Gordon MacKerron, a professor of science and technology policy, has described it as "thin".<sup>25</sup>

## An open debate

The UK government claims that it needs a large programme of new nuclear power to improve energy security, reduce carbon pollution and keep energy bills low. But they continue to fail to make a convincing case — especially when there is a wealth of evidence to the contrary. Now that there is new academic analysis revealing the crucial role of military nuclear interests in supporting this agenda, it is surely time to have a full and frank debate about what really are the best civilian energy options for the UK.

Dr Stuart Parkinson is Executive Director of SGR, and has written widely on energy and climate issues for over 25 years.

### References

- SGR (2016). http://www.sgr.org.uk/resources/uk-nuclearweapons-catastrophe-making
- For example, see: CND (2016). http://cnduk.org/information/briefings/tridentbriefings/item/2464-trident-and-jobs-the-employmentimplications-of-cancelling-trident-replacement

- Carbon Brief (2016). https://www.carbonbrief.org/the-hinkleyc-new-nuclear-plant
- NAO (2016). https://www.nao.org.uk/report/nuclear-power-inthe-uk/
- Greenpeace (2016). http://energydesk.greenpeace.org/ 2016/07/27/hinkley-offshore-wind-cost-effective/
- Friends of the Earth (2016). https://www.foe.co.uk/sites/default/files/downloads/nationalpolicy-statement-energy-hinkley-101619.pdf
- Parkinson S (2016). http://www.sgr.org.uk/resources/ukclimate-policy-unravelling
- 8. As note 3.
- World Nuclear News (2016). http://www.world-nuclearnews.org/RS-EDF-faces-EUR100-billion-reactor-upgrade-billsavs-audit-office-1102164.html
- Financial Times (2017). https://www.ft.com/content/2baf6270c36a-11e6-81c2-f57d90f6741a
- 11. The Economist (2016). http://www.economist.com/node/21703367
- BEIS (2016). https://www.gov.uk/government/speeches/baroness-nevillerolfes-speech-at-the-office-for-nuclear-regulation-onr-industryconference
- 13. BBC News (2006). http://news.bbc.co.uk/1/hi/uk\_politics/4987196.stm
- Japan Times (2017).
   http://www.japantimes.co.jp/news/2017/01/28/business/corpo rate-business/toshiba-chairman-resign-struggling-u-s-nuclearbusiness/

- Cox et al (2016). SPRU Working Paper Series, no.2016-16. http://www.sussex.ac.uk/spru/documents/2016-16-swps-coxet-al.pdf
- Corporate Watch (2007).
   https://corporatewatch.org/sites/default/files/nukes%20report.pdf
- 17. Lowry D (2013). http://www.sgr.org.uk/resources/uk-s-role-nuclear-proliferation-then-and-now
- p.164 of: BEIS (2016).
   https://www.gov.uk/government/collections/digest-of-uk-energy-statistics-dukes
- Diesendorf M (2016).
   http://www.theecologist.org/News/news\_analysis/2987376/dispelling\_the\_nuclear\_baseload\_myth\_nothing\_renewables\_cant do better.html
- 20. Chapter 6 of: Goodall C (2016). The Switch. Profile Books.
- 21. Barnham et al (2015). Nature Materials, no.15, pp.115–116. http://www.mng.org.uk/gh/renewable\_energy/barnham\_2015.
- National Infrastructure Commission (2016). https://www.gov.uk/government/publications/smart-power-anational-infrastructure-commission-report
- Bloomberg New Energy Finance (2016). https://www.bloomberg.com/news/articles/2016-04-06/windand-solar-are-crushing-fossil-fuels
- Ramana V (2015). http://spectrum.ieee.org/energy/nuclear/theforgotten-history-of-small-nuclear-reactors
- MacKerron G (2015). https://blogs.sussex.ac.uk/sussexenergygroup/2015/10/09/sm all-modular-reactors-a-real-prospect-by-gordon-mackerron/

## The landmine ban: 20 years on

Steve Wright, Leeds Beckett University, looks at the achievements of campaigners and governments in reducing the casualties from landmines.

