



Report on Wilton Park Conference 871

COUNTERING CBW PROLIFERATION 28 September – 30 September 2007

1. Challenges to international efforts to contain and roll back the proliferation of biological and chemical weapons (CBW) centre on the changing dynamics of CBW proliferation, the challenges posed by developments in the life sciences, non-lethal weapons, the Review Conference of the Organisation for the Prohibition of Chemical Weapons (OPCW), and current status of the international regime established to combat proliferation.
2. In mapping out the nature of contemporary CBW proliferation, words must be used with care. Even the word 'proliferation', which was imported from debates in the nuclear weapons field, can be misleading. It is usually taken to imply that weapons exist in tangible form, but in the international treaty definition of CBW the term also applies to chemical and biological agents held for *purposes* prohibited under the Conventions. Thus the term 'proliferation' in the CBW sense takes us into the difficult realm of intangible factors such as intentions. This is highly significant, because in the field of biological and especially chemical weapons, the weapons themselves are slowly being eradicated, thus making less tangible features of proliferation more important.
3. 'Proliferation' increasingly will refer to the spread of dual-use technology that can be weaponised should possessors choose to do so, and that dual-use nature is the root problem for CBW non-proliferation efforts. This problem becomes a serious international security issue in the presence of various entities that exploit the duality for weapons purposes. These entities include suppliers that are willing to meet the demand, including either industry or criminal organisations, and the demand-side actors that include states and non-state actors.
4. The nature of proliferation is also complicated by recent shifts in the utility of chemical and biological weapons. Recent patterns of conflict indicate that terror attacks on civilians are a recurrent feature of warfare, and in this context CBW may have a greater affinity with 'new' wars than old ones that were largely fought between militaries. Another aspect of new conflicts is the use of CW such as riot control agents for counter-terrorism and/or counter-insurgency purposes. New developments in the life sciences may make this issue more prominent in the future.

5. The non-proliferation is based on four key pillars: treaty-based, legally binding arms control and disarmament; export control arrangements; 'hands-on counter-proliferation', such as UNSCR 1540 and the Proliferation Security Initiative etc; and defence and consequence management. It is in the second and third of these that dynamics are most noticeably changing, driven by state violation of CBW regimes and the rise of possible CBW terrorism.
6. Life sciences are a highly dynamic research field, with new advances being made sometimes at a rapid pace. This creates challenges for the non-proliferation regimes. This is particularly true in the field of biotechnology, in which the potential of agents to do harm is growing exponentially but which has no international body charged with defining and enforcing safeguards against misuse.
7. This problem is exacerbated and made more complex by the inherently dual-use nature of biotechnology agents and techniques, which means an assessment of the risks associated with a particular agent or technique needs to be balanced against the benefits of its peaceful use. Squaring this circle represents one of the principal challenges for the non-proliferation community, one that needs a cohesive international response in light of the globalised nature of the biotechnology industry.
8. Compared to the Chemical Weapons Convention (CWC), the Biological & Toxins Weapons Convention (BTWC) is a relatively simple instrument, with no verification mechanisms. This means it is an instrument of principle rather than procedure. After some difficult times, it settled on the new course set out in the Inter-Sessional Work Programme (ISWP) after the 2001 Review Conference. Despite low expectations, the ISWP model has been successful, and was consolidated at the 2006 Review Conference through the establishment of the Implementation Support Unit (ISU).
9. Synergies between the different entities involved in the non-proliferation enterprise are developed at the Meetings of Experts, which in August 2007 included 93 states parties, regional groups such as the African Union and the League of Arab States, and international agencies such as Interpol.
10. In the US, which has focused on supporting the ISWP 2003-2005, the 2006 Review Conference is considered a success. However, the issue of compliance still causes concern in Washington. A working paper on this topic was submitted to the 2006 Review Conference, which set out measures that states parties can take nationally, such as confidence-building measures, working with the World Health Organisation, and improving national capabilities for detecting non-compliance.
11. The US has rigorous processes for assessing compliance, and continues to offer assistance to other states. In the event of an allegation of use, an attribution process is in place, working on three scenarios: overseas use affecting US nationals; overseas use not affecting US nationals; and use within the US.
12. The issue of non-lethal weapons (NLWs) represents one of the thorniest issues in chemical and biological weapons non-proliferation. Their status under the CWC is the subject of great controversy,

although most would concur that it is necessary, one way or another, to define the compatibility or incompatibility of NLWs with the precepts of the Convention. The key problem is to make allowance for legitimate use of agents such as tear gas (which are permitted under the convention) while preventing new proliferation fears or unlawful uses.

