

# The UK arms industry: ethical issues and alternatives

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Full references listed at the end

## We will discuss...

- UK arms industry: the basics
- Key ethical concerns
- Alternatives
  - Security strategies
  - Industries
- Libya: a case study
- Campaigning opportunities

## UK arms industry: the basics

## UK is major military power

- UK is one of 5 'declared' nuclear weapons states
- UK is member of NATO
  - world's largest military alliance
- UK military budget is world's 6<sup>th</sup> largest
- UK forces active in recent major conflicts
  - e.g. Afghanistan (2001-14), Iraq (2003-7; 2014-), Libya (2011)
- UK is 6<sup>th</sup> largest arms exporter
  - Recent recipients include Algeria, Bahrain, Libya, Saudi Arabia, Tunisia, Yemen
- Central to all this is the UK arms industry

- UK has arsenal of 215 nuclear warheads (FAS, 2015)
- NATO military spending is 10 times that of Russia (ORG, 2015)
- UK military budget was £36.7 bn (\$60.5 bn) in 2014 – world's 6th largest behind USA, China, Russia, Saudi Arabia and France (SIPRI, 2015a)
- UK military spending per person: more than 1.5 times that of Russia; more than 5 times that of China (calculations based on SIPRI, 2015a)
- UK spending per unit GDP is 50% greater than EU average (ORG, 2015)
- UK is 6th largest arms exporter behind USA, Russia, China, Germany and France (SIPRI, 2015b)
- UK arms exports recipients include authoritarian countries, including those suppressing Arab uprisings (Committees on Arms Export Controls, 2011; CAAT, 2015)

## Approach to national security

- UK military/ defence strategy based on:
  - Assumption that security threats need large military to tackle them
  - Major weapons systems & need for ‘force projection’
    - Nuclear weapons, aircraft carriers, long-range warplanes & warships, drones
- Major role of arms corporations
  - Often monopoly suppliers
- Involvement of scientists/ engineers essential
  - Large budgets for Research and Development

Increasing emphasis on ‘remote control warfare’

Sources (for example): MoD (2010); ORG (2015); BBC News online (2015); Remote Control Project (2015)

# Defence Equipment Plan 2014

	10 year budget (£ billion)
<b>Submarines &amp; nuclear weapons</b> - incl. 4 x Trident replacement nuclear-armed subs; 4 more Astute-class conventionally-armed subs	40.0
<b>Warships</b> - incl. completion of 2 Queen Elizabeth-class aircraft carriers; 13 x Type-26 Global Combat Ships	18.2
<b>Combat planes</b> - incl. 48 x Lightning II (F-35) jets; upgrade of Typhoon jets; RPAs (drones)	17.9
<b>Info Systems and Services</b> – incl. cyberwarfare and communications	16.9
<b>Land equipment</b> - incl. 589 x Scout AFVs; upgrade of tanks	15.4
<b>Long-range support aircraft</b> - incl. Voyager for air-to-air refuelling; A400M for heavy transport	13.8
<b>Weapons</b> - incl. missiles, torpedoes and bombs	12.6
<b>Helicopters</b> - incl. upgrades and some new craft	11.1
Other programmes and contingency funds	17.0
<b>Total</b>	<b>162.9</b>

- Ring-fencing of the military equipment budget while civilian spending still contracting
- Source: MoD (2015)

## UK arms corporations

UK ranking	Company	Global military sales (2013)	Global ranking	% military sales
1.	BAE Systems	\$26.8 bn	3	94%
2.	Rolls-Royce	\$5.6 bn	14	23%
3.	Babcock International Group	\$3.3 bn	26	59%
4.	Serco	\$2.6 bn	39	32%
5.	Cobham	\$1.8 bn	55	65%

Source: SIPRI (2014)

- Smaller, but also significant, are AWE Management Ltd – a consortium which manages the Atomic Weapons Establishment on behalf of the MoD – and QinetiQ – which was the corporation formed by the privatisation of some of the MoD's research labs.
- Many arms corporations have links with UK universities – for example, see Parkinson (2015)

