

Stepping down the nuclear ladder

Options for UK nuclear weapons policy

Workshop at the Department of Peace Studies, University of Bradford, September 17-18, 2009

Workshop report

In September 2009 twenty participants gathered at the University of Bradford to explore a range of issues affecting options for the UK Trident replacement programme and possibilities for nuclear force structure and posture between a direct like-for like replacement of the current Trident system and unilateral nuclear disarmament, which currently remains politically unacceptable to both major political parties. The discussions raised a number of issues, perspectives and questions that are highlighted in this report.

Issue#1: Balancing cost and capability

Questions:

1. Is the recession and long-term constraints on public spending a 'game changer' for the Trident replacement programme?
2. To what extent is the cost of the Trident replacement programme truly 'ring-fenced' from the MoD budget?
3. To what extent should cost be a legitimate driver of decisions affecting the Trident replacement programme?
4. How much money might be saved by opting for a smaller system (in terms of submarines, missiles, and warheads) and/or a de-alerted system?

Key points:

The current financial situation will be a key factor in the government's decisions on Trident. It was argued that the UK faces difficult choices between cutting either whole capabilities or seeking ways to maintain existing capabilities by reducing them by looking for 80% solutions at 50% cost. This does not mean the Trident replacement programme will not go forward but it means there will be continued pressure to find ways of spending less money which may involve tradeoffs. Regardless of electoral victory in 2009, there will be a serious re-examination of the assumptions in the 2006 White Paper on the future of the UK nuclear arsenal.

Others argued that government will find the resources if Trident replacement is deemed essential (politically or militarily) but pressures to reduce public spending in general and defence costs in particular may sharpen pressure on government to reconsider whether a nuclear capability is a necessity or a luxury.

The immediacy of financial constraints was discussed. It was argued even if the UK emerges from recession in the short term substantial structural financial constraints remain that will limit public spending for perhaps the next two parliaments.

Furthermore, spending on the Trident replacement programme will not peak until 2016-2018, which lies outside the timeframe for considering more immediate pressures on the defence

budget. Scaling back or cancelling the programme would therefore have little immediate impact on government spending.

In addition, savings will not be pro rata – the first submarine will be by far the most expensive and the fourth, if it is procured, the cheapest. It was also noted that there is a minimum level of infrastructure that must be maintained to keep just one warhead available for one operational submarine.

Any savings from scaling down or terminating the replacement programme would *not* be reinvested in MoD, but participants questioned whether *all* the costs of the replacement programme would be borne by a ‘ring-fenced’ fund with little impact on MoD’s budget. Some argued that history shows such costs will always impact on resources available for spending in other areas of defence regardless of whether the costs are formally ‘ring-fenced’ or not.

The impact of decommissioning costs was explored. It was argued that if the current Trident system is withdrawn prematurely before the end of its full service-life, then decommissioning costs will have to be borne that much earlier when pressure on the defence budget is high. It was therefore claimed that there might be little difference in terms of costs in running Trident to the end of its life or scrapping it immediately.

Others argued that the relevance of considering decommissioning costs is questionable as these costs have already been incurred irrespective of future actions that may delay them but cannot eliminate them.

Issue#2: Effect of changes in UK nuclear weapons policy on the NPT

Questions:

1. To what extent can changes in UK nuclear force structure and doctrine reduce the ‘trust deficit’ between the Nuclear Weapons States (NWS) and Non-Nuclear Weapon States (NNWS) in the NPT?
2. How might the UK maximise the international disarmament and non-proliferation potential of any future decision to substantially reduce or relinquish its nuclear force?
3. To what extent might changes in UK nuclear force structure and doctrine have a negative political effect?
4. Should the UK adopt a ‘no-first use’ declaratory posture?

Key points:

It was argued that there is a significant ‘trust deficit’ in the NPT that is at the heart of its crisis of legitimacy. A key component of this trust deficit is NNWS disillusionment stemming from the failure of the NWS to carry out their Article VI obligations to pursue nuclear disarmament. The revitalisation of the NPT’s grand bargain is essential if the NNWS are going to accept more intrusive verification and measures to control the nuclear fuel cycle and this in turn, it was argued, is judged to require much more significant steps towards nuclear disarmament by the NWS.

