

## E-NEWSLETTER

January 2018



- Left: attendees at the ceremony; Right: lft to rt Dr Stella-Sawicki, Lord Rees, Dr Arkady Rzegocki

### Joseph Rotblat memorial plaque

*Joseph Rotblat was honoured on 6 November 2017 with a plaque in his name placed at first floor level outside the Pugwash office on the corner of Bury Place and Great Russell Street. This was at the initiative of the Polish Heritage Society and we were happy and honoured to collaborate with them.*

It was a beautiful but cold winter's day and the ceremony was attended by many people, including the Polish Ambassador His Excellency Dr Arkady Rzegocki, the Astronomer Royal Lord Rees, the Mayor of Camden Councillor Richard Cotton, Dr. Mark Stella-Sawicki from Polish Heritage, Ambassador Peter Jenkins, Chair of British Pugwash and members of Joseph Rotblat's family including his niece Dr. Frances Rotblat, Dr. Patricia Lindop and Mark Esdale. Also present were Pugwash colleagues, friends and members, including former MP Frank Dobson and his wife, residents of the building in which we have our office, and members of the Polish community.

There were also representatives of organisations such as the International Campaign for the Abolition of Nuclear Weapons (ICAN), which was

awarded the 2017 Nobel Peace Prize, represented by Rebecca Johnson, also a Pugwash member.

The Movement for the Abolition of War (MAW) was represented by Bruce Kent, peace campaigner and friend and colleague of the late Professor Robert Hinde a former Chair of British Pugwash. Professor Hinde had campaigned for several years for a plaque in recognition of Joseph Rotblat, and was certainly with us in spirit.

Speeches were given by the Polish Ambassador, the Mayor of Camden, Lord Rees and our Chairman Peter Jenkins. Frances Rotblat presented gifts of thanks to them. After the unveiling ceremony the Ambassador very kindly hosted a reception at the Polish Embassy. Some guests and Pugwashites also came to the office for refreshments. They had a chance to look at copies of the plans showing the Thinker's Lodge refurbishment in Pugwash, Nova Scotia, which the architect, John Crace, had brought with him, and which we now have in the office.

*Sally Milne is the representative of PeaceJam UK on the British Pugwash Executive Committee.*



## The Biological Weapons Convention - A New Work Programme

*The 1972 Biological and Toxin Weapons Convention (BWC/BTWC) was the first of the global treaties to ban a class of weapons of mass destruction. Like the other WMD treaties it holds Review Conferences on a five-year cycle but unlike the others it has no defined arrangements for verification – a contentious issue.*

Efforts to negotiate an international instrument to strengthen the BWC that would have included verification were halted in 2001. After this, BWC Review Conferences agreed programmes of inter-sessional meetings focused on developing 'common understanding and effective action'.

The Eighth Review Conference, held in November 2016, had received a number of proposals for inter-sessional activities but consensus could not be reached; instead, a minimalist Final Document included provision for a Meeting of States Parties (MSP) in December 2017 which would 'seek to make progress on issues of substance and process during the period before the next Review Conference, with a view to reaching consensus on an intersessional process'.

After much deliberation, the MSP agreed a new work programme for the period leading up to the Ninth Review Conference to be held in 2021. This will consist of eight days of Meetings of Experts (MXs) with four days of MSPs, making 12 days of meetings each year. The MXs, each containing a number of sub-topics, will cover: cooperation and assistance; science and technology review; strengthening national implementation; assistance, response and preparedness; and 'Institutional Strengthening of the Convention' with just one sub-topic, worth quoting in full: 'Consideration of the full range of approaches and options to further strengthen the Convention and its functioning, through possible additional legal measures or other measures, in the framework of the Convention.' This last topic was the most contentious, with many discussions on how close its definition should get to using contested terms such as 'verification' or 'compliance'. Dates for the 2018 meetings are yet to be decided.

As with a number of other international arrangements, there are also contentions over financial issues, as a backlog of payments of assessed con-

tributions by governments is affecting the BWC's financial stability and sustainability.

