

Security not Trident



CAMPAIGN FOR NUCLEAR DISARMAMENT

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Introduction

THE submarines which carry Britain's nuclear weapons will need to come out of service from the early 2030s. The government is building four new submarines – the Dreadnought class – to take their place and eventually replace the entire Trident system. This new nuclear weapons system will cost at least £205 billion and will mean Britain remains a nuclear-armed state – at huge public expense – for decades to come.

Cost of Trident

CND's latest calculation of the cost of Trident replacement is £205 billion.

Manufacturing four Successor submarines	£31 billion ¹
Contingency fund	£10 billion ²
Missile life extension programme	£350 million ³
Replacement warheads	£4 billion ⁴
Infrastructure capital costs	£4 billion ⁵
In-service costs	£142 billion ⁶
Conventional military forces directly assigned to support Trident	£1 billion ⁷
Decommissioning	£13 billion ⁸

TOTAL	£205 billion
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This will have huge consequences, not least on our security. The decision on whether or not to replace Trident should be taken on the basis of what will most contribute to the security of the British people. This report will argue that our nuclear weapons do not make us safe. Opposition to these weapons of mass destruction is increasing and broadening as the debate goes on. The latest compelling arguments against replacement are firmly technologically based.

Former Labour Defence Secretary Des Browne recently pointed out that Trident could be rendered obsolete by cyber-attack – and he cited a ‘cyber resilience’ report from the US’s Department of Defence in evidence.⁹ Since then, some experts have observed that no system can be made totally immune to cyber-attack. Scathing comments have also been made about the computer systems used on the Trident subs, dubbed ‘windows for submarines’. What, as Lord Browne points out, would be the point of spending a lot of money on submarines which didn’t work when you wanted them? Worse still, what if someone could hack and use them?

Another technological challenge is the development of underwater drones. One of the big arguments in favour of submarines as a ‘platform’ for carrying round our nuclear weapons has been that they are undetectable under water. When the current system was being built in the 1980s and 1990s, no doubt that was the case. But in the 21st century, how can anyone imagine that a massive metal submarine can remain undetected? Trident is a very twentieth century piece of equipment; technology has moved on and our politicians need to understand that and make choices accordingly.

The government’s National Security Strategy, published in November 2015, actually identifies the most urgent threats – and they are recognisable to all of us: tier one threats include climate change, terrorism, pandemics, cyber-attacks and resource shortages. The document has nuclear weapons firmly down as a level two threat, but bizarrely that doesn’t prevent the government from wanting to spend billions of pounds on new ones.

It is striking how many of these security threats are actually non-military, suggesting that security should be conceptualised in a new way. In fact, overwhelmingly the security threats we face stem either from the problems arising from climate change or from twentieth century politics – imperialism and the cold war. We have to find collective ways – internationally – to resolve and move beyond these problems, or we’ll have no world left to fight over.

We need our politicians to understand that basing our national security on the game of bluff known as ‘deterrence’ is absurd, and so too would be building enormous submarines that may fall prey both to cyber-attack on their computer systems and physical attack via underwater drones.

Kate Hudson

Kate Hudson
General Secretary
Campaign for Nuclear Disarmament

Today's security: Real threats

The UK government published its latest National Security Strategy and Strategic Defence and Security Review in November 2015.¹⁰ This document identifies the real security threats we face today, based on 'a judgement of the combination of both likelihood and impact'. The tier one threats listed include terrorism, cyber-attacks and a health crisis. A nuclear attack is not listed here, but is rather placed in the second tier. This quite sensible analysis is not reflected in the government's rhetoric, when it claims nuclear weapons are vital for our security.

Paul Rogers

Paul Rogers is Professor of Peace Studies at Bradford University. His book 'Irregular War: Isis, Elites and Revolts from the Margins', will be published by I B Tauris in the spring.