There was a general sense that further limited reductions in the UK’s nuclear capability in terms of fewer warheads and/or delivery vehicles could have a significant impact in the domestic political arena and would be positively received as a step in the right direction at the international level, but that such ‘tokenism’ would likely have little effect on NNWS perceptions

of the 'trust deficit' and would be very unlikely to invoke any kind of response in kind from the other NWS.

It was noted by some that important changes in UK nuclear force size and posture over the post-Cold War period, particularly in relation to the Thirteen Steps agreed in the NPT 2000 Review Conference Final Document, have received little domestic or international credit.

It was also argued that whilst further cuts in capability, such as warhead numbers, might have little wider effect, a clear change in operating posture that demonstrably de-valued nuclear weapons could have much more impact. Others argued that this would be most effective if it were to coincide with other measures such as post-START US-Russian nuclear stockpile reductions, entry into force of the Comprehensive Test Ban Treaty, and commencement of formal negotiation of a Fissile Material Cut-off Treaty.

Beyond further limited force reductions or more significant changes in operational posture, it was argued that the prospect of a far-reaching effect that could make a significant contribution towards replenishing the trust deficit in the NPT might only be achieved through a 'leap of trust' in which the UK relinquishes its nuclear arsenal.

Proponents of this view tended to argue that such a move by the UK would not necessarily have a direct, immediate causal effect on other states' nuclear weapon policies but would have an indirect effect but in terms of strengthening the norms that underpin the global non-proliferation regime. This challenged the unilateral/multilateral dichotomy of potential changes in UK nuclear weapon policy in that a unilateral move by the UK could stimulate actions by other states over time and generate a multilateral effect.

Some participants cautioned against assuming changes in UK nuclear weapons policy would automatically be positive. It was argued that the non-proliferation regime does not rest solely on the grand bargain between NWS and NNWS at the heart of the NPT but on a wider array of regional bargains, bilateral bargains, and extended security guarantees. The UK would have to be sure that any decision to reduce its force size, alert posture or even disarm would not adversely impact on European regional security relationships, understandings and assurances, particularly with respect to France and NATO member states. How such changes are communicated and enacted will be as important as the changes themselves.

In this context it was noted that the international political, disarmament, and non-proliferation impact of a UK decision to substantially reduce or relinquish its nuclear forces would be much reduced if it were seen to be based primarily or exclusively on cost grounds rather than a clear reconsideration of the strategic value of nuclear forces in their present numbers and operational posture.

It was also argued that the UK could adopt a 'no-first use' declaratory nuclear posture given that it would meet NNWS demands frequently made at NPT meetings and reflect the reality of most conceivable scenarios in which the UK may choose to use its nuclear weapons. Others argued that such commitments are essentially meaningless and undermine the credibility of deterrent threats.

Issue#3: Possible future options and 'how much is enough'?

Questions:

1. What does 'minimum deterrence' mean today in terms of the number of nuclear weapons we think we need, the purposes to which they might be put, and the contemporary relevance of Cold War nuclear deterrence concepts?
2. How are 'credible' (and therefore effective) nuclear deterrent threats generated today and how relevant are they to the security challenges we face now and may face in the future?
3. Where should the balance be struck between nuclear use and targeting scenarios against generic adversary types and generic adversary capabilities vs. specific countries and specific scenarios?
4. Will the UK Trident fleet always be used in conjunction with the US and how does this affect future force structure and posture decisions?

Key points:

Discussion of potential future options between direct like-for-like replacement of the current Trident system and unilateral nuclear disarmament centred on the question of 'how much is enough' for 'effective' UK nuclear deterrent threats. The discussions were also conditioned by a general acknowledgement that if the UK did not have nuclear weapons today it would not seek to acquire them.

It was argued that the 'Moscow Criterion' still dominates formal UK strategic nuclear targeting requirements in order to hold at risk key aspects of Russian state power. For some, however, this criterion now represents an institutionalised mindset rather than a strategy.

Discussions questioned the concept of 'key aspects of state power' for potential nuclear targeting and how it relates to the concept of 'minimum deterrence'. It was argued that a credible minimum deterrent threat could be achieved with a much smaller nuclear arsenal based on selective nuclear destruction of a small, core set of economic targets to decimate a country's economic infrastructure. It was also noted that it is easier to deter an adversary than to assure oneself that the adversary in question is indeed deterred.