13. It can be argued that riot control agents (RCA) and incapacitating agents (ICA) may be developed, held and used for purposes not prohibited under the CWC. If this is the case, what constitutes a legitimate purpose? It is here that the ambiguity, and consequent conflict, lies and thus it is here that the international community ought to focus its efforts.
14. The Moscow Theatre Siege of October 2002 represented a new development in the use of NLWs. The Siege raised some difficult questions, particularly over the very term 'non-lethal'. Given that the known death rate in the incident was 17.4%, can the agent used really be described in those terms? The Siege was evidence of a clear interest in such weapons, and it appears that other drugs (such as pain-killers, sedatives and muscle relaxants) are being considered for weapons use.
15. From a medical perspective, there are at least two serious problems with this. The first is the 'therapeutic index', or the difference between the dosage required for a drug to be effective and that required for it to be lethal. Since most or all drugs are toxic if taken in excess, this index is of paramount importance, and 'non-lethal' use requires this gap to be as wide as possible. The deaths in the Moscow theatre were caused by overdose, as it was impossible to regulate the amount of agent applied to each individual. Studies have suggested that the therapeutic index needs to be 10,000 times wider than for any known drug for usage to be reliably non-lethal.
16. The second issue is the 'time to drop' or the time taken for the agent to act and incapacitate. In a hostage situation, it is important for this time to be as low as possible so that the intended target has little time to react. Again, this is a function of dose, something that was impossible to regulate in the Moscow Theatre Siege action.
17. This presents serious challenges for proponents of NLWs. Drugs are difficult to use as weapons as there is no difference between a drug and a poison. In the absence of ability to closely control dose, there is no such thing as a non-lethal weapon in this context. For many proponents of NLWs, this raises questions about their point of departure: the existence of a weapon exists which is inherently non-lethal, which is not supported by science. The legal decision here will need to utilise evidence-based science, which involves making difficult judgements about toxicity.
18. Countering this is the argument that there was considerable potential for 100% casualties at the Moscow Theatre Siege if nothing was done. The 17.4% rate inflicted by the agent used looks favourable when set against that worst-case scenario. Proponents of NLWs point out that using RCA or ICA to lower casualty rates does not necessarily mean advocating their use over other methods of resolving crisis situations. The Convention's language on use of chemicals for law enforcement is

ambiguous. Ambiguity may have its uses in certain situations, but in the case of NLWs some clarity is now required. This represents a critical challenge for the OPCW.

