Labour Defence Review

Response from Scientists for Global Responsibility (SGR)

Summary

With the world facing an increasingly complex range of security threats, from international terrorism to climate change, now is an important time to reflect on the UK's role. In recent years, the UK has focused resources on trying to retain its place as a leading military power, developing and deploying major weapons platforms such as nuclear-armed submarines, aircraft carriers and a large fleet of fighter-bomber aircraft. It has fought in major wars in Afghanistan, Iraq, Libya and now Syria. Yet there are serious questions about whether such military technologies and campaigns are helping or hindering international security, and to what extent radical changes in UK security policies are needed.

In this submission, Scientists for Global Responsibility, a UK organisation of hundreds of scientists and engineers, argues that:

- The UK's military spending is disproportionately high, and is especially focused on developing and deploying new major weapons platforms. There is clear evidence that, not only is this failing to improve UK or international security, it is actually undermining it.
- Particular risks are:
    - the UK's continued practice of licensing arms export contracts to authoritarian governments involved in human rights violations;
    - the UK's continued prioritisation of resources for military intervention over political, economic and humanitarian efforts to deal with international security problems;
    - the UK's continued deployment of nuclear weapons, which could be inadvertently launched due to human or technical error (including due to cyber security breaches); and
    - the UK's failure to engage constructively with multilateral nuclear disarmament efforts.
- The costs of the planned Trident nuclear submarine replacement and warhead upgrade continue to escalate beyond even recent cost estimates. Furthermore, new advances in submarine detection and anti-submarine warfare may make the system obsolete by the time it is planned for deployment.
- There is increasing evidence that the UK is failing to adequately fund efforts to tackle the root causes of conflict, and that resources (financial and technical) switched from the military budget – especially funds earmarked for major weapons platforms – would be more effectively spent in areas such as climate change mitigation (including renewable energy and energy conservation) and poverty alleviation.
- There is clear evidence of employment benefits should a shift from military industry to 'green' industries, such as renewable energy and energy conservation, be undertaken.

About SGR

Scientists for Global Responsibility (SGR) is an independent UK-based organisation, formed in 1992, whose membership includes over 750 natural scientists, social scientists, engineers, and other professionals in related areas. We promote science, design and technology that contribute to peace, social justice, and environmental sustainability.

Our recent publications include an in-depth report critically examining the role of science and technology in UK military and security strategies[1] and a report examining the risks of UK nuclear weapons.[2] Our reports and related material have been used in a series of international conferences discussing the humanitarian impacts of nuclear weapons in Oslo, Nayarit and Vienna which have led to the current UN negotiations on multilateral nuclear disarmament (see later for details). We draw on evidence from these reports – as well as other sources – in this submission.

This submission was compiled by Dr Stuart Parkinson (Executive Director) and Dr Philip Webber (Chair), with input from other colleagues.

1. Britain's Place in the World: Values, Principles and Objectives

Values

In the 2015 National Security Strategy and Strategic Defence and Security Review (NSS/SDSR), the UK government listed "core British values" as "Democracy, the rule of law, open, accountable governments and institutions, human rights, freedom of speech, property rights and equality of opportunity, including the empowerment of women and girls."

Notably absent from this list were:

- sustainable development; and
- high levels of income equality.

Much academic evidence is now available highlighting how these factors can contribute to well-being in society, but also how their absence is strongly linked with violence and conflict.[3,4] It is essential therefore for these to be included in the values which guide our society and our security and defence policies. Incorporation of these values would necessarily lead to a strategy much more heavily focused on tackling the roots of conflict.

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[1] Parkinson S, Pace B, Webber P (2013). Offensive Insecurity: The role of science and technology in UK security strategies. Scientists for Global Responsibility. http://www.sgr.org.uk/publications/offensive-insecurity

[2] Webber P, Parkinson S (2015). UK Nuclear Weapons: A catastrophe in the making? Scientists for Global Responsibility. http://www.sgr.org.uk/publications/uk-nuclear-weapons-catastrophe-making

[3] Oxford Research Group (2006). Global Responses to Global Threats: Sustainable Security for the 21st century. http://www.oxfordresearchgroup.org.uk/publications/briefing_papers/global_responses_global_threats_sustainable_security_21st_century

[4] Wilkinson R, Pickett K (2010). The Spirit Level: Why equality is better for everyone. Penguin books.