It was also argued that the logic underpinning nuclear deterrence theory stands up today just as well as it did during the Cold War. Others, however, argued that the discussion of targeting and the credibility of nuclear deterrent threats reflected a 'pathology' of Cold War thinking divorced from the realities of today's complex and messy international security environment. It was argued that the purpose of nuclear weapons and nuclear deterrence is to provide security but that the post-Cold War era has seen a decisive shift from a paradigm of national security to one of human security. The question should therefore be not what configuration nuclear forces and postures are best for deterrence but what forms of deterrence are best for human security.

In this context it was noted that these issues (of force size, deterrence, credibility etc.) have been debated many times before. Nevertheless, it was argued that all of these concepts are contested, subjective and socially and historically located and should be applied to today's political, strategic and economic context.

The role of the US was raised in two ways: first, it was argued that it would be difficult for Russia, in this instance, to attack the UK or the US with nuclear weapons without also attacking the other because of the likelihood of a nuclear counter-attack. Second, it was argued that it would be very difficult for the UK to launch its Trident missiles against Russia without US support given that Russia would have little chance of discerning whether the Trident missiles launched against it were fired from a UK or US SSBN.

Issue#4: Ending continuous-at-sea deterrence

Questions:

1. What are the economic and political benefits of ending CASD?
2. Do we still need to plan to deter a surprise attack against our nuclear capability by maintaining invulnerable nuclear forces? I.e. do we need to present an adversary with 100% certainty of nuclear retaliation for the deterrent threat to be effective?
3. What are the detailed, practical operational implications of ending CASD and attempting to resume CASD for a period of time?
4. Do operational and crisis stability concerns tie UK nuclear posture to CASD so long as we possess an SLBM system? I.e. is CASD a necessary condition for sustaining a UK nuclear capability?
5. What are the operational deterrent and cost implications of a dual-capable future submarine that can deploy Trident missiles and engage in some navy missions currently assigned to the SSN fleet?
6. To what extent would ending CASD with the future or current Trident fleet delay the Trident replacement programme?
7. What are our precise nuclear commitments to NATO in terms of missiles and SSBNs and how does this affect options to end CASD?
8. Could we cooperate with France to establish a joint-CASD posture through coordinated SSBN patrols?
9. How would the US respond to a UK decision to end CASD?
10. Would ending deployment of SSBNs that fatally undermine the UK's ability to maintain an SSN fleet?

Key points:

Discussion centred on the economic and political rationales for ending CASD with one participant observing that there are three core criteria that will guide future options: economic, deterrence, disarmament, i.e. the overall financial cost compared to a direct like-for-like replacement, the impact on prevailing or evolving UK concepts of 'minimum deterrence', and the impact of any changes on international nuclear disarmament politics.

In the context of invulnerable forces and deterrent threats, it was argued that a rational adversary that was deterred by 100% certainty of nuclear retaliation would be equally deterred if it calculated that there was an 80% or 50% chance of nuclear retaliation and that history shows nuclear weapons induce caution. Others disagreed and argued that a credible nuclear deterrent threat requires 100% invulnerable forces to be effective.

In the context of disarmament, some participants argued that the target audience of ending CASD is not other NNWS but the UK's own political-military establishment to reassure them that they can live without CASD and perhaps without nuclear deterrence, but also to set an example to other NWS military establishments that they could consider a similar change in posture. Some participants argued that the UK ending CASD should be part of a package offered in conjunction with steps towards disarmament by other NWS. This would signal a concrete move away from what one participant called the 'logic of nuclearism'. It was also argued that if a non-CASD posture were not verifiable then it would lessen the international disarmament impact.

For some participants the prospect of ending CASD and considering procurement of dual-capable future submarines was associated with too much financial, operational and crisis stability risk. It was argued that bringing SSBNs up to operational readiness from extended readiness status is very difficult and costly. It is cheaper and easier to keep them at sea in a CASD posture. The pitfalls of reducing the alert status of nuclear forces were highlighted by some with reference to the December 2008 'Schlesinger report' on operational failings affecting the de-alerted US nuclear bomber capability.

