Good things – small packages

Lieutenant-Colonel Rick Barker, Canadian Requirements Officer of the CBR MOU and Vice-Chairman of Nato's Joint Capability Group on CBRN Defence, looks at the four-nation group behind many of today's CBRN standards

MANY readers of *CBRNe World* are familiar with Nato's CBRN Standardisation Agreements, or STANAGs, and would be forgiven for thinking that these guidelines were born and raised in Nato groups like the Joint Capability Group on CBRN Defence. While this is, in a sense, true, there is a less well-known party responsible for much of the initial work in developing these valued documents.

In the 1970s, Canada, the UK and the US recognised the rising danger posed by the Cold War threats of chemical and biological agents, and decided to join forces to improve their defences. The Soviet Bloc had large stores of chemical weapons; there were fears that ways would be found to circumvent the Chemical Weapons Convention, and there were indications that the biological warfare capacity of the East was burgeoning. The need to be able to field capabilities quickly in the face of rapidly appearing threats called for an agreement among a small number of nations whose research and development (R&D) programmes were at similar stages of maturity.

Bigger groups…

The chemical-biological defence sub-group of The Technical Co-operation Programme was seen to respond to the pure research requirement, but it did not follow through with product development and advanced engineering models. Thus, in 1980, the three nations signed a Memorandum of Understanding (MOU) for chemical and biological defence to "…to set up procedures whereby the co-operative chemical/biological defence programmes of each country are integrated to the maximum possible degree".

The MOU is peppered with key words like 'joint use', 'maximum standardisation', 'correlation of military concepts and doctrine', 'exchange and harmonisation', and 'engineering development and production'. It focuses on well-defined technical challenges, leading to co-operative developments of defensive capabilities and, ultimately, joint procurement of equipment. The three nations are also accustomed to working together on classified issues – an important enabler.

The areas of concentration for the MOU's work have not varied over the years although, of course, the specific technologies pursued have advanced considerably.

CBR MOU areas of concentration
- Assessment
- Field trials
- Dispersion
- Detection and identification
- Protection
- Contamination control
- Therapy and prophylaxis
- Defensive experiments
- Training materials

The CBR MOU Programme works under the direction and guidance of the senior defence authorities of the member nations, to ensure that it aligns with national objectives and is consistent with the overall technological programmes.

From the outset, senior defence CBRN officials have led the Programme from the three nations, named Programme Officers (POs). In 1981, they recognised that tri-national agreements on tactics and doctrine were necessary to ensure that the Programme was aligned with operational requirements. This led to the enlistment of operators – Requirements Officers or ROs – to help set goals and validate developments. Somewhat later, Medical Requirements Officers (MROs) were added to the mix to lend their specific expertise in medical countermeasures and to facilitate collaboration on new vaccines.

From its humble beginnings, the Programme has remained unencumbered by bureaucratic procedures and has effectively adopted a 'bottom-up approach' to develop standards and capabilities for the members' militaries. Since the original agreement, there have been four re-signings; the latest, in 2000, extended the MOU and its work through to the year 2025. Throughout, the MOU has proven its ability to respond rapidly to recognised threats and deficiencies.

…have lesser groups…

The POs, ROs and MROs meet twice yearly, with each nation taking turns at hosting and chairing the meetings. Executive Officers (EOs) for each country facilitate the gatherings and co-ordinate work between the sessions. The meetings are focused on managing the Programme and overseeing the work of the Working Groups (WGs) and International Task Forces (ITFs) that do the 'heavy lifting' of developing standards and products.

Working Groups are formed to address high priority R&D challenges that require mid to long-term exchanges and co-operation. They normally last for several years, involve experts in a variety of disciplines and carry concepts through to fieldable products. In 2007, there are nine active WGs.

Active CBR MOU Working Groups (WGs)
- Threat agent assessment
- Test and evaluation
- Detection and diagnostics reagents
- Demilitarisation and site remediation
- Medical countermeasures co-ordinating team
- Information systems
- Biological detection
- Medical countermeasures to non-traditional agents
- Standoff biodetection

Good things – small packages

Responding to well-defined R&D problems, the ITFs normally have a life expectancy of less than two years although some have convinced the POs of their enduring value and have 'graduated' into full-fledged WGs. In other cases, new ITFs are formed to investigate opportunities revealed by the investigations conducted; as many as six 'offspring' ITFs have been spawned by initial investigations.