"If we look at the major threats to UK security, nuclear weapons are not just irrelevant and dangerous but they stop us addressing the real problems that are common not just to Britain but to the world as a whole. Three issues are central, the first being that we are facing a world-wide challenge of an economic system failing to deliver anything approaching equity or emancipation.

As the recent Oxfam report shows, the rich-poor gap is widening rapidly, with 62 billionaires owning as much wealth as the poorest 50% and just 1% of the world's population owning as much wealth as the remaining 99%. The neoliberal free market model shows itself increasingly unfit for purpose and this is leading to anger and frustration across much of the world as educated but marginalised people see so few life chances. Moreover this readily aids recruitment into politically violent movements.

This will be compounded by the second issue, the steadily increasing impact of environmental limits to growth. The most obvious element of this is the huge impact that climate disruption is already starting to have, and the near certainty that it will have an even greater effect on the poorer states of the Global South, particularly in the northern sub-tropics. The current tragedy of the mass refugee flows, and Europe's unwillingness to cope, is an indicator of much greater problems in the future.

The final issue is what is best called the 'control paradigm', the propensity for elite states to maintain control of an uncertain and threatening world by resort to force. Even into the fifteenth year of the failed war on terror this approach persists, although the preference is now for low profile special forces, armed drones and the used of privatised militias in place of tens of thousands of boots on the ground.

The tragedy for Britain is that if it could kick the nuclear addiction and rethink its whole attitude to security it could begin to play a genuinely international role and even get the respect and status that it has for so long sought".

So what are the actual problems which are facing us today?

Terrorism

International terrorism from groups such as the Islamic State in Iraq and the Levant (ISIL) and Al Qaida present the most high profile threat today. The total number of deaths from terrorism in the world increased by 80% in 2014.¹¹

While most terrorist acts occur in just five countries (Iraq, Nigeria, Afghanistan, Pakistan and Syria), high profile terrorist attacks have taken place in Europe recently. The UK's current terrorism threat level is 'Severe', meaning that a terrorist attack on the country is highly likely.

Climate change

There is a clear consensus that climate change constitutes a serious threat to global security. Senior military figures have formally warned that global warming is the greatest security threat of the 21st century.¹²

Climate-related disasters such as food insecurity, drought and rising sea levels are major causes of mass migration flows, with Friends of the Earth estimating that there are currently 40 million environmental refugees,¹³ a figure that is expected to continue to rise substantially over coming years. This increases the challenges faced by states in providing the conditions necessary for human security, with increased pressure on public services and infrastructure in addition to challenges of integration.

Climate change is overwhelming disaster-response capabilities and creating and exacerbating humanitarian disasters, political violence and state instability.

Cyber-attack

The UK is facing an increasing threat of cyber-attacks from hostile states, terrorist and criminals, with the internet representing a critical axis of potential vulnerability in today's internet reliant world. Cyber security embraces both the public and the private sector and spans a broad range of issues related to national security, whether through terrorism, crime or industrial espionage.

Global health security

Public health has come to be regarded as a security concern for governments with the safety and well-being of citizens a central concern, with a number of factors combining to create an increasingly unstable situation in the realm of public health. These include the increasing physical interconnectedness of the world, weak public health services and lack of infrastructure and the rise of drug resistance. The combination of these factors has resulted in a situation where infectious diseases are now able to spread geographically at a much faster rate than ever before. There is also clear evidence that infectious diseases are emerging at an unprecedented rate, with the WHO confirming that since the 1970s newly emerging diseases have been identified at the unprecedented rate of one or more per year.¹⁴ This increase in both the occurrence and spread of microbes with the potential to cause pandemics is placing pressure on existing health services, creating scientific challenges and has the potential to impose enormous economic damage to states.

Richard Norton Taylor

“Trident, of course, is supremely irrelevant to combating the main threat to Britain's security, a threat which, according to Cameron, will last a generation. So violent extreme jihadist groups, now manifest by Isis, will still be the main security threat when a new Trident fleet starts to sail in the 2030s. And such groups are not going to be deterred by any nuclear weapon, least of all such intercontinental ballistic missiles as Trident.”

