ireland and Malta have ratified the Treaty on the Prohibition of Nuclear Weapons
-  UK and French submarine-based nuclear weapons
-  US Nuclear Bombs
-  Aegis Ashore ballistic missile system
-  French 'Strategic Air Forces Command'
-  US hypersonic missiles named 'Dark Eagle'

**French Nuclear Weapons: Submarine**  
No US nuclear bombs stored. France maintains a submarine-based nuclear capability, the 'Strategic Ocean Force', consisting of four *Triomphant* class SSBN's. Also see *Air-based*.

**French Nuclear Weapons: Air-based**  
This component of the French nuclear forces is comprised on land- and sea-based *Rafale BF3* aircraft each of which is armed with medium-range cruise missiles (ASMP-As).



## The "worst-kept secret"

In July, 2019, a report by the Defense and Security Committee of the NATO Parliamentary Assembly 'accidentally' confirmed the locations of US nuclear weapons in Europe. A version of the report, titled *A New Era for Nuclear Deterrence?*

*Modernisation, arms control and allied nuclear forces* was uploaded to a NATO website. The report confirmed what everyone knew; that US nuclear weapons were being stored in Europe. Further, the report confirmed assumptions about the exact location of the weapons and the numbers involved. As a rule, neither the US nor

**US Nuclear Weapons  
Büchel, Germany**  
Up to 20 nuclear bombs are stored in Germany. As with other NATO member states, German aircraft will 'deliver' the bombs. Germany is also home to a large number of US armed forces.

**'Nuclear Weapon-Free-Zone' Germany**  
Article 5, subsection 3, of the *Treaty on the Final Settlement with respect to Germany*, signed in 1990, prohibits the deployment of nuclear weapons in the former GDR. See *END Info 7*.

**US Missile 'Defence'  
Poland and Romania**  
There are claims that the missiles used on this defence system breached the INF Treaty due to adaptability. See *The Spokesman 142* for more information.

**US hypersonic missiles  
Wiesbaden, Germany**  
The 'Dark Eagle' hypersonic missile system is scheduled for deployment from 2023. Conventionally armed, 'Dark Eagle' functions as a 'first strike' capability. See *END Info 30* for more information.

**US Nuclear Weapons  
Incirlik, Turkey**  
It is estimated that 50 US nuclear bombs are stored at the Incirlik air base in Turkey. Strategically important and increasingly dangerous location.

**US Nuclear Weapons  
Aviano & Ghedi-Torre,  
Italy**  
Around 70 bombs are stored in Italy. Some of these had previously been stored at RAF Lakenheath, UK, before removal in 2008.

## The NATO Dimension

Approximately 150 US 'B-61' nuclear gravity bombs are currently stationed at six locations in five European states. These weapons are in addition to the 'independent' nuclear capabilities of the UK and France. They are stationed under a nuclear 'sharing agreement' as part of membership of NATO. The weapons are stored and guarded under US command, ready to be deployed on host nation aircraft at US/NATO command. Why is this 'Cold War' arrangement still in place? Following the collapse of the Soviet Union, rather than disband NATO expanded to Russia's borders. NATO has expanded not only in a geographic sense but also in terms of 'posture'. Its stated area of operation now extends from the North Atlantic to South East Asia. At heart, it is a nuclear-armed alliance.

European partners discuss the location of US nuclear weapons on the continent, but the report confirmed the presence of 150 nuclear weapons and exactly where they were stored. When the final version of the report was released, reference to the location and numbers of such weapons was removed. The presence of these weapons

derived from an agreement reached in the 1960s and is a relic of the 'Cold War' era. When the 'Cold War' ended, the nuclear weapons remained. Now is the time to demand that all US nuclear bombs be removed from Europe, for an end to 'nuclear sharing' and the scrapping of UK and French nuclear weapons.

## Nuclear risks and realities of the Ukraine crisis

*Helena Cobban with David Barash, Cynthia Lazaroff and Richard Falk*

### **Ukraine: Stop the Carnage, Build the Peace! Introduction and Policy Recommendations**

In March 2022, Just World Educational held a series of eight webinars on the international crisis sparked by Russia's February invasion of Ukraine. The sessions were co-hosted by JWE President Helena Cobban and Board Member Richard Falk; in each one, they conducted a broad public conversation on issues raised by the crisis with superbly well-qualified and thoughtful guests.

The multimedia records of all these conversations can be viewed at [bit.ly/JWE-UkraineCrisis](http://bit.ly/JWE-UkraineCrisis). Policy Recommendations arising from these conversations are as follows:

1. Ukraine-wide ceasefire now!
2. An embargo on arms shipments into Ukraine by all countries.
3. Start negotiations now, involving all relevant parties, for a lasting peace arrangement for Ukraine, and commit to completion within six months.
4. Monitoring and verification of the ceasefire and arms

embargo to be led by the United Nations and the OSCE, or any other party acceptable to both Ukraine and Russia.