Roles

The UK has historically placed a lot of emphasis on applying military approaches to international security problems. Ministers often use the phrase 'punching above our weight' in describing such a role. Since the end of the Cold War (and arguably long before then), reviews of the effectiveness of such a strategic role have been few, lacking in transparency and based upon a narrow range of viewpoints and sources. Recent examples of the shortcomings in the review processes are the public consultation for 2015 NSS/SDSR – whose deadline was less than a month before the publication of the review – and the fact that the Chilcot Inquiry into Britain's involvement in the Iraq War is taking so long to be published. Indeed no public reviews seem to be planned for the Afghan and Libyan wars.

Nevertheless numerous failings in the UK's military interventions have been identified by a wide range of analysts including SGR.[5] These failings include: multiplying rather than reducing the threat of international terrorism; failing to stabilise those nations subject to intervention, and contributing to regional destabilisation; contributing to the proliferation of small arms; and significantly contributing to civilian casualties.

SGR's view is therefore that the UK needs to shift its main role in international security strategies to prevention and non-military interventions. This would include greater use of diplomacy and mediation, much stronger non-proliferation efforts, greater provision of humanitarian aid, and more concrete actions in support of the Sustainable Development Goals.

2. The Threats to Britain's Security

The National Security Risk Assessment (NSRA), which formed the basis of the NSS/SDSR, identified and prioritised a number of major risks to the UK's security. It is important to note that most risks, including most of highest (Tier 1) risks, were non-military in nature, such as environmental and public health hazards. And while the NSS and SDSR included preventative action to tackle these risks, there was a major focus on the development and deployment of major weapons platforms intended as 'deterrence' rather than on non-military measures, including tackling the root causes of the security risks.

Furthermore, in seeking to identify threats to UK national security, it is important to view them in the context of wider human security. For example, while terrorism is viewed as a 'Tier 1' risk to national security in the NSS/SDSR, the annual death toll due to this threat within the UK has been close to zero in recent years.[6] This compares to, for example, 1,800 deaths a year in road collisions[7] and about 9,000 deaths a year due to badly insulated

[5] For example, see analysis and references in: Parkinson S, Pace B, Webber P (2013). Offensive Insecurity: The role of science and technology in UK security strategies. Scientists for Global Responsibility. http://www.sgr.org.uk/publications/offensive-insecurity

[6] Institute of Economics and Peace (2015). Global Terrorism Index 2015. http://economicsandpeace.org/wp-content/uploads/2015/11/2015-Global-Terrorism-Index-Report.pdf Also see: Wikipedia (2016). https://en.wikipedia.org/wiki/List_of_terrorist_incidents_in_Great_Britain

[7] Dept for Transport (2015). Reported road casualties in Great Britain: main results 2014. https://www.gov.uk/government/statistics/reported-road-casualties-in-great-britain-main-results-2014

homes.[8] Yet public funding for traffic police[9] and home energy conservation programmes[10] have been cut markedly under the Cameron premiership, while funding for tackling terrorism has been protected. Comparisons at the international level are also important here. For example, in 2015 the number of deaths globally attributed to terrorism rose to over 30,000.[11] However, estimates of the numbers dying annually due to the effects of climate change – including malnutrition and infectious diseases – are about 10 times higher.[12] And these latter estimates do not include the contribution that climate change can make to an increase in conflict, which is a serious risk acknowledged in the NSS/SDSR. With the UK government cutting funding for key renewable energy technologies and home energy conservation – both essential in the struggle against climate change – while ring-fencing spending on military equipment, one has again to question their priorities.[13]

Of course, care does need to be taken in making comparisons such as these, so SGR attempted a more rigorous analysis focused on UK public spending on research and development (R&D) related to security issues, using publicly-available databases and freedom of information requests.[14] Specifically, we compared military R&D spending with spending on civilian R&D which could help tackle the root causes of conflict. The latter included international development and poverty alleviation, climate change impacts, sustainable energy technologies, food security, international relations, natural resource management, biodiversity, environmental risks and hazards, sustainable consumption and other measures to mitigate and adapt to climate change. We found that, depending on how you defined security, the UK spends between 2 and 7 times as much on military R&D as on civilian alternatives. We consider this disproportionate, and an indication that the UK's approach to security is 'hard-wired' to give priority to military approaches, even though these have major failings.