2017 marks the twentieth anniversary of the adoption of the Ottawa Treaty that banned antipersonnel mines, more commonly known as landmines. Upon reaching such a milestone, it is important to reflect on how campaigners succeeded in getting the ban agreed and what has been achieved in the two decades since.

The Ottawa Treaty<sup>1</sup> defines a landmine as "a munition designed to be placed under, on or near the ground or other surface area and to be exploded by the

presence, proximity or contact of a person or a vehicle". Such a precise definition doesn't quite capture the horror of an indiscriminate weapon which transforms limbs into offal, and persists years after a military conflict is over, threatening the life of civilians and denying them access to valuable land to grow food, build schools etc. These explosive remnants of war had been placed in their millions — yet, through implementation of the treaty, considerable progress has been made on reducing the threat — see Box.

## Achieving the ban – and progress since

An insight into how the ban was achieved was provided recently when Leeds Beckett University awarded the founders of the Mines Advisory Group

(MAG), Lou and Rae McGrath, Honorary Doctorates of Law, for the tremendous work these brothers had contributed to the campaign to make the Ottawa Treaty a reality. At the award ceremony, Lou said: "The landmine campaign grew from a group of determined individuals with experience of the impact that landmines had on communities throughout the world, knowing it was an indiscriminate weapon that continued to maim and kill long after conflicts had ceased. When it began in 1992, emails were not the norm and there was no social media. Yet by 1997. when the treaty was signed the International Campaign network represented over a thousand human rights, medical, religious, children's, peace, veterans, development, arms control, environmental, humanitarian and women's groups from over 60 countries. The Mine Ban Treaty was brought about by civil society responding to a manmade catastrophe and forcing their governments to the table."

Determination was an absolute necessity for the success of this campaign. In the early days of MAG, the McGrath brothers were working out of a caravan in Cockermouth in northwest England. Their primary focus was the practicalities of de-infesting countries like Afghanistan and Mozambique. Rae's own book<sup>3</sup> provides a detailed account of the meticulous thought

## The Ottawa Treaty – key facts and figures<sup>2</sup>

Since the treaty came into legal force in 1999:

- 29 nations have been declared 'mine free' –
  out of 61 reported to contain mined areas. The
  remaining 32 nations have action plans to
  eliminate their mine-fields.
- 158 nations no longer hold any stockpiles of anti-personnel mines.
- 49 million mines have been destroyed by these nations.
- 162 nations have ratified or acceded to the treaty. However, six key nations which together still retain stockpiles of tens of millions of mines have yet to join the treaty. These six are China, India, Pakistan, Russia, South Korea, and the USA.

13

# **Feature Articles**



De-mining with the Mines Advisory Group

which was put into these dangerous operations. Between 1989 and 2015, MAG achieved:<sup>4</sup>

- Destruction of over 300,000 landmines and over 150,000 cluster munitions;
- Removal of over 4 million other unexploded ordnance items; and
- Clearance of over 5,000 square kilometres of land, which it had released back to communities.

Such humanitarian demining was accomplished inch by inch, with much thought given to employing local de-miners, giving a livelihood especially to those who themselves had been victims of anti-personnel landmines. Women-only teams have been a particular feature.

Networks of non-governmental organisations were involved in this work — united through the International Campaign to Ban Landmines (ICBL) — and by 1999 when the Ottawa Treaty came into effect, production and deployment of landmines had already been halted in many parts of the world. Then, through implementation of the treaty, many of the large stockpiles were destroyed and large areas de-mined (see Box). The ICBL

estimates that the annual number of deaths due to landmines fell from over 9,000 in 1999 to below 4,000 in 2014.<sup>5</sup>

This commitment and these results were not won without a price, however. MAG, for example, was at one point heavily in debt, as they expanded operations across the globe to places like Vietnam, Cambodia and Laos (where the US dropped more ordnance than dropped by all sides in World War II). Details of the full extent of the bombing were only declassified by the US in the 1990s.