5. Immediate aid for rebuilding in Ukraine, including for agriculture, ports, residential areas, and related systems.
6. Immediate international talks on implementation of 1970 Nuclear Non-Proliferation Treaty, under which all signatory states including the United States and Russia committed to complete nuclear disarmament, and a call for all governments to support the 2017 Treaty on the Prohibition of Nuclear Weapons.
7. Leaders of NATO countries should oppose all manifestations of Russophobia.
8. The United States should give up all efforts at regime change in Russia.

A full report on the conversations can be accessed at [justworldeducational.org](http://justworldeducational.org)

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For our March 28 conversation, Richard Falk and I (Helena Cobban) were delighted to have as our guests two very experienced anti-nuclear scholar/activists, Cynthia Lazaroff and David Barash.

In my introduction I noted, "Most people who are under, say, 45 years old have no vivid memory of having lived in a situation of

possible war between two heavily armed nuclear superpowers. But this is a scenario that looks very close today." This was thus a conversation we felt it was important to include in our series.

David Barash opened his remarks with a stark warning that many observers might conclude from Russia's invasion of Ukraine that Ukraine should never have agreed, as it did in 1994, to give up its Soviet-era nuclear arsenal, and that therefore, "We must adhere all the more closely to nuclear weapons and if anything obtain even more of them."

He warned that the war could also "serve as a massive impetus for nuclear proliferation in the future, both horizontal, other countries trying to derive a message from this, and also vertical proliferation, with individual countries, the US almost certainly among them, maintaining that we need more and 'better' nuclear weapons. So those of us in the anti-nuclear world have our work cut out for ourselves, perhaps more than ever."

Barash said people should understand, however, that historically, "There are many cases in which having nuclear weapons did not work as a deterrent." The cases he cited were: non-nuclear China sending 300,000 soldiers into Korea in 1950 to fight against the U.S. there, at a time when the U.S. had already demonstrated and used its nuclear arsenal and China

had none; Argentina invading the British-controlled Falklands/Malvinas in 1982; and Iraq sending 39

SCUD missiles against nuclear-armed Israel in 1991. Of this latter case Barash said, "Clearly he (Saddam Hussein) was not deterred by Israel's possession of nuclear weapons and Israel didn't do anything about it."

He concluded: "We all have a responsibility to declare a just war against nuclear deterrence, which in my mind is really at the heart of the whole nuclear problem that we all face."

Cynthia Lazaroff started with by noting an assessment former Defense Secretary William Perry had recently made, namely that, "The danger of some sort of nuclear catastrophe is greater than it was during the Cold War, and most people are blissfully unaware of this danger. He said, 'We're allowing ourselves sleepwalk into another catastrophe, and we must wake up'."

She continued, "The US and Russia still possess over 90% of the estimated 13,000 nuclear weapons. We still have dangers that existed during the Cold War, such as the risk of inadvertent nuclear war due to accident, blunder, miscalculation, or mistake. We still have ICBMs on launch-on-warning postures with the presidents just having minutes to decide upon receiving warning of a nuclear attack. And these

missiles have triggered many false alarms in the past. Plus, we have a whole host of new dangers that didn't exist during the Cold War. These include destabilizing new weapons and missile defense systems, cyber warfare and the cyber-nuclear nexus, emerging technologies, and more."

She said, "We're in a moment of extremely high tensions, in some ways more dangerous than the Cuban Missile Crisis. And... I'm most concerned about two things. First, we have to find our way to a ceasefire to stop the killing, bloodshed, and immense human suffering. And I'm deeply concerned about the risk of escalation which could lead to a nuclear exchange."

Regarding the risk of escalation, Lazaroff said, "We have both state and non-state actors who could take action that could escalate the conflict, inadvertently or intentionally. We have large numbers of NATO and Russian troops now in close proximity in the region. And this multiplies the risk of possible incidents of escalation. And we have uncertainty about where the "red lines" are for NATO and Russia. There are so many pathways to escalation."

Among the risks she noted was this: "The ambiguity in weapons systems that can lead to miscalculation and escalation such as dual-capable missiles that can carry both conventional and

nuclear warheads that Russia is now using in Ukraine. And there's no way to know what kind of warhead is mounted on the missile until it strikes its target."

Turning to the question: "Would Putin actually push the button?" her assessment was, "The probability may be low, but the risk is not zero. And I believe... that the longer this war goes on, the more Putin feels frustrated, pressured, backed into a corner the more he feels like he's losing, the more his perception is that he and Russia are threatened I think the more likely we could see some kind of intentional escalation to nuclear use." She said she did not know how the U.S. and NATO might respond, but that a simulation done at Princeton that started with just one nuclear launch by Russia during a conventional war had "escalate(d) to a nuclear war with 90 million dead and injured within the first few hours."

Her strong recommendations were: "We have to end this war to make sure that we don't have an escalation that could lead to something like this or worse... We need to reduce the risk of escalation. And we need to prioritize diplomacy, dialogue, and negotiations to secure a ceasefire and withdrawal of Russian troops and work out all the points of a peace agreement. To achieve this we need better and more open channels of communication at all levels, diplomatic and military... It's

omnicidal behavior to stop talking to your nuclear adversary and words matter. We need to stop the inflammatory and escalatory rhetoric on all sides."

She ended by quoting Dimitri Muratov, the editor in chief of Russia's independent newspaper *Novaya Gazeta*, who won the Nobel Peace Prize last fall, who said, "Only a global anti-war movement can save life on this planet."