SGR strongly recommends that a thorough comparison is undertaken between UK government spending on military and non-military spending, with reference to a wide range of security threats at the international, national and human scale. If, as we strongly suspect,

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[8] Association for the Conservation of Energy (2016). Treasury slammed following 9,000 cold home deaths. http://www.ukace.org/2016/03/treasury-slammed-following-9000-cold-home-deaths/

[9] Independent (2015). 1 February. http://www.independent.co.uk/news/uk/home-news/dramatic-rise-in-road-deaths-as-numbers-of-traffic-police-fall-10016058.html

[10] Association for the Conservation of Energy (2016). Home energy efficiency 2010-2020. http://www.ukace.org/wp-content/uploads/2016/03/ACE-briefing-note-2016-03-Home-energy-efficiency-delivery-2010-to-2020.pdf

[11] Institute of Economics and Peace (2015). Global Terrorism Index 2015. http://economicsandpeace.org/wp-content/uploads/2015/11/2015-Global-Terrorism-Index-Report.pdf

[12] Examples of estimates for annual number of deaths due to climate change:
300,000 – Global Humanitarian Forum (2009). Climate Change: The Anatomy of a Silent Crisis. http://www.ghf-ge.org/human-impact-report.pdf
400,000 – DARA and the Climate Vulnerable Forum (2012). Climate Vulnerability Monitor (2nd Edition): A Guide to the Cold Calculus of a Hot Planet. http://daraint.org/wp-content/uploads/2012/09/CVM2ndEd-FrontMatter.pdf

[13] Parkinson S (2016). Wind turbines and solar panels into nuclear weapons: the UK's new industrial strategy? The Ecologist. http://www.sgr.org.uk/resources/wind-turbines-and-solar-panels-nuclear-weapons-uks-new-industrial-strategy

[14] Parkinson S, Pace B, Webber P (2013). Offensive Insecurity: The role of science and technology in UK security strategies. Scientists for Global Responsibility. http://www.sgr.org.uk/publications/offensive-insecurity

spending is focused disproportionately on major weapons platforms, then these should be cut back.

3. Britain's Military and Security Forces: Capabilities, Spending, and Choices

Military spending

It is important to note that the total military spending of NATO in 2015 was greater than the rest of the world put together, while the spending of NATO European members alone was significantly larger than that of China and nearly four times the level of Russia.[15] Furthermore, a comparison of troop numbers, weapons systems and other military capabilities shows that, for example, European NATO alone has a commanding advantage over Russia in nearly all areas.[16]

Hence, SGR views NATO current military spending as disproportionately high and potentially destabilising.

The UK's military spending in 2015 was approximately 2.0% of GDP. Although this represents a fall from a peak in 2009, this is markedly higher than most other members of the EU, NATO, and other democracies worldwide. These 76 or so nations spend an average of 1.4% of GDP on military activities.[17] It is essential to question, therefore, why Britain does not reduce its spending to such a level (or lower), rather than promising to meet US and NATO demands for greater military spending.

The UK's high military spending is largely driven, not by the need for territorial defence against likely aggression by a competing nation, which is extremely unlikely in itself, but by a strong belief in:

- deploying nuclear weapons (the so-called 'deterrent'); and
- the capability to deploy sizeable armed forces far from British shores (for example, by using its very large and expensive new aircraft carriers).

In particular, the Ministry of Defence's most recent equipment budget includes planned spending of £178bn on new military systems over the next 10 years.[18] The spending is focused on a series of new major weapons platforms. As a result, UK military forces have, and plan to retain, a major offensive capability well beyond those of many comparable nations.