Horrific pictures of people with their limbs blown off might be vital evidence of the deployment of inhumane weapons but they were so appalling that most of the public wanted to turn away. One of MAG's skills was employing key story-tellers and photographers such as Sean Sutton, who has brilliantly documented how mine-afflicted communities have tried to survive the peace.

The legacy has not just been the return of mine-free land to communities all over the world but also a bench mark on how civil society can actively challenge weapons deemed to be anti-humanitarian—and win. The civil society networks Lou McGrath talked about went on to win a further legal victory with the Convention on Cluster Munitions being adopted in 2008. 119 nations have now joined this treaty.<sup>6</sup>

### **Unfinished business**

The successes of these campaigns and treaties, however, should not obscure the fact that landmines, cluster bombs and other similar weapons still cause much suffering. For example, figures recently published show that in 2015, there was a large increase in the number of casualties from landmines.<sup>7</sup> The wars in Syria, Iraq and elsewhere has caused an increase in the use of these weapons by both government militaries and non-state groups - the latter often in the form of 'improvised explosive devices' (IEDs). Meanwhile, evidence has emerged that Saudi Arabia has used British-made cluster bombs in its war in Yemen<sup>8</sup> (although sales stopped many years ago), while the USA is still selling such weapons to the regime. So we currently have the depressing spectacle of US-manufactured cluster munitions being used against civilians once again.9

Such examples illustrate the key problem that some of the world's largest nations have refused to join the Ottawa Treaty and the CCM. These include China, India, Russia and the USA. It is especially depressing that many members of the UN Security Council will not assume a leadership role on this issue.

Nevertheless, the Ottawa Treaty has taught us that civil society can pressure militaries to drop the use of inhumane weapons. Many of the same NGOs involved in both the ICBL and the anti-clustermunitions campaign are now involved in efforts to ban autonomous weapons - those which could decide for themselves whom to kill. Although these weapons are still under development, there are understandably huge concerns about their potential impact should they ever be deployed. The main coalition working on this issue is the Campaign to Stop Killer Robots, 10 which is working within UN processes to make progress. Confidence is high that the learning from these previous efforts to ban inhumane weapons will bear fruit once more. Some SGR members - such as myself - are part of this process and look forward to reporting back on the progress of these efforts as they happen.

Dr Steve Wright is a Reader in the School of Applied Global Ethics, Leeds Beckett University. His research interests include the proliferation of the technologies of political control and human rights violation.

## References

- Anti-Personal Mine Ban Convention (undated). Overview and convention text. http://www.apminebanconvention.org/ overview-and-convention-text/
- Anti-Personal Mine Ban Convention (2016). Landmine Treaty
  meeting concludes with advances in stockpile destruction.
  http://www.apminebanconvention.org/newsroom/pressreleases/detail/article/1480938217-landmine-treaty-meetingconcludes-with-advances-in-stockpile-destruction-158countries/ (Some of the data can be found elsewhere on this
  website.)
- McGrath R (2000). Landmines and Unexploded Ordnance. Pluto Press, London.
- MAG (2015). The issues. http://www.maginternational.org/theproblems/the-issues-/
- ICBL (2016). Landmine Monitor 2016. http://themonitor.org/en-gb/reports/2016/landmine-monitor-2016.aspx
- CCM (2016). The Convention on Cluster Munitions. http://www.clusterconvention.org/
- 7. As note 5.
- Allen K (2016). British-made cluster bombs are turning up in Yemen. https://www.theguardian.com/commentisfree/ 2016/may/23/british-cluster-bombs-yemen-cameron-killing-civilians-inquiry
- Thornbecke C (2016). House OKs Ongoing Cluster Bomb Sales to Saudi Arabia. ABC News. http://abcnews.go.com/US/houseoks-ongoing-cluster-bomb-sales-saudiarabia/story?id=39931315
- 10. http://www.stopkillerrobots.org/

14