## Top UK arms corporations: examples

- BAE Systems
  - designs and manufactures military aircraft, warships and submarines; guided weapons; radar; space systems; surveillance equipment; military simulation systems etc
- Rolls-Royce
  - engines for military ships/ aircraft
- BAE Systems, Rolls-Royce, Babcock all have key role in UK nuclear weapons system



## Arms corporations: UK subsidiaries

- All 'Top 10' military corps. have UK factories:
  - Lockheed Martin (USA)
  - Boeing (USA)
  - Raytheon (USA)
  - Northrop Grumman (USA)
  - General Dynamics (USA)
  - Airbus Group (trans-Europe)
  - United Technologies (USA)
  - Finmeccanica (incl. Selex & AgustaWestland) (Italy)
  - Thales (France)

Sources: SIPRI (2014) and corporation websites

## Key ethical concerns

## Main ethical concerns

1. Nuclear weapons are Weapons of Mass Destruction
2. Arms spending fuels the cycle of violence
3. Arms spending competes with civilian spending
4. Employment issues

Another important ethical concern is corruption – not discussed in this presentation due to lack of space.

# 1. Nuclear weapons are WMD

- Current UK arsenal: 215 nuclear warheads
- Each Trident submarine carries 40 warheads
  - Total explosive power: 4,000,000 tonnes TNT
  - More explosive power than all WWII bombs
  - Equivalent to 320 Hiroshima bombs
  - Could inflict 10 million casualties directly
  - On continuous patrol
- 100 Hiroshima-sized bombs could cause nuclear winter
  - Global threat

- Explosive power of each UK nuclear warhead is equivalent to 100,000 TNT – this is approx 8 times that of the Hiroshima bomb

Sources for all figures: FAS (2015); SGR (2013a)

## Trident replacement

- UK has cut warhead numbers, but still plans to replace current Trident system
  - Total lifetime cost of about £100 billion
  - Decision due by 2016
- All 9 nuclear weapons powers are modernising despite NPT treaty
- Over 110 non-nuclear-armed nations have signed new 'Humanitarian Pledge' for a ban treaty

- UK nuclear arsenal is being reduced to 180 warheads (MoD, 2010): still equivalent to over 1000 Hiroshima's
- Estimate of total cost of Trident replacement system: Greenpeace UK (2009)
- Commitment to developing a strategy for complete disarmament first stated in Nuclear Non-Proliferation Treaty (NPT) agreed in 1968, and restated in review conferences since – although the 2015 conference broke up without agreement.
- For more info on Humanitarian Pledge, see: ICAN (2015)

## 2. Arms spending fuels the cycle of violence

- Large military reinforces UK government's willingness to use military force rather than alternatives
- Exports often fuel international arms races and increase risk of war
- Exports often strengthen oppressive regimes and lead to human rights abuses
- Civilian casualties are high
  - e.g. Iraq war (2003-11): over 79% of casualties civilian

- For examples, see the arms export recipients listed in slide 4 and Libyan case study later. The government effectively admitted the problem when 50 UK arms export licenses for Libya and Bahrain were revoked in 2011 after the Arab uprisings (BBC News online, 2011a).

- Estimate of civilian casualties from IBC (2012) – includes violent deaths only – many deaths caused by war are due to, e.g., destruction of health or food distribution systems

- Related concern of a shift from 'threat-driven' defence to 'capability-based' defence, as military corporations increasingly influence agenda for defence policy based on what technologies can be developed rather a broader assessment of security threats

## Armed drones

- RPA – Remotely-piloted aircraft
- Technology is spreading very rapidly
  - UK govt keen/ UK arms industry heavily involved
- Claimed to allow more precise targeting
- But use is ‘expanding the battlespace’
  - ‘Illegal’ CIA use in civilian areas (e.g. Pakistan)
  - Some evidence of higher civilian casualties and that their use leads to revenge attacks on civilians
- Industry is developing the potential for them to act autonomously