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[15] SIPRI (2016). Trends in world military expenditure, 2015. http://books.sipri.org/product_info?c_product_id=512

[16] Oxford Research Group (2015). We need to talk about NATO. http://www.oxfordresearchgroup.org.uk/publications/briefing_papers_and_reports/we_need_talk_about_nato

[17] Oxford Research Group (2015). Cutting the Cloth: Ambition, Austerity and the Case for Rethinking UK Military Spending. http://www.oxfordresearchgroup.org.uk/publications/briefing_papers_and_reports/cutting_cloth_ambition_austerity

[18] Ministry of Defence (2015). Strategic Defence and Security Review: £178bn of equipment spending. https://www.gov.uk/government/news/strategic-defence-and-security-review-178bn-of-equipment-spending

As part of a report SGR published in 2013,[19] we highlighted how the government's focus on developing and deploying weapons systems with major offensive capabilities drives up the costs of UK military forces, which are becoming increasingly irrelevant in dealing with the major security threats that Britain and the wider world face. These systems include nuclear-powered submarines – both nuclear-armed and conventionally-armed – aircraft carriers and their support ships, and large fleets of long-range fighter-bombers and their support aircraft. The Trident 'successor' programme is a particular concern as official estimates of the total costs of the programme have increased markedly in the last year.[20]

SGR strongly recommends that the UK move away from its highly militarised security posture – which is perceived by many as aggressive – and, in particular, reduce spending on major weapons platforms and use these savings to improve security in other ways, for example tackling the root causes of conflict.

Stemming the flow of weapons

Since 2010, under the premiership of David Cameron, the UK has markedly increased its arms exports, including to numerous nations with authoritarian governments, poor human rights records and/or involved in armed conflict. The nation to which Britain exports most arms and other military equipment is Saudi Arabia, despite its very poor record in many areas and its current campaign of air strikes in the war in Yemen. Licenses for military and dual use equipment over the last five years to Saudi Arabia alone have totalled over £6.5bn.[21] There is also clear evidence that UK weapons have been used by the Saudi government in Yemen, and this is contributing to violations of international humanitarian law.[22] Other major recipients of UK arms/ dual use exports include China, Iran and the United Arab Emirates. The government has been repeatedly criticised, not just by human rights campaigners, but also by the House of Commons Committees on Arms Export Controls.[23] Adequate responses to such criticism have not been forthcoming from the government.

SGR believes that the UK should take much stronger action in this area by:

- *Strictly applying the EU arms export code which exclude the issuing of licenses for sales of military and dual use goods which could be used for 'internal repression' or 'international aggression';*
- *Ending the government promotion of arms sales through the UK Trade and Investment's Defence and Security Organisation;*

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[19] Parkinson S, Pace B, Webber P (2013). Offensive Insecurity: The role of science and technology in UK security strategies. Scientists for Global Responsibility. http://www.sgr.org.uk/publications/offensive-insecurity

[20] Nuclear Information Service (2015). Trident replacement: Costs rise and timetable slips. http://nuclearinfo.org/article/government-parliament-uk-trident/trident-replacement-costs-rise-and-timetable-slips

[21] Campaign Against Arms Trade (2016). UK Arms Export Licences. https://www.caat.org.uk/resources/export-licences/region?date_to=2015-12-31&date_from=2011-01-01

[22] Campaign Against Arms Trade (2016). A Shameful Relationship: UK complicity in Saudi state violence. https://www.caat.org.uk/campaigns/stop-arming-saudi/a-shameful-relationship.pdf

[23] Committees on Arms Export Controls – publications. http://www.parliament.uk/business/committees/committees-a-z/other-committees/committee-on-arms-export-controls/publications/

- *Eliminating all other subsidies for arms exports, for example, UK public funding of associated research and development;*
- *Taking a lead in the strengthening of the provisions of the Arms Trade Treaty to further restrict international arms transfers, especially small arms and light weapons.*

UK nuclear weapons

SGR carried out its latest assessment of the threat posed by the UK's continued deployment of nuclear weapons last year.[24] This was based on the latest scientific and technical data.

Our findings included:

- The explosive power of nuclear weapons carried by just one Trident submarine is greater than that of all the bombs dropped in World War II. This is around 300 times that of the atomic bomb dropped on Hiroshima.
- If used, the nuclear weapons carried by one Trident submarine could cause such huge climatic disruption that global food supplies would be at risk, threatening the lives and livelihoods of billions of people.
- If used, the nuclear weapons carried by one Trident submarine could directly cause more than 10 million civilian casualties.
- Intentional use of the UK's nuclear weapons would therefore be both genocidal and suicidal.
- The probability of unintentional use of the UK's nuclear weapons – whether through accident or miscalculation during a crisis – is not negligible. There have been numerous known cases across the world of 'near nuclear use' over the past 60 years, despite much nuclear history being clouded in secrecy. It is therefore only a matter of time before our luck runs out. The UK's round-the-clock nuclear patrols – and the desire to continue these indefinitely – add significantly to this risk.
- The UK is one of a very small number of states actively deploying nuclear weapons, creating a completely unacceptable risk of catastrophe for human society.