There have been 52 ITFs over the years, 50 of which have been completed. Their themes cover the spectrum of CBRN defence, and have addressed a history book's worth of challenges since the early 1980s. A good example of how the ITFs have underpinned developments elsewhere lies in the work that they have done on toxic industrial chemicals (TICs). Firstly, ITF-25 addressed the hazard posed by TICs in military operations and produced a list of TICs of highest hazard. This list was widely used throughout Nato and by homeland security agencies. In response to the operators' requests, ITF-40 expanded the work of ITF-25 to encompass industrial chemicals that posed a hazard because of their toxicity, flammability or reactivity. More than 1,400 high production volume chemicals were assessed and 39 were considered to pose an 'extreme risk'. The new 'extreme risk' list is now being used by several sub-groups of the Joint Capability Group. ITF-46 is developing challenge levels for force-on-force and asymmetric chemical and biological releases, the results of which are being embraced by Nato's Challenge Sub-Group. The areas that have enjoyed the most work and, indeed, the greatest numbers of ITFs, include penetrating agents, potential agents, TICs, vaccines and other medical counter-measures.

Apart from the obvious benefits of WGs and ITFs, the MOU offers other processes to aid member nations' R&D initiatives and co-operative developments. Project Arrangements provide a means of quickly advancing a concept to a fieldable product, via limited funding and engagement of contracts. Information exchanges and cross-testing of developments carry benefits for all participants, while equipment loans and short-term personnel exchanges have obvious advantages for product refinements and cross-pollination of expertise.

The ultimate goal of any CBR MOU initiative might be seen as the joint recognition of a deficiency or challenge, the collaborative development of a defensive counter-measure, and then a combined acquisition with all of the benefits of interoperability. To continue, the new capability would find its way into Nato in the form of a standard, and lead to greater commonality for coalition operations.

…and so ad infinitum

Many of the members of the MOU and its WGs and ITFs also belong to other CBRN defence groups, including those of Nato, and are able to lend their findings to a broader audience and engage other partners to the advantage of all. Canadian, British and American members of the Information Systems Working Group also belong to the Warning and Reporting Panel of the Bio-Defence Working Group and Nato's ATP-45 Panel.

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TICS have come under the gaze of NATO through ITF-25

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Standards improve inter-operability

There have been two important additions to the CBR MOU's mandate in the last ten years. Firstly, in 2000, the renewed agreement included the radiological aspect, in recognition of the growing threat of radiological dispersion devices and the transformation of concerns from the Cold War's nuclear fears to asymmetric threats.

The second major change was the admission of Australia to the agreement in 2006. This had been considered previously – Australia is also a member of The Technical Cooperation Panel – but the way was clear last year for that southern hemisphere nation to add its notable capability to the MOU.

There are many forums across the globe dealing with the CBRN threat and all have their parts to play. Those in Nato and the European Union tend to attract the most attention, but often credit for their successes is due to smaller, more concentrated groups working in relative obscurity to develop the concepts and technologies that eventually find their ways into effective service in CBRN defence. Not least among these is the CBR MOU.

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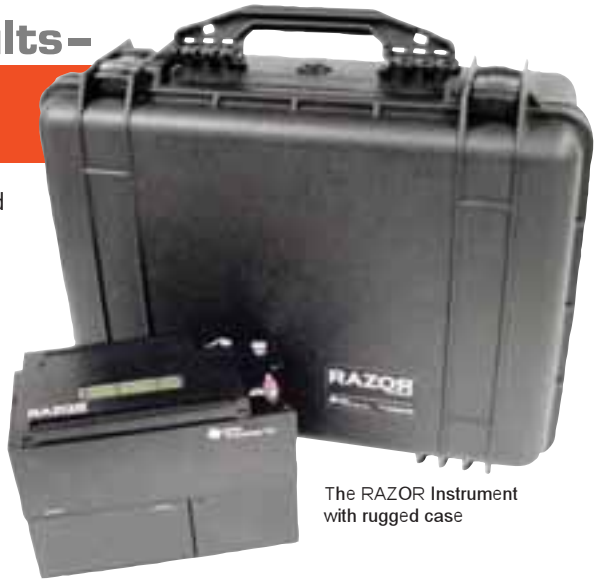

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