There was considerable relief in the room at the agreement on a work programme, with praise for the role played by the Chair, Ambassador Amandeep Singh Gill of India. The lack of a work programme could have weakened efforts to maintain a world free of biological weapons.

The most novel feature of the new work programme is the discussion on institutional strengthening. For many years there have been obstacles to talking about verification and compliance issues, most notably owing to positions taken by the USA. There are arguments that traditional verification arrangements have some limitations in the biological field owing to the living nature of organisms and the widespread adoption of biological technologies in a wide variety of industries. The problem of the control of deliberate biological threats is multifaceted. There are multiple strands of activity that might be woven into a 'web of prevention', some of which might form the basis of new legal or institutional arrangements in the longer term. A forum in which such issues could be discussed in a technical manner could move the debate forward.

There is still a tremendous need, at many levels, for improving implementation of the BWC as the foundation stone of international efforts to control biological weapons. The agreed work programme is not the pinnacle of possibilities, but should prove to be a practical contribution to making the world safer.

*Richard Guthrie is Chair of the British Pugwash Trust.* This article is based on his daily reports from the MSP on behalf of the BioWeapons Prevention Project (BWPP). They are available via <http://www.cbw-events.org.uk/bwc-rep.html> and <http://www.bwpp.org/reports.html>

### Reports

#### EU Non-Proliferation & Disarmament Conference Brussels 11-13 December 2017

*This meeting brought together some 176 representatives from 52 countries or international bodies, and enabled them to express their perspectives on seven themes, ranging from 'The future of Arms Control, Non-proliferation and Disarmament, and the role of the EU' to 'Conflicts and threats in the North East Asia and Asia Pacific Regions', 'Achievements and weaknesses of the JPCOA deal' and 'After the Biological and Toxin Weapons Convention (BTWC) meeting of State Parties, what next?'*

This is now the fifth of these conferences that I have attended, all bringing together European & International experts on the subject, and helping them to share their hopes and fears. Sadly, this year the fears predominated. A combination of unhelpful Russian and US strategic policy changes, Middle Eastern and Far Eastern conflicts and threats, the development of a new generation of technologies linked to Mass Destruction, withdrawals from hard-won international agreements, and a serious decline in support and funding for relevant NGOs have come together to discourage all but the most optimistic of those engaged in peace studies and negotiations.

On each theme, a panel of three or four keynote speakers were each given 15 minutes to explain their perspective before the discussion was thrown open to the floor. Keynote speakers included Federica Mogherini (High Representative of the EU for Foreign Affairs and Security Policy), Izumi Nakamitsu (UN Under-Secretary-General and High Representative for Disarmament Affairs), Rose Gottemoeller (Deputy Secretary-General of NATO) and Annike Söder (State Secretary to the Swedish Minister for Foreign Affairs). Other key speakers included leading members of NGOs and international bodies such as the European Commission, the Russian Academy of Sciences, the Chinese Institute of International Studies, the European Leadership Network, SIPRI, IISS and RUSI, and also teachers and researchers at relevant world-leading universities and institutes. Wherever possible, panels included representatives of opposing points of view in areas of conflict.

The list of participants had some weaknesses: the gender mix was rather unbalanced and some major players were under-represented. EU countries and USA typically had nine participants or more each, Poland, Sweden & Netherlands five, but all others four or less). Several key countries had only one - e.g. Australia, Argentina, Canada, Greece, and Ukraine. Surprisingly, both Russia and China were under-represented (four and two respectively), and there were only three from S Korea and no-one from North Korea.

Nevertheless, it was possible to identify some consensus conclusions, and detect some positive developments:

- Most commentators were agreed that JCPOA had been a diplomatic triumph, and that unless one of the parties makes a serious false move it will result in Iran re-entering the com-

munity of 'normal' states, and ceasing to develop nuclear weapon technology, at least for many years.