In his response, Richard Falk identified the inequity baked into the non-proliferation regime in the Nuclear Non-Proliferation Treaty of 1970, that allowed only five countries to possess nuclear weapons, while those that do not are left in the position Iraq was in when the United States invaded it in 2003. He concluded that, "Both the critique of nuclear deterrence and the complementary critique of the non-proliferation regime lead us in the direction that Cynthia was eloquently suggesting as the only morally and rationally coherent position, which is abolition."

He endorsed Lazaroff's call for a speedy ceasefire in Ukraine and added, "Once that's done, there is an incentive to once more look around and see what can be done to reduce the nuclear danger. And I think... that we need the language of elimination and abolition."

He also underscored Lazaroff's stress on the importance of

rhetoric. Just two days before our session, Pres. Biden stated in Poland that Putin "cannot remain in power." U.S. officials tried to walk back that rhetoric, but widespread suspicion remained that Biden indeed entertained an ambition to achieve regime change in Russia.

In our session, Falk termed Biden's rhetoric "inflammatory" and added: "He even hinted at regime change as a goal. Not only does that increase nuclear risks and nuclear dangers, but it also is a guaranteed way of prolonging the war, and fighting metaphorically till the last Ukrainian in order to satisfy these geopolitical objectives... Having a leader like Putin in Moscow and a leader like Biden in Washington and their interaction to me is one of the salient dangers."

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The conversation that followed ranged over a number of issues including:

- x the very risky fact that there is much less communication between Washington and Moscow today than there was in the 1980s;

- x the erosion of the global "security architecture" that had been built up during the pre-1990 Cold War, including through steps Washington took after 2000 to abrogate treaties like the AntiBallistic Missile Treaty and the Intermediate Nuclear Forces

Treaty and through Pres. Putin's decision in 2015 to cancel what bilateral nuclear cooperation remained;

x more on the riskiness of Pres. Biden's hawkishness;

x the consequences of the United States' failure to publicly adopt a posture of "No First Use"; and

x the importance of working to maintain people-to-people (as well as military-to-military) contacts between Americans and Russians.

What follows is a rough guide to some of what we said.

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At one point, I asked David Barash how we should look at the risks of nuclear-relevant miscommunication and accident. He replied: "My immediate reaction is to say we should look at these risks with enormous fear and trembling."

He noted that his wife was a prominent member of International Physicians for the Prevention of Nuclear War, a group with members in Russia, the U.S., and other countries, and said: "IPPNW people say there is no communication of the sort that was going on during the 1980s. My understanding is there is no comparable communication

going on between highranking US military officers and those of Russia... Certainly with regard to communication, I would have to say things are worse than they were in the 1980s."

Later, Cynthia Lazaroff noted that Defense Secretary Lloyd Austin and JCS Chairman Mark Milley reportedly had tried to contact their counterparts in Moscow, but were met with no response. She noted that, "The longer this war goes on, the risk of escalation goes on, and I think increases... I would like to hear Biden calling every day for a ceasefire. I would like to be hearing him using the words. 'We need a peace agreement. We need to end this war.' I'm not hearing that kind of language."

Cynthia Lazaroff talked about the setbacks she has suffered recently in the efforts she has pursued since the 1970s to conduct people-to-people diplomacy with Russian counterparts. She said that one project she is involved with, to bring together young and Indigenous people from each side of the Bering Strait, had already suffered long delays because of Covid, and now might need even more postponing. But she noted that a Soviet-era (then Russian) general with whom she worked, Gen. Maslin, had told her shortly before his recent death that "If there are young people still thinking about improving relations in the Bering Strait and coming together

from our two countries, all hope is not lost."

She commented, "We have to really make those contacts robust again. We have to get different kinds of people collaborating...Climate scientists! We have such a potential for cooperation, and it seems so idealistic to talk about it right now, but I think the work has never been more important."

Lazaroff talked about the importance of the Treaty on the Prohibition of Nuclear Weapons, which was adopted by a number of (non-nuclear) nations in 2017. She described it as "a response to the injustices of the nonproliferation regime and the way the NPT has not fulfilled what it originally said it was going to do in Article Six, which is to... achieve eventual, total and complete disarmament. And the Treaty is a demonstration of what the world can do when we come together in alignment. People said this treaty would never happen. Then they said it would never be ratified. And now it's in force and just last week, another country (joined). So we're now at 60 countries that have ratified it!"

She said there is, "a growing movement in the nuclear space for divestment, from the banks that fund the nuclear weapons producers. When you do the research, you discover that the biggest offender banks funding nuclear weapons are, many of

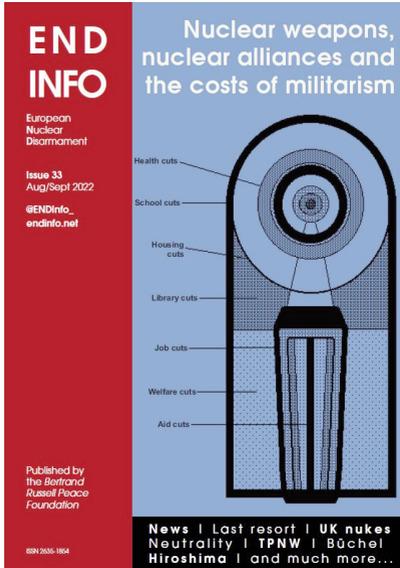
them, the same ones funding fossil fuels. And we know that there's a divestment movement in the climate justice movement. So I am calling for bringing our movements together and for massive divestment... We're seeing who's profiting from this war in Ukraine. It's the arms dealers and it's the fossil fuel providers' companies. So there is a huge obvious intersection here."