- Dozens of countries involved in developing RPA technology – grey areas over civilian/ military surveillance/ weapons applications.
- Shifting of risk from ‘our’ soldiers to others: increased risk of civilian casualties.
- BAE Systems involved in development of Mantis and Taranis armed drones.
- Much dispute over legality of US use of drones in ‘targeted assassinations’ in (e.g.) Pakistan and Yemen.
- Study by US military-linked think-tank (Center for Naval Analyses) concluded that drone strikes 10 times more deadly than those of conventional military jets – based on analysis of air strikes in Afghanistan from mid-2010 to mid-2011, using classified military data (The Guardian, 2013). Area of intense debate.
- University College London study found that terrorists in Pakistan were more likely to target civilians after drone strike (Kersley, 2015).
- Further discussion at: International Committee for Robot Arms Control (2015); Drone Wars UK (2015); Remote Control Project (2015)

### 3. Competition with civilian spending

- Global comparison:
  - Military spending: \$1,776,000,000,000
  - More than 4 times that needed to hit 2°C climate change target
- Examples of major industrialised countries:

Country	Military spending (2014)	% GDP
USA	\$610 bn	3.5
UK	\$61 bn	2.2
Germany	\$47 bn	1.4
Japan	\$46 bn	1.0

SIPRI (2015)

- Ample scope for cutting military budgets
- All figures are for 2014
- Sources: SIPRI (2015a); Parkinson (2014)



## 4. Employment issues

- Some argue that military spending should not be cut as many jobs depend on it
- Flaws in this argument:
  - If there is a strong ethical case against an activity, it should be stopped
  - As in any area experiencing job losses, regeneration funding can be used to aid a transition
  - Military industrial sector is comparatively small and expensive (as follows...)

## Employment in military industrial sector

	UK employees (including supply chain)
Ministry of Defence equipment spending	115,000
Arms exports	55,000
<i>Total</i>	<i>170,000</i>

Source: CAAT (2014)

- Only approx. 0.5% of total UK employment;  
7% of manufacturing sector

- Figures include direct and indirect (supply chain) employment (roughly 50:50) – but not the MoD's non-equipment budget

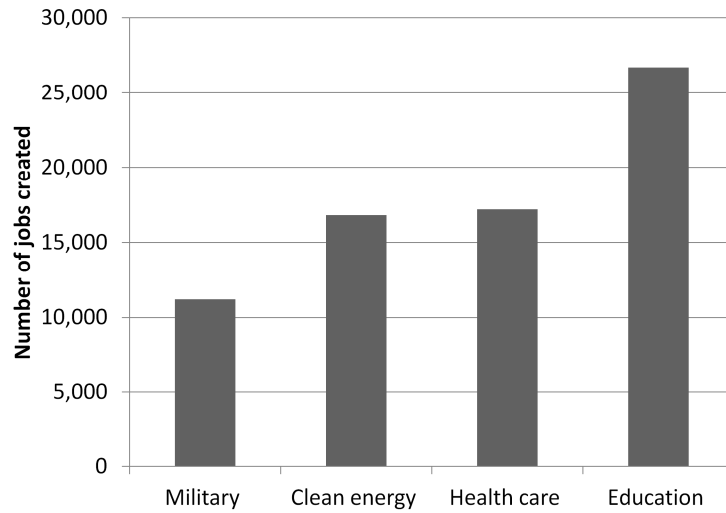
Main source: CAAT (2014) – calculations based on government and industry data

## Military v civilian job creation

- Military industry is capital-intensive
  - Expensive
  - Low job creation for investment
  - Highly specialised jobs
  - High use of materials and energy
- Civilian sectors
  - Generally more labour-intensive, including many 'green' sectors

SGR (2013b) – chapter 6.

## Job creation potential



Jobs created by \$1 billion spending by US government by sector for USA, 2009

Pollin and Garrett-Peltier (2011)

Researchers at the University of Massachusetts

## Major shifts from military to civilian industry in UK

- Post-conflict demobilisation
  - e.g. after World Wars
- As Cold War drew to a close
  - 215,000 jobs in military/defence sector lost in 10y from 1985/86
- Following 2010 military cuts?
  - Broader shifts in economy have been successful
  - Further cuts could be carried out successfully

- Jobs in military/defence sector fell from 625,000 in 1985/86 to 410,000 in 1995/96 (figures include MoD non-equipment spending) – from Defence Analytical Services and Advice (1998)
- The scale of job losses in UK arms industry following the 2010 military cuts is not yet clear (CAAT, 2014)
- Decommissioning (e.g. Trident) would provide some jobs during any future transition period, as it has done in the past