19. This and other challenges will be prominent at the forthcoming CWC Review Conference in April 2008. In 2012, the CWC deadline for destruction of all chemical weapons destruction will be up, and the OPCW should move from being a disarmament institution to a non-proliferation one (although this assumes that some chemical rearmament does not take place). The overall global enterprise against chemical weapons actually goes beyond the OPCW itself: the Geneva Protocol, the BTWC and UN Security Council Resolution 1540 all are part of this enterprise.
20. In the case of the BTWC, this relationship is a dynamic one because the crossover between chemical and biological weapons means it is increasingly difficult to keep the two separate. The CWC and BTWC can both be seen as very much products of their time: the interdisciplinarity of chemical and biological proliferation was less prominent when they were established than it is now. Moreover, the 'footprint' of a biological weapons programme, thanks to the advances made in synthetic biology, may be considerably smaller than in the past. The BTWC has had to engage the scientific and technological communities to address this issue, and it may be that the CWC might have something to learn from that.
21. The CWC's final destruction deadline, now only four years away, was an essential requirement during the Convention's negotiating process, but it is in some ways an arbitrary one due to inadequate earlier studies on destruction. This is perhaps illustrated by the fact that the CWC in fact stipulates destruction by 2007 with states-parties able to request an extension till 2012. Currently India has an extension until April 2009, Libya until 2010, South Korea until 2008. The US estimates 66% of its stocks will be destroyed by 2012, and 100% by 2017. A number of factors have contributed to the problems in meeting the deadline: adequate funding has not always been forthcoming, and technical problems were not always foreseen.
22. Despite the challenges, the achievements of the OPCW to date are sufficient to make the Convention viable and necessary far into the future. These achievements include the declared stockpiles that have been certified and destroyed, and the destruction timetables pursued by states parties: the US will have 50% of its stockpile destroyed by the end of the year, and Russia will have 23% certified as destroyed. Every facility labelled under Schedule 1 has been inspected at least six times, every S2 facility at least 3 times, and 20-40% of all S3 facilities have been inspected.
23. There is pressure to reaffirm the 2012 deadline for destruction of all chemical weapons. Although it is premature to say that the deadline will be missed, the predictions are not encouraging. Nonetheless, the Review Conference ought not to lose sight of the reality of destruction: a highly complex and expensive process is still moving forward albeit at a slower pace than expected. It might be an idea to run a Special Conference on the deadlines, to be held after 2008 but before 2012.

This could be worth pursuing: 2008 is, in many respects, too early for a proper consideration of the deadline, but the next Review Conference will be in 2013 and thus too late.

24. The non-proliferation aspect of the CWC should also be highlighted at the Conference. It is sometimes argued that non-proliferation may distract attention from the disarmament issue, but this is not really the case. The two are in fact closely linked: non-proliferation gives a permanent reason to have the OPCW: it will monitor the peaceful uses of chemistry.
25. The associated issue of universality will need careful consideration. Even if the 2012 deadline is met, the CWC will be unable to claim complete success as long as some states remain outside it. Achieving universality will be a key challenge. Real difficulties lay in wait here, particularly in the Middle East and North Korea (which remains the only state that has never responded to any of the openings).
26. It is hoped that the Review Conference will renew the mandate to intensify and focus industry inspections on other chemical production facilities (OCPFs), where much remains to be done. Here, it might be productive to arrange visits by OCPFs to Schedule 1 and 2 facilities to convey the differences which are hard to get across on paper.
27. Other major issues include the impact of science and technology on the Convention. The scientific community made an important input into the first Review Conference in 2003, and many issues need to be studied, particularly nanotechnology, chemical engineering and the life sciences. Industry is another important stakeholder in the CWC process.
28. The Review Conference will also need to look at international cooperation and assistance: this is a leading reason why many countries are in the CWC, particularly in the developing world. It is understood that the OPCW is not a development agency, but the international co-operation and assistance programme is not about money but about well-tailored and well-focused assistance programmes.
29. Both chemical and biological weapons have a potent but rather vague prominence as public concerns. Policy is often driven by what is possible rather than probable, and public discourse is often characterised by conjecture and worst-case scenarios. The 9/11 Commission spoke of a failure of imagination in foreseeing catastrophic terrorism, but it is also possible to go too far the other way. There is a tension between failure to imagine and imagining too much.
30. Uncertainty, particularly over events of high consequence, is something that publics are increasingly expected to reject. The associated problem with this is that the maxim 'you can never be too safe' can lead to diversion of both attention and resources. There are dangers in suspecting too much. Ascertaining exactly what the public think is a difficult exercise. Opinion polls can be a useful indicator, but can also be an excuse to cover the absence of any real engagement with the public, which has been portrayed as anything between alarmed and complacent.