In his closing, Richard Falk said, "The Ukraine crisis has generated the most serious danger of escalation close to or over the nuclear threshold since the Cuban missile crisis, in 1962. And it's a moment when... all citizens of conscience should awaken to the dangers, not only that Russia is causing, but that our own government is contributing to."

At the end, I noted that Lazaroff had been taking part with us from Hawai'i, where it was still early morning and occasionally we could all hear roosters crowing in the farmland behind her. I suggested they provided "a wake-up call for all of us!"

# Nuclear weapons, nuclear alliances and the costs of militarism

Tom Unterrainer



The Stockholm International Peace Research Institute estimates that in 2021, Russian military spending stood at \$66,000,000,000 (\$66 billion). In the same year the United States spent approximately \$801bn. Over the same period, NATO member states, excluding the US, spent \$363bn. As Simon Kuper pointed out in the *Financial Times* (9/10 July 2022): “If the US abandons Europe after 2024” - that is, if Trump or one of his protege’s wins the Presidential election that year - “other NATO states would outspend Russia more than sixfold.”

At the recent NATO conference in Madrid, Secretary-General

Stoltenberg announced that the nuclear-armed alliance’s ‘high-readiness forces’ will increase in number from 40,000 to 300,000 by 2023. This is an almost eightfold increase and will include:

battlegroups in the eastern part of the alliance ... enhanced up to brigade levels, with forces pre-assigned to specific locations; and more heavy weapons, logistics and command-and control assets ... pre-positioned.

*(Dr. Ian Davis, NATO Watch Briefing Paper No. 96)*

In addition to the upgrade of units and material, President Biden has promised further troop and weapon deployments in Europe and a new HQ in Poland.

The content and implications of NATO’s new ‘Strategic Concept’ will be considered later but suffice to say that the global ambitions, spending commitments, reasserted role of nuclear weapons and the overall posture paint a deadly picture.

NATO is remilitarising and in so doing, enormous damage will be done to rational concepts of peace, security, investment, social security and the environment. Simon Kuper (ibid) quotes Dan Plesch of SOAS, University of London, on the implications of this new wave of militarisation. Plesch warns:

Worst case is we stumble into unintended global war. Best case is we stockpile and never use the weapons, but use our scarce resources on them.

Plesch's warning of "unintended global war" should not be taken lightly and we should not forget what the dimensions of such a war would encompass: the risk of all-out nuclear war and the subsequent destruction of humanity.

In his opening comments to the much-delayed Review Conference of the Non-Proliferation Treaty, UN Secretary-General António Guterres warned that "humanity is just one misunderstanding, one miscalculation away from nuclear annihilation". In subsequent comments, he explained that relying on "luck" - which has stood in the way of such annihilation on more than one occasion - is not a strategy for human survival.

The sharpening tensions arising from Putin's invasion of Ukraine - including stark nuclear tensions - put us all at risk. Yet the response of NATO is unlikely to reduce the tensions, nuclear or otherwise. In fact, such responses follow a pattern we have seen in the past and will undoubtedly replicate the worst possible consequences.

### **Spend, spend, spend**

*The New York Times* of December 8, 1987 reported that the sum total of United States missiles, aircraft and

submarines capable of 'delivering' so-called 'strategic' nuclear warheads amounted to 11,786. The targets for these weapons were 220 urban industrial centres across the Soviet bloc. As Seymour Melman points out in *The Demilitarized Society*: "Hence, US forces have more than fifty times overkill capability."

Melman notes that if this "overkill capability" was reduced by 75%, a budget saving of \$54.6 billion (\$142 billion in 2022) would be made. Such a reduction would have left the US with an "overkill capability" of twelve. *The Demilitarized Society* (1988) focuses on the problems arising from sustained and extreme levels of military spending in the post-WWII US economy. He explains that whilst money, skill and effort were poured into creating machines of mass annihilation:

The US now lacks a modern rail system, a modern highway system in good repair ... The city streets are poorly paved. Between a fifth to a third of the highway bridges in the US are rated as needing major repair. Decent housing is no longer available for millions. There is a growth of homelessness and hunger ... Important parts of the population draw water from aquifers that are contaminated. The national parks are in poor repair. The libraries are poorly operated. Waste disposal systems

violate modern technical standards. The public school buildings of New York City require an expenditure of \$8 billion for decent repair.

Between 2002 and 2016, the top 100 weapons manufacturers and 'military service' companies logged 38% growth in global sales. In 2016, these sales – excluding Chinese companies – amounted to \$375 billion, turning \$60 billion profit. Between 1998 and 2011, the Pentagon's budget grew in real terms by 91% while defence industry profits quadrupled.