It was argued that a dual-capable / multi-role future submarine that could undertake some SSN roles would be a more costly and complex enterprise than a like-for-like replacement of the current SSBN fleet with an exclusive focus on the nuclear mission.

Discussion also centred on the ability to, and implications of, mobilising a nuclear-armed submarine during an emerging crisis in which the survival of the state was conceivably under threat if the nuclear-capable submarine force was not operating under a CASD posture.

It was argued that a CASD posture means that policy-makers would not have to make a decision about sailing a nuclear-armed submarine in a crisis whereas under a non-CASD posture policy-makers would have to make a positive decision to do so. The question then becomes at which point do you choose to do this? Some participants argued that you don't want to present the national leadership with difficult nuclear weapons-related decision in difficult times with deteriorating relations with another nuclear weapon state or states.

It was noted that if, during a period of tension, the government decided to bring a nuclear-capable submarine up to operational readiness or recall it from other missions in some part of the world's oceans it would take considerable time to bring the submarine to port, reload with Trident missiles, train and re-certify the crew and sail on deterrent patrol. This would probably take months, not weeks or days. Nevertheless, it was noted that in the 1970s the submarine service maintained a Polaris submarine in dock at 48 hours notice to deploy if necessary.

It was also argued that attempting to regenerate a CASD posture would be very difficult. Training Suitably Qualified and Experienced Personnel takes a long time – years for nuclear submarine crew. It was also noted that there is a tension between ending CASD whilst putting in place plans to return to a CASD posture albeit for a limited period of time, and the government's commitment to the irreversibility of nuclear arms control and disarmament steps.

In addition, it was argued that the morale of SSBN crews is dependent upon CASD and that if crews sense the nuclear mission is no longer deemed so essential to the country as to warrant a CASD posture, then they are liable to leave.

Others argued that there are no risk-free nuclear worlds and that the UK could take a useful lead in ending CASD and exploring the trade-offs involved with its own nuclear arsenal thereby constituting a 'disarmament laboratory' on a national scale. In this sense ending CASD could be an important indication that states with nuclear weapons intend to continue on the path towards disarmament because it supposes a future without reliance on nuclear weapons for national security.

In the context of NATO, the question was raised about the UK's precise nuclear commitments to the Alliance in terms of missiles and SSBNs to SACLANT and SACEUR set out in the 1962 Nassau agreement and 1963 Polaris Sales Agreement and whether changing operational posture, and therefore the availability of UK SSBNs and SLBMs, would affect UK commitments under those agreements.

Discussion also centred on the extent to which ending CASD might postpone key Trident replacement programme decisions. It was stated that the safety certification of the current Vanguard-class SSBN nuclear reactor is 25 years and that this is the key limiting factor in extending the service life of the current SSBNs, although government intends to extend the service life by at least another five years. It was not clear where authority for setting and possibly revising the 25-year reactor safety case lies, be it MoD or the Health and Safety Executive's Nuclear Installations Inspectorate. It was also argued that if the government's primary objective were to become extending the life of the current SSBNs as far as possible then current operational practices could be adapted to fulfil that overarching goal.

In addition, it was argued that further studies are required but that these could be conducted by experienced but independent military and scientific experts with access to classified data in a forum comparable to the JASON Defense Advisory Group at the Mitre Corporation in the US.

With respect to cooperation with France, it was argued that the UK and France could cooperate through coordinated SSBN patrols but that there is too much fear in MoD about the effect of such a relationship on UK nuclear cooperation with the US and the extent to which both the UK and France would feel comfortable sharing detailed SSBN patrol information.

With respect to the US it was argued that the current Obama administration (if not the US nuclear weapons policy community) would likely be agnostic about a UK decision to end CASD. It was also argued that the outcome of the 2009-10 US Nuclear Posture Review could have an important impact on future UK and NATO nuclear weapons policy decisions. One participant argued that the NPR will be seen as a political failure if there is no significant change in US policy.

Finally, it was argued that if the UK ended deployment and further production of SSBNs it could signal the end of the UK's ability to maintain an SSN fleet, primarily because of the cost of production and infrastructure. The question was then raised as to whether advanced SSK submarines could perform most of the missions currently undertaken by the SSN fleet, suggesting a reversal of government policy set out in the 2005 Defence Industrial Strategy to maintain a nuclear submarine building industry as an essential national asset.

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