31. It may therefore be that we require a broader idea of the social context in which debate takes place. Social attitudes are not derived solely from the media, but from popular science, political rhetoric, and business. Security, in the years since 9/11, has become a major business. In many ways Western publics seem to be prone to occasional scares: fears over bovine spongiform encephalopathy, genetically-modified crops and the measles mumps and rubella vaccine indicate a widespread propensity for fear on the part of the public. The media amplifies these fears, but does not appear to be the driver or creator of them.
32. How does this apply to the realm of CBW non-proliferation? A problem is that the treaties and conventions governing the proliferation on chemical and biological weapons are necessarily complex, delicately-worded and often dense documents, which do not readily lend themselves to the short, snappy explanation demanded by modern media. On the other hand, the media does, as noted above, play an important role in the dissemination of public information on CBW non-proliferation. That role, while significant, is in many respects the only one really attributable to the media, and is one which may be under-fulfilled: there is less appetite today for serious complex issues in the news media, which can lead to undesired consequences. For example, the failure to agree a Protocol to the BTWC, widely reported in the serious news media, generated a narrative that international treaties were becoming less relevant. Once imprinted in the public mind, such narratives can prove hard to change.
33. In the aftermath of Iraq, levels of scepticism about CBW remain relatively high in the media and public opinion, but real knowledge of the issues remains fairly low, creating problems for reporting of the topic. Moreover, many in the media charged with reporting on CBW issues are generalists not experts, and journalists are often confused about definitions and technical issues. This is a particular problem when reporting an incident, as there is a need for speed, authority and clarity. The 2003 ricin incident in the UK is a case in point: ricin is not a weapon of mass destruction, but the misunderstanding was not corrected. A popular perception arose that there was in fact no ricin at all.
34. Without independent sources or verification, covering stories can be very difficult. Government officials can give information and corroboration, but such sources are now regarded with suspicion. Governments are aware of this, and will often put forward its own scientists (such as the Chief Scientific Advisor or the Chief Medical Officer) which can produce more sound information, albeit with the risk of politicising experts and expertise.
35. Despite these problems, the media can play a constructive role in the non-proliferation enterprise: exposing loopholes in export controls, identifying states that are possible non-compliance, and the threats posed by proliferation.
36. In global terms, the current counter-proliferation regime is confronted with significant challenges and there are a numbers of ways in which it might be strengthened. As one example, the experience of the UN

commissions on Iraq (UNSCOM and UNMOVIC). The Iraqi CBW programmes uncovered by the Commissions were initially dependent on foreign sources and thereby vulnerable to export controls, but subsequently became indigenous after those controls (in particular the Australia Group) began to have effect.

37. Iraq demonstrated how easy it is to turn legitimate biological facilities into weapons facilities, and to hide them from inexperienced inspectors. Civil biological facilities with no history of illegitimate activities can be much harder to trace than more specialised facilities that are closer to the line. In the chemical weapons field, the lesson on the Commissions was that militarily significant quantities of chemical weapons can be produced by relatively small or even lab-scale facilities. The current emphasis of non-proliferation is on industrial-scale production, but a recent UNMOVIC study demonstrated that the small-scale type looks very different.
38. Nonetheless, UNSCOM and UNMOVIC showed that well-planned and executed inspections can work even against systematic concealment. On-site sampling is the best tool for verification, and the human factor (i.e. Technical knowledge and expertise) is indispensable. UNSCOM and UNMOVIC have conducted extensive work here: 59 courses exist, 350 experts, and a roster of inspectors trained in inspection skills (ability to see through concealment, recognition of dual-use equipment, understanding of critical technologies etc).
39. The CBW treaties are good for stating aims and objectives and setting out frameworks. It is in the areas of operationalisation and national enforcement that more work remains to be done. This can take the form of establishing clear consensus on what is being attempted: the failure of the BTWC Protocol negotiations, for example, can be attributed partly to the fact that some participants thought they were negotiating a technology transfer agreement while others regarded it as fundamentally a security agreement. Elsewhere, the emphasis in many states, particularly the US, is on enforcement of legislation, even among those states that already have extensive laws in place.
40. Finally, and on a more encouraging note, it may be that the delegitimisation of CBW via the network of conventions, treaties and agreements, and the near-universalisation of the treaties, is approaching a point where even those states that have not signed up to the CWC and/or BTWC may be self-deterred from pursuing these weapons (this is less likely to be the case with non-state actors). This is particularly the case with biological weapons, perhaps because they have a particularly abhorrent image (only one state, the Soviet Union, is known to have stockpiled such weapons). Chemical weapons, which have been used in the past century, have less moral resonance.

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