In the 1970s, investment in the 'information technology' sector stood at \$17 billion. By 2017, investment in this sector exceeded \$700 billion. In the same year, Apple's market capitalisation stood at \$730 billion, Google stood at \$581 billion, and Microsoft stood at \$497 billion. Meanwhile, Exxon Mobile – the highest placed 'industrial' company – had a market capitalisation of \$344 billion. By comparison, the arms manufacturer Lockheed Martin had a capitalisation of around \$321 billion and Rolls Royce \$21 billion at the end of 2017.

Whilst the United States and other countries continue to purchase – and use – vast quantities of 'conventional' weaponry, the extraordinary figures quoted above occurred alongside the unleashing of a 'Fourth Industrial Revolution',

powered by significant leaps in capability in computing, robotics, artificial intelligence, biotechnology, 'autonomous' vehicles and the rest. Ever greater sums are being spent on military and policing applications of the 'fruits' of this 'Revolution'. So much so, that the sociologist William I. Robinson (*Race and Class*, 2018) identifies a trend towards what he terms 'militarised accumulation' as a 'major source of state organised profit-making'.

In 1988, Melman warned that:

(M)assive, sustained military spending is, qualitatively, the single most critical factor in the cumulative depletion of the industrial economy. If this is dealt with decisively then the rest can be addressed. If that factor is unattended, then the rest is rendered unmanageable, and a process of continued decline is locked in place.

Such massive, and long-term, patterns of military expenditure and the material consequences on society at large are made, consistently, in the name of 'security'. Each and every bullet, missile, nuclear warhead, bomber, armed drone, submarine, warship and tank is - we are told - there for 'our security'. This militarised approach to 'security' is riddled with contradictions.

### **Militarised 'security'**

*Climate change constitutes a serious threat to global security, an immediate risk to our national security and, make no mistake, it will impact how our military defends our country. And so we need to act - and we need to act now.*

President Obama, May 2015

The US army is the most highly funded military organisation in human history. It is also the single largest institutional polluter on the planet. Obama's eloquently delivered speeches on the risks associated with climate change morphed from initially wholesome appeals for action to save humanity, to framing the question as a matter of national security. As Nick Buxton points out ('Securing whose future?' *The Spokesman* 134):

The Pentagon is the world's single largest organisational user of petroleum: one of its jets, the B-52 Stratocruiser, consumes roughly 3,334 gallons per hour, about as much fuel as the average driver uses in seven years.

As state level reaction to climate catastrophe incorporates more militarised 'security' responses and as multinational efforts at climate change reduction - such as the recent COP26 - fail to meet needs and expectations, it seems likely

that militarised responses will be emphasised above other forms. After all, it is much easier to secure funding for military expenditure than for anything else and such expenditure drives corporate profiteering:

US defence contractor Raytheon openly proclaims its 'expanded business opportunities' arising from 'security concerns and their possible consequences', due to the 'effects of climate change' in the form of 'storms, droughts, and floods'. (Buxton)

Neta Crawford from the 'Costs of War Project' at Brown University estimates that in 2017 alone, the US military emitted more carbon dioxide than Sweden, Denmark and Finland combined (Jessica Fort and Philipp Straub, 'The Carbon Boot-Print', *The Spokesman* 144). Freedom of Information Act (US) requests to the US Defense Logistics Agency, which is responsible for managing fuel purchase and distribution show that in 2017, the Department of Defense emitted 59 million metric tons of carbon dioxide and that from 2001 to 2017, a total of 1,212 million metric tons of the same gas was emitted. These figures include the period covering the bombing, invasion and occupation of Afghanistan and the illegal war against and occupation of Iraq.

Not only do wars, the preparations for war and militarised

responses to 'security' risks have immediate destructive consequences in terms of death, depletion of resources and environmental damage: each and every day that sophisticated and expansive capabilities, such as those embodied in the US military, operate means additional releases of greenhouse gasses into the atmosphere. The impact of US and allied military operations in Iraq could be seen on the TV screen. Civilians on the streets of Baghdad and elsewhere saw the death and catastrophe first hand. What was not reported or broadcast and what has gone largely unmentioned is the legacy of environmental harm arising from these events.

How many B-52s flew in the years of war and occupation? How many hours in total were they in the air? How many gallons does that amount to? How many cubic tons of greenhouse gasses? How many more fractions of a degree did this take us to catastrophic temperature increases? What militarised responses have been put in place to ensure 'security' as a consequence of this increase in temperature? How many B-52s will it take to ensure 'security' from the consequences of war?...

This is just one example of the contradictions that arise in militarised responses to 'security'. In common with other examples, it shares the features outlined earlier:

the enormous sums of money devoted to military spending and the way in which such spending shapes the economy more generally. This example also shares another, connected, feature with other militarised responses to 'security': the fact that such responses simply make matters worse.

### **Law of the instrument**

In his *The Psychology of Science* (1966), Abraham Maslow made the following observation:

I remember seeing an elaborate and complicated automatic washing machine for automobiles that did a beautiful job of washing them. But it could do only that, and everything else that got into its clutches was treated as if were an automobile to be washed. I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail.