Obsolete – rise in drone technology

“In the past, submarines have enjoyed the luxury of hiding in empty seas. In the future, those seas are likely to be increasingly crowded with networked drones.”¹⁵

In recent months, experts have increasingly questioned the technological viability of Trident, as developments in underwater drone technology could render the system obsolete. The vast amounts of money being poured into drone technology means that eventually Trident will be both detectable and targetable, meaning the government is wasting money on weapons with built-in redundancy.

Hostile submarine detection is generally undertaken by staffed ships and aircraft. Manpower is a precious resource and so only a limited number are searching for adversaries' submarines at any one time. Viable underwater drones mean that it becomes feasible for the number of machines looking for a submarine to be multiplied many times. This adds up to a 'swarm' effect with possibly hundreds, or thousands, of machines able to search together, covering vast areas.

The Ministry of Defence (MoD) has even launched a competition to see who can come up with the best way to develop drone swarms. The 'Many drones make light work' challenge offers the opportunity to win grants to develop the first generation of drone swarms for use in war.¹⁶

Drones can even be launched in bad weather conditions which would usually be too dangerous for a staffed ship or aeroplane. A current limitation on the use of drones is that their time in operation is relatively short, but here also we see developments with NATO thought to be developing gliding underwater drones that sweep up and down thereby generating the power they need for their tasks. Other drone makers are ensuring their product can charge itself using solar power.

Drones can carry a range of sensors, as do conventional anti-submarine warfare technologies. And these sensors are improving too. As well as getting smaller and cheaper, sensors are getting better at detecting submarines from further away. A network of drones successfully detected, reported and tracked a live submarine in a Royal Navy demonstration in October 2016.¹⁷

If the Trident submarines were to become easily detectable, they of course lose their advantage.

Paul Ingram, BASIC

“We are on the verge of the emergence of several key technologies, including swarming drones in large quantities covering large areas of ocean, massive expansion in the capability of computers, abilities to sense and communicate underwater, that will sooner or later render the stealth of submarines inoperable. And when that happens, the very worst place to put your nuclear weapons is in slow submarines in international waters – not least because they can be taken out with far less strategic come-back. So the British commitment to putting all their warheads onto an extraordinarily expensive system could be the biggest white elephant possible, giving us an illusion of a nuclear deterrent that could be easily removed from the strategic equation”.

Cyber-attack

Former Defence Secretary Lord Browne warned in 2015 that Trident could be rendered obsolete by cyber-attacks.¹⁸ He went on to say in the same interview that unless ‘weak spots’ were protected, there was ‘no guarantee’ of a reliable nuclear system. Common sense would suggest that the fact that Trident relies on various computers and networks means there is at least a possibility of an adversary affecting the running of the system. Especially considering that it uses the very common, and therefore well-known and understood, Windows for Submarines software, based on Windows XP.

The government tries to reassure us that Trident is safe from hackers because it is ‘air-gapped’ from the internet, but many hackers in the world today are proficient in jumping similar ‘gaps’. Britain’s nuclear weapons are connected to other computers and servers for various reasons, for example to upgrade with new information or to receive weather reports.

The Atomic Weapons Establishment (AWE) near Reading, where Britain’s nuclear bombs are made and serviced, even uses a public cloud service to store its data.¹⁹ AWE has refused to answer whether this will include classified information.

The worst case scenario is a hostile, cyber take-over of our nuclear weapons system. This is more likely to succeed if an adversary manages to install a malware programme during the building phase that would activate at a later date. As a lot of equipment for Britain’s submarines is produced outside of the country – in China – it is possible to see how this could happen.

Another cyber-threat is the possibility of another state or organisation hacking into communications to the submarines, and suggesting a nuclear attack was imminent to a sufficient degree to confuse those on board.