There is also a question mark over whether new Trident submarines will remain undetectable while on patrol. New advances in submarine detection and anti-submarine warfare may make the system obsolete by the time it is planned for deployment.[25]

The risks created by all nine existing nuclear weapons states are also much more serious than the UK government admits. Critically, there is a very serious risk of a major nuclear conflict by accident.

Arguably, the largest risk arises from the 1,800 US and Russian warheads currently kept on 'high alert' or 'launch-on-warning' status. This is an obsolete and very dangerous carry over from the Cold War when nuclear 'first strikes' were feared. The Global Zero Commission[26] –

[24] Webber P, Parkinson S (2015). UK Nuclear Weapons: A catastrophe in the making? Scientists for Global Responsibility. http://www.sgr.org.uk/publications/uk-nuclear-weapons-catastrophe-making

[25] BASIC (2016). The Inescapable Net: Unmanned Systems in Anti-Submarine Warfare. http://www.basicint.org/publications/david-hambling/2016/inescapable-net-unmanned-systems-anti-submarine-warfare

[26] Global Zero Commission on Nuclear Risk Reduction (2015). De-Alerting and Stabilizing the World's

whose membership includes very senior military and diplomatic personnel from the US, UK, Russia and many other countries – recommends that these warheads be stood down and physical safety measures urgently put in place. A belief in nuclear deterrence cannot prevent a devastating nuclear conflict that arises due to an accident or mistake.

For all of these reasons the UK should urgently re-engage with diplomatic actions to bring about significant nuclear disarmament at an international level – for example, by pressing the US and Russia as a first step to reduce their huge remaining nuclear arsenals from thousands of warheads to very small numbers.

Although the UK government claims to support multilateral nuclear disarmament, its recent record of diplomatic activity has been deliberately obstructive. A new UN initiative has recently begun – known as the Open Ended Working Group (OEWG) – aimed at drawing up a treaty for a complete ban of nuclear weapons. This process was set up as a range of other international initiatives aimed at multilateral nuclear disarmament had been stalled for many years by the actions of the nuclear weapons states such as the UK. 125 nations are actively participating in this new process – yet the UK voted against the formation of the OEWG and it continues to boycott the process.

SGR believes that the continued deployment of UK nuclear weapons is a threat to international security and Britain's approach to multilateral nuclear disarmament is undermining steps to eliminate the threat from all nuclear weapons. We recommend that the UK government takes the following initial steps:

- *remove Trident from continuous patrol at sea;*
- *place the nuclear warheads in storage;*
- *cancel Trident replacement; and*
- *actively support the OEWG negotiations on a nuclear ban treaty.*

4. Protecting British Jobs and Skills

A shrinkage of the UK's military forces – focused on the military systems with major offensive capabilities – will necessarily result in a shrinkage of the UK arms industry. However, the public finance released by this shift can be focused on expanding employment in a range of other sectors which can make a major contribution to tackling the root causes of conflict, as well as providing numerous other benefits.

Firstly, it is important to remember that the arms industry is capital-intensive, generating fewer jobs per unit of investment than many other sectors. This has been shown particularly clearly in studies carried out by researchers at the University of Massachusetts.[27] They concluded that, for every $1 million of public investment in the military, about 11,000 jobs would be created, while a similar investment in clean energy would create nearly 17,000. If the investment were directed to the education sector, then nearly 27,000 jobs would be created.

Nuclear Force Postures. http://www.globalzero.org/get-the-facts/nuclear-risk-reduction

[27] See, for example: Pollin R, Garrett-Peltier H (2011). The U.S. Employment Effects of Military and Domestic Spending Priorities: 2011 update. University of Massachusetts-Amherst. http://www.peri.umass.edu/fileadmin/pdf/published_study/PERI_military_spending_2011.pdf

In terms of the type of alternative employment, there are numerous options. Here, we focus on three key areas:

- decommissioning military equipment;
- renewable energy; and
- home energy conservation.