Whatever else you might think of Maslow's psychological theories, this observation - an outline of the 'Law of the Instrument' - seems a close fit to NATO's approach to 'security'. The nuclear-armed alliance is on the hunt for nails.

However, the fact that NATO is armed to the teeth with hammers is not a sufficient explanation for why it sees every problem as a nail. The purely military-industrial aspect of

militarisation might indicate how NATO will react in any given circumstance but it does not account for the US-dominated, nuclear-armed alliance's wider aims and perspectives.

The preface to the 2022 document explains:

The Strategic Concept emphasises that ensuring our national and collective resilience is critical to all our core tasks and underpins our efforts to safeguard our nations, societies and shared values ...

Our vision is clear: we want to live in a world where sovereignty, territorial integrity, human rights and international law are respected and where each country can choose its own path, free from aggression, coercion or subversion. We work with all who share these goals. We stand together, as Allies, to defend our freedom and contribute to a more peaceful world.

Fine sentiments. Yet the reality of NATO's actions, historic and contemporary, and the belligerence of certain NATO members today, exposes these sentiments as insincere waffle. NATO's new Strategic Concept actually reflects Jens Stoltenberg's perception - and we should assume he largely acts to telegraph the views of the US, in particular - that "we now face an era of strategic

competition".

Whereas the 2010 Strategic Concept could proclaim that "the Euro-Atlantic area is at peace and the threat of a conventional attack against NATO territory is low", the 2022 version warns: "the Euro-Atlantic area is not at peace ... We cannot discount the possibility of an attack against Allies." Russia is "the most significant and direct threat to Allies' security and to peace and stability in the Euro-Atlantic area". China is a "systemic challenge" and China's "stated ambitions and coercive policies challenge our interests and values." Russian/Chinese relations are a "deepening strategic partnership".

In the same way that President Bush Jnr concocted an 'Axis of Evil' to mobilise support for his wars of aggression, NATO has now outlined a new 'Axis' of threat, systematically aiming to link Russia and China. All the better for attempting to justify NATO's tilt to China - some distance away from the North Atlantic area! In response, China's mission to the European Union stated:

NATO's so-called Strategic Concept, filled with cold war thinking and ideological bias, is maliciously attacking China. We firmly oppose it.

We previously argued that US foreign policy under the Trump administration reflected wild and reckless attempts to maintain US

influence in a period of shift from unipolarity to multipolarity ('Global Tinderbox', *The Spokesman* 141). The 'bonfire of treaties', aggressive statements and Trump's Nuclear Posture Review reflected these attempts. At the time, Trump could not take NATO with him and devoted some energy to attacking the nuclear-armed alliance, not least for member states reluctance to meet spending commitments.

Trump is no longer the US President, but NATO is now spending positively Trumpian amounts of money on armaments and rearmament. NATO has also fallen into line with US concerns about the emergence of alternative centres of power and influence. This is why they were happy to sign up to the new Strategic Concept and why 'partners' from Australia, Japan, New Zealand and South Korea were welcomed in Madrid.

### **A nuclear-armed alliance**

*The strategic nuclear forces of the Alliance, particularly those of the United States, are the supreme guarantee of the security of the Alliance ... NATO's nuclear deterrence posture also relies on the United States' nuclear weapons forward-deployed in Europe and the contributions of Allies concerned.*

*NATO 2022 Strategic Concept*

If, for NATO, every problem is a nail, then the biggest hammer at its

disposal is the nuclear weapon. As the Strategic Concept makes clear, it is the "supreme guarantee" of 'security'. Only a truly sick mind could confuse a world-ending weapon of genocide with anything of the sort, but this is the reality we are dealing with.

The expansion of NATO's nuclear footprint across Europe (see *END Info* 32) and the steady incorporation of Australia, Japan, New Zealand and South Korea into NATO's strategic thinking (see *END Info* 27 for analysis of AUKUS) are conceived of as 'security measures'. These measures, along with massive increases in military spending and troop deployments, sow the seeds of potentially catastrophic outcomes. The catastrophe could be immanent, medium- or long-term, as risks multiply and as pressing concerns around climate change, hunger, pandemic and health intensify.

A truly secure future must mean working for peaceful outcomes to these challenges, not preparing for war.

## UK nuclear weapons modernisation update

*Dr Tim Street, Nuclear Information Service*

**The following article first appeared on 28/06/2022 as ‘An update on UK nuclear weapons modernisation’ on the Nuclear Information Service website ([nuclearinfo.org](http://nuclearinfo.org)). It is reproduced here with permission of the author.**

This article is adapted from a talk given at the 2022 Student and Young Pugwash conference. It gives an overview of the costs and risks involved in the UK nuclear weapons modernisation programme. It also summarises recent research from Nuclear Information Service (NIS), and draws on the work of Peter Burt and Claire Mills.

NIS has estimated the total cost of replacing the UK’s nuclear weapon system between 2019 and 2070 to be at least £172bn. It is a huge, national, multi-decade endeavour, with all four elements of the system being replaced. This includes the submarine, missile, warhead, and infrastructure.