## Alternative security strategies for the UK

## Non-Offensive Defence

- Focus military forces on narrowly-defined defence
- Cut the 'offensive' arsenal, especially:
  - Nuclear weapons
  - Long-range bombers, missiles etc
  - Long-range military ships and submarines
- Minimise arms exports
- Shrink the military industry
- Peace-keeping activities would be retained

- Under a Non-offensive defence policy, the armed forces retain the capability to defend national territory (and contribute to peacekeeping), but not to invade or mount a major attack

- The case for Non-Offensive Defence (although known under a variety of titles) has been made since at least 1982.

Reference: SGR (2013b) – chapter 4

## Sustainable Security

- More substantial shift
- Focus on tackling the roots causes of major security threats:
  - Competition over resources
  - Global militarisation
  - Marginalisation of the majority world
  - Climate change

Reference: Abbott et al (2006); SGR (2013b) – chapter 5



## Some limited changes

- 2010 National Security Strategy
  - Most threats to UK security are non-military in nature
    - e.g. terrorism, environmental problems, pandemics, major industrial accidents
  - Acknowledgement that solving security problems needs a broader approach

HM Government (2010)

## Alternative strategies for UK industry

## ‘Green collar’ sector

- Low carbon and environmental goods and services (LCEGS) sector:
  - a. Environmental
  - b. Renewable energy
  - c. Emerging low carbon
- Activities:
  - Maintain clean water, air and land
  - Tackle climate change
  - Improve energy security
  - Protect ecology

➤ Human society needs healthy environment

Government definitions:

- *Environmental sector* - including environmental consultancy, air pollution control, environmental monitoring, marine pollution control, waste management, recovery and recycling; as well as the service industries that support environmental management.
- *Renewable energy sector* - including wind, wave and tidal, biomass, geothermal, hydro and photovoltaic energy generation and the services that support them, including renewables consultancy.
- *Emerging low carbon sector* - including alternative fuels such as nuclear, and alternative fuels for vehicles, carbon capture and storage, building technologies, energy management and carbon finance.
- Many security benefits of tackling action to curb climate change and protect environment

## 'Green collar' security benefits

- Specific security benefits:
  - Reduced oil and gas imports from oppressive regimes
    - Increased energy security
    - Reduced support for governments which threaten security of own people and other countries
  - Reduced fossil fuel use
    - Reduced contribution to climate change, local air pollution and other environmental problems

But nuclear power raises security problems of its own...

## Employment

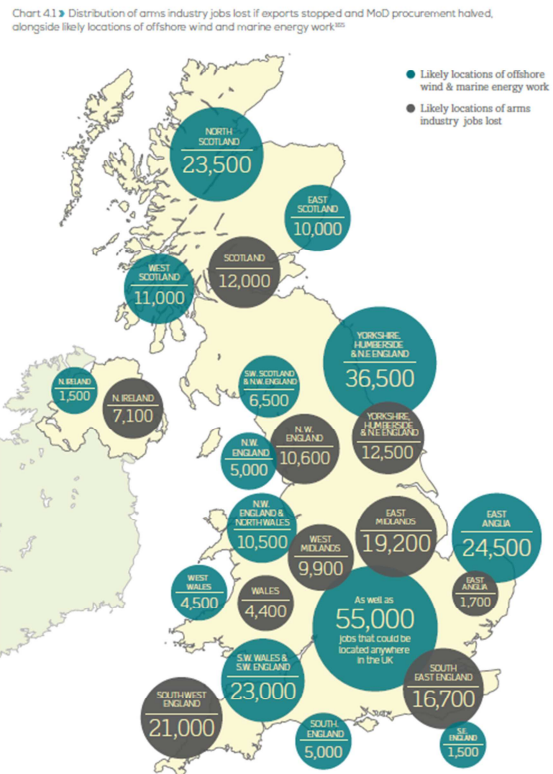
- UK renewable energy sector
  - Currently at least 110,000 jobs
- Other LCEGS sectors at least as big
  - Some estimates put the no. of jobs much higher
- Potential for large expansion depending on government climate change policies

- Employment figure from REA (2012) – includes direct and indirect jobs.
- In 2014, percentage of UK electricity generated from renewables (19.2%) passed that of nuclear power for the first time (DECC, 2015).
- Home energy efficiency (e.g. home insulation) is especially labour intensive and so generates a large number of jobs.
- The current policies of the new Conservative government are slowing down the growth of wind, solar and home insulation.
- Globally, the renewable energy sector employs approx 7.7 million people (REN21, 2015).

