

Pugwash Conferences on Science and World Affairs
British Pugwash Group

NEWSLETTER

SEPTEMBER 2011

Welcome from our new Chairman



British Pugwash has recently made some changes in its Executive Committee. John Finney, after three highly successful years as chairman, has retired from that role (but happily not from his involvement in Pugwash) and I have been elected to take his place.

For those who have not already met me, I have been involved in the Pugwash movement since 1969, joining at the invitation of Sir Rudolph Peierls. In my professional career, I have worked as a physicist/project manager at UKAEA Culham/Harwell Laboratories, on the JET Project and on nuclear projects in Russia. Currently I am a consultant to the

UK government's 'Closed Nuclear Cities Partnership' in Russia and the Former Soviet Union and an emeritus fellow at Merton College, Oxford.

I am happy to introduce our newsletter, the first of its kind, to give members information between annual reports on British Pugwash activities. We hope it reflects our work aimed at meeting British Pugwash's core objective – to provide expertise in support of evidence-based decision making in the spheres of Science and International Affairs. Our core competence has hitherto been primarily in the area of nuclear and chemical weapons, and we intend to sustain that expertise. But we are also beginning to expand our competence into the areas of energy policy and the environment.

In recent months we have submitted evidence to the Select Committee on Science and Technology relating to UK Energy Policy and we recently organised a very successful public meeting on Planetary Boundaries (a topic which includes, but is not limited to, climate change – see page 2).

For many years our primary approach has been to communicate with decision takers in government and industry, but in recent years we have also developed our outreach to the general public, particularly through the Weapons of Mass Destruction (WMD) Awareness Programme. We also collaborate with like-minded NGOs.

We believe that we are living in interesting times, in which many established patterns of domestic and international behaviour are being questioned, and that there is a very real opportunity to influence political developments by urging that decisions should be based on good science and rationality.

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RECENT EVENTS 2011

Planetary Boundaries Professor Johan Rockström of Stockholm University, addressing a well-attended British Pugwash Group meeting on 6 July at UCL, outlined [the concept of](#)



[planetary boundaries](#) developed by an international group of earth scientists and systems

analysts. They examined evidence of the complex impacts of growing anthropogenic pressures on the planet.

They propose nine planetary boundaries and argue that each of these, if breached, risks causing a catastrophic failure of earth systems. There is now growing understanding of non-linear change, which is already evident in the complex interactions between these planetary boundaries. The research has quantified seven of the nine boundaries and estimated ‘tipping points’ to avoid catastrophic change. These are: climate change, ocean acidification, stratospheric ozone, the biogeochemical nitrogen cycle, global freshwater use, land system change, and rate of biodiversity loss (seen as the most important). Exact boundary levels have yet to be determined for chemical pollution and atmospheric aerosol loading. Professor Rockström concluded that there is still a window of opportunity to remain within ‘the safe operating spaces’ inside these boundaries.

Mark Lynas, author of *The God Species*, looked at the implications of trying to remain within those safe spaces. While the precise nature of planetary boundaries may be challenged, ‘either we accept the scale of our impact on the planet or lapse into denial. If we keep in mind all the planetary boundaries, we are less likely to address one while exacerbating another.’

He argued that many of our responses so far, especially those focused on climate change, will be ineffective. The majority of emissions growth is going to come from developing countries, not the old industrial countries, so the focus of the environmental movement is on the wrong place. He saw the elimination of poverty as critical to meeting planetary boundaries and staying safe. He challenged the notion that urbanisation is a

negative development and questioned exaggerated concerns over expanding nuclear power. A lively panel debate followed the presentations with representatives from a range of environmental organisations.



The Future of Trident At this British Pugwash Group meeting in February, **Dr. Nick Ritchie** described the current status of the UK’s Trident replacement programme. He said that technological momentum has gathered pace with submarine concept and design work moving forward in the UK and through collaborative programmes with the US. Political momentum is less defined, with the Conservatives committed to a like-for-like replacement and the categorical necessity of continued possession of nuclear weapons, while their Liberal Democrat Coalition partners are much more equivocal. Financial momentum remains comparatively fragile due to the ‘thin strategic rationale’ for what could be a £30-billion investment, and the increasing budgetary constraints faced by the MOD.