The 2015 Strategic Defence and Security Review described building four new nuclear-armed submarines alone as “equivalent in scale to Crossrail or High Speed 2”. However, the UK Government’s centre of expertise for major projects has, for several years,

warned that the nuclear enterprise is facing serious difficulties. The Infrastructure and Projects Authority’s last annual report stated that there had been no improvement in the status of the nuclear projects it reviewed over the previous year.

This article will discuss each element of this vexed programme in turn, beginning with the submarines.

### Submarines

Jon Thompson, former permanent secretary at the Ministry of Defence, was asked by MPs in 2015 which project troubled him most. He answered unambiguously: the new nuclear submarines. “The project is a monster,” he said. “It keeps me awake at night”, because it is the “single biggest future financial risk we face”.

Building four new submarines is the most expensive of the UK’s nuclear weapons projects. Parliament initially voted to begin the process of building a replacement for the UK’s Vanguard-class submarines in 2007. Work on the submarine programme, named Dreadnought, began in March that year.

At that point the first of the four new submarines were supposed to come into service from 2024. The estimated total cost of the project was £15–20bn. The programme moved into its delivery phase in July 2016 following a parliamentary vote.

As of 2022, work is under way on construction of the first two of the four planned new submarines. Procurement of long lead items for the last two submarines has also commenced. The first submarine is now expected to come into service in the early 2030s and will retire in the 2060s. The second delivery phase for Dreadnought was extended by a year due to the Covid-19 pandemic. At present the estimated total cost of the project has gone up to £31bn with a £10bn contingency.

The Dreadnought class will draw upon US submarine designs, so efforts have been made to bring the two nation's replacement programmes in line. For example, the Dreadnought submarines will be powered by a new reactor design, the PWR3, which stands for pressurised water reactor.

The PWR3 is based on a US submarine reactor design and will run on Highly Enriched Uranium fuel. The reactors will be built at Rolls-Royce's Raynesway factory in Derby. However, the company is struggling to upgrade the facilities which are needed to build the PWR3. In addition, the Government's 2021 Defence Equipment plan stated that the manufacture of new reactor cores has been delayed by a year.

It is also important to appreciate that production of the UK's nuclear weapons submarines is connected

to production of the UK's hunter killer submarines—known as Astute. All of the seven Astute submarines have faced severe delays, which contribute to the rising costs and risks of building Dreadnought.

Looking more widely, Professor Andy Stirling and Dr Phil Johnstone have highlighted how the UK's nuclear weapons programme depends on civil nuclear energy production. This is because, they explain, the UK's nuclear weapons infrastructure "relies on particular kinds of design expertise, engineering skills, supply chains and regulatory capabilities". Calculating the true cost of the UK being a nuclear weapon state likely therefore requires us to include expenditure in the civil nuclear realm.

There are several other issues which impact on the UK's ability to sustain its nuclear posture. These include: significantly extending the service life of the Vanguard class submarine; a fuel element breach issue in the PWR2 reactor design; and dock capacity at Devonport. These issues, and the way they interact with delays in the Submarine Dismantling Project, could jeopardise the Royal Navy's ability to maintain constant nuclear submarine patrols, known as continuous at sea deterrence.

## Missile

The UK's nuclear warheads are delivered by Trident D5 missiles. These are US ballistic missiles to which the UK has access to a common pool. Previously, up to eight operational missiles were deployed on each of the UK's Vanguard submarines. However, following the Government's Integrated Review, published in March 2021, figures on the UK's "operational stockpile, deployed warhead or deployed missile numbers" will no longer be made public, meaning that such numbers may rise.

The life extended version of the D5 missile began to be brought into service in 2017. There is scheduled to be a further life extension, which will last around twenty years, passing through concept, design and deployment phases. A review of this upgraded missile is expected in 2025, followed by ground testing and a first test flight in 2032, before early production begins.

These second life-extend version D5 missiles are set to be loaded onto UK Dreadnought submarines in the late 2030s. This is several years after the first of this new class of submarines comes into service. The focus of the life-extension programme is on developing technologies including: a post-boost control system; guidance instruments; radiation-hardened electronics; battery technologies;

and cyber-security frameworks.

The missile compartment of the UK's new Dreadnought submarines will be identical with the US's own new Columbia-class submarines. The UK has paid for a significant proportion of the compartment's development costs. This was because it was expected that the Dreadnought submarines would come into service ahead of the Columbia class, although this now appears unlikely.

## Warhead

In February 2020, US officials revealed the existence of a UK replacement warhead programme, which the British Government subsequently confirmed to parliament. The US disclosure led to accusations that the decision was taken without an official UK announcement or appropriate scrutiny. The Integrated Review included an announcement that the UK's warhead stockpile cap would increase from under 225 to 260.

Given these concerning and retrograde developments, NIS is focusing on the UK's next generation warhead. An in-depth analysis of this topic will be provided in a forthcoming report from NIS, currently being written by David Cullen.

Replacement of the UK's current Holbrook warhead (with an upgraded Mk4A version) is thought

to have begun in 2016. Monitoring group Nukewatch believe that the three Vanguard class submarines currently available for operational deployment have now been loaded with Mk4A warheads.