The most obvious area is in decommissioning existing military systems, especially nuclear-powered submarines and nuclear warheads which will take decades to complete. Such decommissioning is already underway to deal with historic equipment and could be significantly expanded. In terms of siting, it is generally located near to production facilities, enabling local re-employment.

Another important employment area is renewable energy technology and the associated infrastructure. Industries in this area have expanded considerably in recent years due to the need to tackle climate change, improve energy security and control energy bills. Because climate change is a major security threat multiplier, continued expansion of these industries will help to tackle the root causes of conflict. It is particularly disturbing therefore that the current Conservative government has cut many forms of financial support for renewables, as part of its austerity agenda. Many thousands of jobs are now at risk, as are the numerous environmental, health and other benefits that these technologies provide.[28] A recent in-depth study[29] has shown that re-investment of the money saved by major cuts to military equipment spending and arms exports into the renewable energy sector could create about *twice* as many skilled jobs as would be lost. If the investment were directed especially to offshore wind and marine energy, because of the overlap in skills between these and the military industrial sector, then many of the jobs that would be created would not require major retraining. Furthermore, careful direction of the re-investment funds would enable industries to be developed in areas which are currently disproportionately dependent on military industry, such as Barrow and Plymouth.

A further important employment area is home energy conservation. This is a sector which has been particularly badly hit by poor policy decisions under the Cameron premiership, with the annual installation of home energy efficiency measures having fallen by 80% since 2012.[30] Tens of thousands of jobs are estimated to have been lost.[31] Yet such measures can provide major benefits in terms of climate change and energy security, as well as being essential in tackling fuel poverty given the latest estimate (stated above) that 9,000 deaths

[28] Independent (2015). 19 October. http://www.independent.co.uk/news/uk/home-news/hundreds-of-renewable-energy-companies-could-be-forced-out-of-business-due-to-dramatic-subsidy-cuts-a6700466.html
[29] Campaign Against Arms Trade (2014). Arms to Renewables: Work for the future. https://www.caat.org.uk/campaigns/arms-to-renewables/arms-to-renewables-background-briefing.pdf
[30] Association for the Conservation of Energy (2016). Home energy efficiency 2010-2020. http://www.ukace.org/wp-content/uploads/2016/03/ACE-briefing-note-2016-03-Home-energy-efficiency-delivery-2010-to-2020.pdf
[31] IPPR (2014). Up Against the (Solid) Wall: What changes to the ECO mean for energy efficiency policy. http://www.ippr.org/publications/up-against-the-solid-wall-what-changes-to-the-eco-mean-for-energy-efficiency-policy

per year are as a result of illnesses due to living in cold homes.[32] It has been estimated that over 100,000 new jobs could be created by a nationwide programme to properly insulate Britain's homes – at a fraction of the cost of the military equipment budget.[33]

SGR therefore believes that there will be major employment and other benefits from a move away from arms production to civilian areas such as renewable energy and home energy conservation.

Concluding comments

One of the main reasons why SGR was set up was out of a concern that the UK was failing to use science and technology responsibly. The UK's current security and defence policies are, in our view, a particularly pertinent example of this. The UK deploys weapons of mass destruction, exports conventional arms to governments with very poor human rights records, spends excessive amounts on major weapons platforms which are not effective in dealing with the security threats facing the country, and uses its military forces in campaigns which fail on many levels.

SGR has made a number of recommendations in this submission to help deal with these major shortcomings, and we strongly urge the Labour Party to pursue these if the UK is to play the desired role of a responsible global citizen.

[32] Association for the Conservation of Energy (2016). Treasury slammed following 9,000 cold home deaths. http://www.ukace.org/2016/03/treasury-slammed-following-9000-cold-home-deaths/

[33] Energy Bill Revolution (2014). Building the Future: The economic and fiscal impacts of making homes energy efficient. http://www.energybillrevolution.org/wp-content/uploads/2014/10/Building-the-Future-The-Economic-and-Fiscal-impacts-of-making-homes-energy-efficient.pdf