Sir Hugh Beach argued that the UK does not need nuclear weapons, and dismissed the argument that non-nuclear weapon states (NNWS) are vulnerable to coercion from nuclear weapon states (NWS). Not only have NNWS initiated military attacks despite facing nuclear-weapons threats, but nuclear weapons have often failed to guarantee military victories for NWS. Nuclear deterrence also failed in cases such as Argentina’s attempted annexation of the Falkland Islands in 1982. Finally, Sir Hugh argued that the UK’s nuclear programme is too expensive to act as an ‘insurance policy’.

Dates for your diary

29 September 17.30 British Pugwash discussion meeting: Ward Wilson (Monterey Institute of International Studies) ***Stable at Zero: Maintaining a World Free of Nuclear Weapons*** UCL, Garwood Lecture Theatre

24 October Sixth conference on a Middle East WMD-Free Zone, SOAS

Check the British Pugwash website for further details

British Pugwash Newsletter September 2011

Royal Society of Edinburgh, ‘Trident – should we keep it?’ Together with the WMD Awareness Programme, British Pugwash co-sponsored this ‘mock trial’ of Trident in Edinburgh on 23 June. **Professor Michael Clarke**, Director of the Royal United Services Institute, made the ‘no’ case, with the ‘yes’ arguments being put by former UK Defence Secretary and Secretary General of NATO **Lord Robertson of Port Ellen**. In a powerful speech, Michael Clarke not only came out *very* strongly and persuasively against renewing Trident, but also undermined superbly the very theory of nuclear deterrence. British Pugwash’s Hon. Secretary **Dr Nick Ritchie** and the **Right Reverend Richard Holloway** (previously Bishop of Edinburgh) gave powerful ‘witness’ statements for the ‘no’ case. Lord Robertson, together with former Defence Minister **Lord Moonie** and **Dr Paul Cornish** from Chatham House argued strongly for retaining the system. The [proceedings](#) were recorded and are available on the RSE website.

Joseph Rotblat Memorial Lecture 2011 This year’s lecture at the Hay Festival featured **Dr. Mohamed ElBaradei**, former Director General of the IAEA, live from Cairo in discussion with Jon Snow. Dr. ElBaradei’s book, *The Age of Deception: Nuclear Diplomacy in Treacherous Times*, the ‘Arab Spring’, and Dr. ElBaradei’s candidacy in the forthcoming Egyptian elections were among the subjects covered. Dr. ElBaradei provided forthright answers to questions from members of the 700-strong audience, and made several references to the need to implement Sir Joseph Rotblat’s vision of a world free of nuclear weapons. [The lecture](#) was organised by British Pugwash’s WMD Awareness Programme.

The PeaceJam Education Programme, to which Joseph Rotblat contributed as a Nobel Peace Laureate, and which has been supported by the British Pugwash Trust, held its annual conference for young people at the University of Bradford on 5/6 March 2011. It was the largest and most successful so far. Over 250 students attended from the UK, Norway, Armenia, Azerbaijan, and Nagorno-Karabakh with their teachers and youth workers, as well as participants and observers from the Co-operative Membership, the Rotary, the UNA Association and the Quakers. We were delighted to welcome the Nobel Peace Laureate,

Betty Williams, to explore the issues of community-based solutions to violence and threats of violence. The weekend was filled with interactive sessions exploring this topic, workshops and volunteering service projects.

Annual Conference of the British Society for the History of Science, Exeter At this meeting of science historians on 18 July, British Pugwash organised a session on ‘Rotblat – a nuclear physicist in the public eye 1944-1957’, which stimulated interesting discussions.

Andrew Brown, has just completed Jo’s biography, and gave a fascinating talk on what he has learned from the Rotblat archive about Jo’s leaving the Manhattan project. **John**



Finney with **Carol Naughton** gave a presentation on the Atomic Train – an early (1947) project to raise awareness of nuclear issues, which has echoes in today’s WMD Awareness Programme. British Pugwash Treasurer **Kit Hill** presented a joint paper with **Sandy Butcher** (Director of the Pugwash History Project) on Jo’s involvement in the founding of the Pugwash movement. Finally, a paper by **Martin Underwood**, who has also been working on the archives, discussed Jo’s return to Liverpool University, the Chadwicks and the development of nuclear physics in the UK. A video clip of the 2003 launch of the Awareness Programme by Joseph Rotblat and Mikhael Gorbachev was shown – if you would like a copy, please contact Sarah in the office. The overheads used at the meeting will also be available on the British Pugwash website.