## Potential employment changes through arms conversion to offshore renewable energy

- Half UK arms spending & end exports: 115,000 jobs lost
- Expansion of offshore renewable energy: 220,000 jobs gained
- Similar skill sets

CAAT (2014)



- Globally, electricity generated from wind and solar sources has been growing exponentially – and looks very likely to continue, as costs have tumbled (especially for solar photovoltaics) and they are becoming competitive with fossil fuels in some parts of the world (REN21, 2015).
- Battery technologies – which can store electricity for when (e.g.) the wind is not blowing or the sun is not shining – are also advancing rapidly – see e.g. The Guardian (2015a).
- UK energy policies could and should be changed build on this.

## Libya: a case study

## Libya before 2011

- Large oil exports
  - especially to Europe (incl UK)
- Large arms imports
  - embargo ended in 2005
  - large increase in imports, especially from EU (incl UK)
  - Total: €763m from 2005-09, including military aircraft
- Amnesty highlights poor human rights record
  - Political freedoms ‘severely curtailed’
  - Internal Security Agency continues to operate ‘with impunity’

- Figures from the Official Journal of the European Union summarised in The Guardian (2011)
- Human rights situation: Amnesty International (2011)



## 2011 Libya war

- Uprising against Gaddafi regime
- Violent suppression by Gaddafi
  - European weapons were used
- UN resolution approves military action ‘to protect civilians’
- NATO bombing campaign supports rebels in regime change
- ‘One of NATO’s biggest successes’

Numerous sources, e.g. The Guardian (2015b)

## Libya after 2011

- Libya left without functioning government
  - Numerous militias in control
  - Security situation remains poor
- Arms of Gaddafi regime stolen
  - Probably used by other armed groups in region, e.g. Mali, Iraq, Syria wars
- IS groups operating
- Gateway for refugees to Europe

Numerous sources, e.g. The Guardian (2015b)

## Conclusions

- UK industry should support tackling roots of conflict
  - Cutting arms industry, especially exports
  - Reducing fossil fuel dependence
    - Especially through expansion of energy efficiency and renewable energy
- Arms conversion has many benefits
  - Improving security
  - Creating long-term employment
  - Protecting environment

## Campaigning opportunities

- Government policy
  - Security and defence reviews currently underway
  - Decision on Trident replacement by 2016
- Industry
  - Arms factory in your area?
  - Member of trade union?
  - Member of sci/tech organisation?
- Individual level
  - Who do you bank with?

- Some actions

Write to your MP arguing that tackling roots of conflict/ arms conversion/ abolition of nuclear weapons should be at heart of security/ defence reviews

Write to local papers/ specialist magazines arguing for tackling roots of conflict/ arms conversion

Send trade union/ scitech organisational contacts copies of SGR/ CAAT reports

Check 'Don't Bank on the Bomb' report to see if your bank is involved in nuclear weapons – see <http://www.dontbankonthebomb.com/>

Take part in demonstrations – e.g. against DSEi arms fair in London in Sept

Work with local/ national campaigners to multiply your efforts

- UK organisations working on these issues include (some have local groups):

Campaign Against Arms Trade – <http://caat.org.uk/>

Campaign for Nuclear Disarmament - <http://cnduk.org/>

Drone Campaign Network - <http://dronecampaignnetwork.org.uk/>

ICAN UK - <http://www.icanw.org/unitedkingdom/>

Oxford Research Group - <http://oxfordresearchgroup.org.uk/>

Pax Christi UK - <http://paxchristi.org.uk/>

Scientists for Global Responsibility – <http://www.sgr.org.uk/>

Stop the Arms Fair – <http://www.stopthearmsfair.org.uk/>

Stop the War Coalition – <http://www.stopwar.org.uk/>

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