The government does have high security measures in place to attempt to counter these threats, but with 250-350 serious cases of cyber-attack against NATO countries each week²⁰, the risk of just one being successful and accessing Trident is not unthinkable.

Not a deterrent

Many supporters of Trident claim that nuclear weapons keep the peace by acting as a 'deterrent'. This is the false belief that we will dissuade an 'enemy' from attacking if they know that we could retaliate with nuclear weapons. During the Cold War, the United States and the Soviet Union may have avoided a direct war – and whether or not that was anything to do with nuclear weapons possession is unknowable – but that didn't prevent their involvement in wars in Vietnam, Korea, Afghanistan and elsewhere. The nuclear powers have been involved in hundreds of wars since the atomic bomb was first invented in 1945. Having nuclear weapons did not defend France from the recent terrorist attacks, or the US from 9/11 or the UK from the July 7th bombings.

In fact, replacing Trident might encourage more countries to get nuclear weapons and so increase the danger of nuclear war. If countries like the UK and others insist that they need these weapons for their security, other countries will come to the same conclusion. Unstable or isolated states are more likely to seek nuclear weapons in this context. Their behaviour is often the result of complex regional problems or of a history of hostile external intervention or exploitation. These issues are best resolved through diplomacy and political negotiation on the basis of equality and mutual respect – not on the basis of having the capacity to destroy them many times over.

General Sir Hugh Beach

General Sir Hugh Beach is a former British Army officer who researches and advises on defence policy, arms control and disarmament.

"The core argument for replacing Trident can be simply stated. If Britain were to divest itself of this weapon and became a non-nuclear weapon state, then a state that did possess nuclear weapons might 'threaten us, try to constrain our decision making in a crisis or sponsor nuclear terrorism'. So it might. The implication is that we should then have no option but to comply. History does not bear this out.

Of the 190 states party to the nuclear Non-Proliferation Treaty (NPT) all but five have committed themselves to non-nuclear weapon status permanently. Many of them have the economic, industrial and scientific capacity to become nuclear weapon states if they wished, but have chosen not to. They seem to have suffered no disadvantage from nuclear blackmail. In fact non-nuclear weapon states have often defied possessor states.

There are many examples where non-nuclear states successfully defied nuclear weapons powers. Indeed, I know of no instance where a non-nuclear weapon state has been deterred from doing something that it wanted to do, or compelled to do something it did not, by coercive threat from a possessor state in virtue of its nuclear weapons. Why should Britain be so afraid of surrendering to nuclear blackmail when no one else ever has? Are we such wimps?"

Veterans for Peace UK

“The notion that we should spend billions on a weapon system only a misanthrope would use and that its use would prove the failure of its value as a deterrent leaves us completely and utterly gobsmacked. Who would want to live in a world to see the revenants of Hiroshima and Nagasaki? By no rational or mathematic measure would it make sense to launch nuclear weapons after these islands have already taken a significant hit. What would be the point? More destruction for the sake of revenge? We cannot further the cause of world peace with such a spiteful weapon at our disposal. Our ownership of a nuclear weapon system is a real threat to the people of these islands as it makes us the target of other nuclear-armed states”.

Not independent

Some MPs voted in favour of replacing Trident on the false belief that Britain’s nuclear weapons are a symbol of the country’s independence and ability to act alone. But Trident is neither politically or technically independent. Most of the system relies on technical support from the United States. The missiles are leased from them with the Trident submarines having to regularly visit a US base for their maintenance; the UK warhead is a copy of the US one, with some components directly bought from Washington. It is inconceivable to imagine a British Prime Minister firing a nuclear missile without permission from the American President, and the rest of the world knows this.

It’s also important to note that Trident has been assigned to NATO since the 1960s, meaning it could be used against a country attacking – or threatening to attack – one of the alliance’s member states. NATO also refuses to implement a no first use policy. Does anyone really want our nuclear weapons to be used in a proxy war which might not even be directly relevant to Britain and its security?