59th Pugwash Conference: European Contributions to Nuclear Disarmament & Conflict Resolution, Berlin, 1-4 July

This International Pugwash Conference was attended by over 300 participants, including several from British Pugwash. The plenary sessions covered most areas in the world where there are real risks of conflict and potential nuclear use. An impressive number of high-ranking officials in governments from East to West and independent experts gave presentations, generating interesting discussions in the plenaries

British Pugwash Newsletter September 2011

and on the margins. The Hodgkin Lecture on [The Fukushima Nuclear Accident: Lessons learned \(so far\) and possible implications](#) was given by **Dr. Tatsujiro Suzuki**, Vice Chair of the Japan Atomic Energy Commission, previously a member of Pugwash Council ([overheads used](#)). He kept subscribers to the Pugwash email forum informed of what was happening in the weeks after the Fukushima accident. **Dr. Victor Gilinsky**, former Commissioner of the US Nuclear Regulatory Commission followed up with some fascinating [observations on nuclear safety issues](#).

Six working groups addressed a range of science- and security-related issues. **Nick Ritchie** gave a short presentation on the UK Trident replacement programme to the 'European Security and Disarmament' working group, while **John Finney** chaired the [Social Responsibility of Scientists](#) working group. A positive outcome was an agreement that International Pugwash should reform its 'standing working group' on this issue – if you are interested, please let Sarah in the office know. Fuller reports of the conference can be found on the Pugwash website.

RESOURCES

British Pugwash

The British Pugwash Mapping Project has produced **Mapping Disarmament in the UK, a directory** of the UK-based NGOs and individual experts involved in nuclear, chemical and biological disarmament in the UK.

In '**What price nuclear blackmail?**' ([Blackaby Paper No 9](#), Abolition 2000 UK), General Sir Hugh Beach challenges the doctrine of nuclear deterrence, arguing that nuclear weapons have never acted as a 'credible' deterrent. Citing several historical cases of conflicts in which nuclear weapons failed to play a strategic role, the paper criticises the UK's commitment to maintaining nuclear weapons, and calls Trident 'a White Elephant that is not worth its keep'. Available by mail for £3.50

In [British Pugwash written evidence](#) to the House of Lords Science and Technology Select Committee inquiry on '**Nuclear Research and Development Capabilities**', Dr. Ian Crossland, Dr. Christine Brown and Dr. Christopher Watson call for strong government leadership on the UK's long-term energy policy, focusing on the need for

the government to coordinate and support nuclear R&D. They argue that current R&D capabilities are insufficient if the contribution of nuclear energy to total UK energy production is to reach between 38 and 110 GW by 2050.

A series of background **Briefings on Nuclear Security**, produced in conjunction with the Parliamentary Liaison Group, aims to inform British parliamentarians on the UK's nuclear weapons policy and its context.

WMD Awareness Programme 'Talking Peace':

New educational materials focus on providing [lesson plans](#) on Global Citizenship and on Weapons of Mass Destruction.

WMDAP's '**Don't Buy It**' project launched [three new short films](#) to huge audiences at the Glastonbury festival. They star Alistair McGowan, James Redmond, Katherine Ryan and Heydon Prowse and urge people to think again about Trident renewal.

For updates on developments relating to the **UK and US Trident replacement programmes** follow Nick Ritchie's Twitter feed at <http://twitter.com/UKTrident>

Some other resources of interest

Books and reports:

- Mark Lynas *The God Species: How the Planet Can Survive the Age of Humans* The Fourth Estate, 2011
- [Planning our electric future: a White Paper for secure, affordable and low-carbon electricity](#) DECC, July 2011, CM 8099

Articles:

- James M Acton '[Deterrence during disarmament](#): Deep Nuclear Reductions and International Security' *Adelphi* 417 March 2011
- Siegfried Hecker '[Adventures in scientific nuclear diplomacy](#)' *Physics Today* 64:7, July 2011
- Peter Jenkins '[The nuclear threat: should the west be concerned?](#)' *Counter Terror Business*, August 2011
- Sara Z. Kutchesfahani '[Who Shapes the Politics of the Bomb?](#)' LSE Global Governance WP03/2010
- George Monbiot '[The unpalatable truth is that the anti-nuclear lobby has misled us all](#)', *The Guardian*, 5 April 2011