- The negotiating approach eventually adopted in Iran could and should be applied in Korea.
- The risk of a nuclear war is greater on the Korean Peninsula than elsewhere, but is avoidable.
- Next on the list is the India-Pakistan confrontation, but here international mediation could help. Both countries have a history of engaging with Western governments.
- Some Middle Eastern countries have tended to resort to chemical weapons when under threat: the West should make serious efforts, using carrots and sticks, to stop this.
- Technologies on the borderline between chemistry and biology are developing very fast, and are outpacing attempts to create treaties or conventions to inhibit their military use. The peace community needs more expertise to keep pace with, and control, developments here.
- Information technology, cybernetics, drones and autonomous weapons are other areas where the peace community is short of expertise.
- Most arms control and disarmament treaties require effective verification technology if they are to survive, and agreed enforcement measures to respond to violations. This area needs more work.

*Christopher Watson 22 December 2017*

### **Disruptive anti-submarine warfare technologies: The BASIC/Pugwash SSBN emerging technologies project**

*British Pugwash will soon conclude its work on emerging anti-submarine warfare (ASW) technologies, for the foreseeable future. The project – initiated in 2015 to inform the 2016 Parliamentary vote to replace the ageing Vanguard-class ballistic missile submarine (SSBN or 'boomer') fleet with the Successor- or Dreadnought-class SSBN – sought to employ Pugwash's scientific and technical expertise to examine critically the long-standing assumption that submarines will remain invisible to undersea detection technologies into the 2080s and 2090s, when the next generations of SSBN are due to retire.*

Initially led by Senior Researcher, Carol Naughton, British Pugwash went on to partner with BASIC (British American Security Information Council) in early 2016 to develop the project's political and strategic dimensions in research papers and technical discussions. Reliable SSBN detection would undermine the platform's capability to provide a secure second-strike, and could create dangerous instabilities in a crisis,

when an SSBN captain may feel incentivised to fire first; this is particularly true for nuclear-armed states with less mature submarine stealth technology, such as China, India, and Pakistan.

Technological trends investigated include developments in unmanned vehicles, complex algorithms, processing power, active and passive Ocean Acoustic Waveguide Remote Sensing (a form of acoustic detection, also known as OAWRS and POAWRS), magnetic anomaly detection (MAD), and anti-neutrino detection. In the later stages of the project, the scope was expanded beyond the UK Trident system to consider more widely the potential impact of SSBN vulnerability on strategic stability. Miguel Batista is in the final stages of preparing a series of technical briefings examining advances in three known or potential submarine detection methods, while I am preparing an academic paper for peer-review primarily on the historical and strategic dimensions.

We find that there is insufficient evidence to state conclusively that Trident ballistic missile submarines are reliably detectable in the present day, but that rapid development and innovative fusion of technologies in the military sphere, and even more so in the civilian space, mean that assumptions about SSBNs can and should no longer be taken for granted. Where previously submarine detection was largely possible only with manned platforms, underwater, surface, and aerial drones are becoming advanced and cheap, and can increasingly work in large swarms that could be purposed to detect and track individual boomers over large areas.

Meanwhile, the range and sensitivity of several detection technologies is increasing, and big data is making it easier to distinguish small signals against background noise. Big changes can be expected in the next five to ten years, and this work should be revisited by organisations like Pugwash; national assessments should be made available to the think tank community wherever possible.

**Sebastian Brixey-Williams, Project Leader, at BASIC & British Pugwash Executive Committee member**

## Short notes

### Martin Rees

Lord Martin Rees, Astronomer Royal and Fellow of Trinity College Cambridge, gave a lecture on 5 November at the School of Oriental and African Studies entitled '*Peering into the Future: The Bumpy*

### *Road Ahead*'.

The meeting was co-hosted by the Centre for International Studies and Diplomacy (CISD) and British Pugwash.



He argued that our Earth is 45 million centuries old. But this century is the first when one species – ours – can determine the biosphere's fate. There are threats to climate and biodiversity from the collective 'footprint' of 9-11 billion people seeking food, resources and energy. In addition, our globally-linked society is vulnerable to the unintended consequences of powerful new technologies – not only nuclear, but (even more) biotech, cyber, advanced A.I., and so forth. We need international guidelines to promote maximum benefits of new technologies, while minimizing catastrophic risks.