As with previous UK warheads, this upgrade is based on a US design. The Mk4A upgrade extends the life of the Holbrook warhead by around 30 years, meaning that it will remain in service until the late 2030s or early 2040s.

The Mk4A was designed as a staging post on the way to a full replacement warhead. New components in the Mk4A include the arming, fusing and firing system, the gas transfer system and new high explosives. The updated fuse allows more precision over the altitude of detonation and the accuracy of the weapon overall has been increased, making it more effective against hardened targets.

The Mk4A upgrade to the UK warhead is part of a wider project called the Nuclear Warhead Capability Sustainment Programme. The programme began in April 2008 and is due to run until April 2025. The total cost of the programme is currently projected to be around £20 billion. Along with the upgrade, this put in place infrastructure deemed necessary for the replacement warhead programme.

The UK's replacement warhead is highly likely to be close in design to the US's new W93 warhead. In

addition, the contents of the US's 2018 Nuclear Posture Review and the UK's 2021 Integrated Review suggest that the UK's new warhead will feature improved capabilities.

The UK Government has refused to give information about the timeline of the project citing national security, and has also not revealed details about its cost. However, based on previous timetables and estimates, it would seem that the replacement warhead is intended to come into service around the late 2030s or early 2040s. Regarding cost of the new warhead meanwhile, the BBC estimate this could be around £10 billion over the next 15 years, a figure similar to that previously estimated by NIS.

Much of the UK's infrastructure for deploying, developing and building nuclear weapons is being rebuilt or refurbished. However, the UK's Atomic Weapons Establishment, known as AWE, seems to exist in a state of near constant crisis.

In September 2020 AWE, previously operated as a government owned, commercially operated enterprise, was brought back into public ownership, owing to its poor performance record. Later that year the Chief Nuclear Inspector predicted that AWE Aldermaston would remain under enhanced regulatory attention until at least 2022 because of safety concerns. Most recently, labour

disputes and the impact of Covid may have caused further delays to production.

In March 2021 the Ministry of Defence approved funding to restart the troubled Project Pegasus. This project involves building a new enriched uranium manufacturing facility at AWE Aldermaston. Work on the project had been paused over six years ago due to mismanagement, delays and cost overruns. The original project budget for the facility was £634 million, which the MOD are now very likely to exceed.

Several of the infrastructure projects the UK is engaged in relate to the techniques used for nuclear weapons development, in place of live explosive testing. For example, Project Mensa, which involves the construction of a new warhead assembly facility at AWE Burghfield, was approved a month before Pegasus. However, Mensa is delayed by six years and forecast to cost over £1bn more than its original budget. New joint Anglo-French hydrodynamic research facilities for warhead research work are also under construction in France under Project Teutates.

Other infrastructure being modernised includes:

# Upgrades to the Trident submarine base at the Clyde Naval Base, which will cost £1.5 billion over the next ten years.

# The construction of new facilities at the BAE Systems shipyard at Barrow-in-Furness where the Dreadnought submarines will be built. This is set to cost £300 million.

# The construction of a new Core Production facility at Rolls-Royce's Derby factory, where PWR3 reactor components will be produced. Around £1.8 billion has been allocated to this.

### Concluding thoughts

Many projects within the UK's nuclear weapons programme have gone vastly over their original budgets. New funding is being poured in to pay for the many projects within the programme facing cost increases.

The programme is also facing severe delays, raising serious questions about the UK's ability to produce this weapons system. Such mounting pressures should be being thrown into sharp relief by developments elsewhere.

For example, the Treaty on the Prohibition of Nuclear Weapons has entered into force. Yet the UK did not participate in negotiations on the treaty and categorically stated that it will not sign or ratify it.

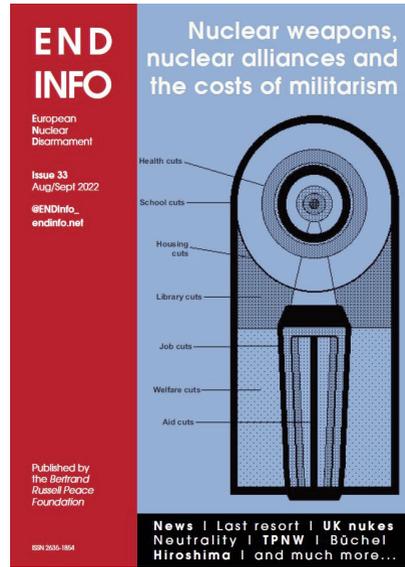
The Covid-19 pandemic has had a devastating impact on communities worldwide. Yet the UK is doubling down on military spending rather than prioritising a green recovery, or supporting a

global peace dividend, as recently proposed by leading scientists.

As a party to the Nuclear Non-Proliferation Treaty the UK is committed to reducing the number of its nuclear weapons, and reducing their role in its security policies, pursuant to disarmament. Yet as the 2022 NPT Review Conference approaches, the story

the UK has to tell is one of rearmament.

Much greater public and parliamentary scrutiny of the UK's nuclear programme and wider militarisation is therefore needed. This is vital if there is to be any chance of the UK prioritising arms control, non-proliferation and disarmament.



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