Richard Norton-Taylor

“When Harold Macmillan, the prime minister, was negotiating a deal with the US on Polaris, Trident's predecessor, documents show that his private secretary, Philip de Zulueta, noted in a secret memo: “The United Kingdom system is 'fully integrated' with the American... an independent British plan does not exist.”

Paul Ingram, BASIC

“Whatever one thinks of the merits of threatening to use nuclear weapons over large population centres as a means of deterrence, it is pretty nigh impossible to come up with a credible future scenario in which Britain faces a nuclear-armed adversary alone, where other nuclear-armed allies would be willing to stand by and allow nuclear blackmail to go unanswered”.

If we valued independence of action as the reason for retaining nuclear weapons, the UK would not engage in the Mutual Defence Agreement and depend so heavily upon the US for the procurement of our nuclear systems. This dependence takes away the only remaining strategic justification for an independent nuclear deterrent. Looked at from an Alliance-wide perspective with a pro-nuclear deterrence agenda, it makes more sense for all to delegate the ultimate nuclear threat to the Americans, freeing the British and French to contribute resources that are valued as a more effective contribution – capabilities like intelligence, cyber security and special forces.

Conclusion

It will always be a government’s priority to keep its citizens safe. But what is true security in the 21st century? As the world becomes more inter-linked than ever before, it is becoming the norm to cooperate with other states on the challenges facing us, rather than battle against each other. The actual security threats identified by the government and in this report are complex and will not be solved overnight. But Britain does have the capability to overcome them. What the country does not need is to spend billions replacing Trident.

Disarming could not only provide political leadership to the rest of the nuclear-armed states, but would be a practical guide for how to do it, a blueprint for the rest of the world drafted by our experts and politicians. Britain disarming could even provide impetus to the United Nations’ plans for a nuclear weapons-free world. A treaty to ban all nuclear weapons will be negotiated in March and June 2017, which will force the nuclear states to confront their possession of these weapons.

This would be the first step in Britain rethinking its approach to security with discussions on our membership of NATO and an end to our involvement in foreign wars to follow.

Paul Rogers

“There are many ways in which Britain could rethink its entire approach to security instead of being stuck in a time warp which results in a thoroughly obsolete and irrelevant outlook. Getting rid of Trident is just the start – it is what comes afterwards that could really be worthwhile and quite possibly inspiring as well”.

Gabrielle Rifkind

Gabrielle Rifkind is Middle East director at the Oxford Research Group and co-author of 'The Fog of Peace' published by IB Tauris, 2014.

“Conflict resolution, early-warning systems and mediation are key to a safer world and a safer Britain yet they remain the military’s poor relations. The Foreign Office budget that pays for those things is currently 28 times smaller than that of the MoD.

The money saved by downsizing Trident could be redirected into ensuring the UK’s reputation was not based on the threat of nuclear weapons but on our special skills in promoting peace. We could commit ourselves to become the world’s leading specialist in conflict prevention and resolution. The UK can no longer establish its status in the world by force but there is another role as skilled, effective negotiators and mediators that is more important and constructive. It also happens to be one the British are very good at.

A shift in political culture is now required. Our mind-set on security seems to be at the heart of many of the world’s problems. In the absence of imaginative thinking, we ‘play safe’ and stick to what we know. Yet that ‘playing safe’ is actually the least safe option.

The 21st century may prove to be more lethal than even its predecessor. This is not because human nature has become any more destructive but because our weapons have become increasingly sophisticated while we humans have not. The combination of modern weapons and unreconstructed attitudes is a terrifying one. Seventy years on from the atomic bombing of Hiroshima and Nagasaki, we need to take stock and change – or we will find ourselves walking mindlessly, deeper and deeper, into a world of nightmares”.

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