**The 62nd Pugwash Conference on Science and World Affairs** met at Astana in Kazakhstan from 25 to 29 August with strong UK participation. Among the issues addressed in its course were the July 2017 Nuclear Ban Treaty (NBT), North Korea's Nuclear Weapons Programme, Emerging Nuclear Dangers, Nuclear Testing, the July 2015 Nuclear Agreement with Iran, and Internationalisation of the Nuclear Fuel Cycle.

A widely-shared satisfaction at the adoption of the NBT was tempered by recognition that none of the nuclear-possessor states intended to accede to it, and by concern over recent trends in US/Russian nuclear arms control, especially reciprocal INF violation allegations, over the scale of the US nuclear modernisation programme, and over the non-entry into force of the 1996 CTBT.

North Korea apart, the nuclear non-proliferation agenda offered a more positive outlook. Participants heard that Iran is respecting its 2015 commitments; four international summits on Nuclear Security have reduced the risk of terrorists acquiring weapon-grade material or actual warheads; and nuclear-weapon-free zones cover Latin America, Africa, Central Asia, South East Asia and the Pacific.

Following the Conference the Council elected Ambassador Sergio Duarte, a former UN Undersecretary for

Disarmament, to the Presidency of the Pugwash movement in place of Ambassador Jayantha Dhanapala.

The proceedings of the Conference can be accessed on  
<https://pugwash.org/2017/08/25/62nd-pugwash-conference-astana/>

## Future events

**27 February, 6pm Amb.Sergey Batsanov, Director, Geneva Office of Pugwash International** will speak at SOAS on: 'A troubled US-Russian Strategic Relationship: what Implications for Stability and the Emerging Technologies Challenge?'

**Additional details to be circulated shortly**

**26 April British Pugwash AGM and Public Lecture by Sebastian Brixey-Williams:**

'How emerging technologies in anti-submarinewarfare could undermine SSBN stealth and strategic stability' Venue & time to be confirmed

**10 March Student/Young Pugwash annual conference**

**Warwick Peace Conference**

Student / Young Pugwash UK is busy planning its next Annual Conference, which will be its first major conference outside London.

The 'Warwick Peace Conference' will be held at the University of Warwick on 10th March. It will cover emerging trends in technology and politics and consider what opportunities (and risks) these pose for peace-making. Guest speakers will include Lord Wood of Anfield (Chair of UNA-UK and foreign affairs advisor to Gordon Brown), Elizabeth Minor (International Campaign to Abolish Nuclear Weapons) and Chris Cole (Drone Wars UK).

Students, young researchers and practitioners will give presentations throughout the day in workshops on either politics or technology topics. If you are connected to a university, please encourage students or younger faculty members

to submit presentation proposals. Student/ Young Pugwash (SYP) now has an active presence at nine UK universities and is increasingly interacting with members of International SYP. The Annual Conference is a great chance for everyone to meet in person and share their ideas and plans for the next year.

<http://britishpugwash.org/student-young-pugwash/annual-british-student-young-pugwash-conference/>

**3-4 March  
PeaceJam UK  
2018 conference  
Winchester  
Tawakkol  
Karman**



We would like to flag up the next PeaceJam UK Youth Conference, which will be held at the University of Winchester over the week-end 3/4 March 2018 with Nobel Peace Laureate Tawakkol Karman from the Republic of Yemen.

Tawakkol Karman was a co-recipient of the Nobel Peace Prize in 2011 in recognition of her 'non-violent struggle for the safety of women and for women's rights to full participation in peace-building work'. She is the first Yemeni and first Arab woman to receive the prize and we are very excited and honoured to be the first PeaceJam conference to host her.

This event is open to all young people aged between 14 and 18 and their teachers and youth workers and registration is open now. Just go to our website: [www.peacejam.org.uk](http://www.peacejam.org.uk) and click on 'peacejamconf.org.uk' and it will take you to registration. The conference will include a talk and Q & A session with Tawakkol Karman, facilitated small group discussions, workshops and action projects. Students are required to present a project or idea for a project to the laureate as part of the One Billion Acts of Peace Campaign.

<http://britishpugwash.org/projects/partnered-projects/peacejam-uk/>

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