

Gwyn Winfield went to the Bio-preparedness Workshop to try and get an idea of the scale of the work that is being done on bio-defence in Europe

A staccato tune

QUICK show of hands: who has heard of the following projects: Impact, ASSRBCVUL, Aerobatics, Bio3R, Bode, Watersafe, Biosafe, Corps, Cropbioterror, Intrans, VHF/Variola-PCR, RIVI Gene and Anthrax Euronet? These are just a small selection of the projects that have been funded by the civilian European Commission (EC) for bio defence; (an idea of the scale of CBRNe research in the EC can be found by entering "CBRNe" into www.cordis.europa.eu/ip77/dc/index.cfm#search). The ones outlined above were the ones chosen by the Aerospace and Defence Industries Association, and EuropaBio, the European Association for Bio-Industries, for their workshop. Whatever other charges might be levelled against the EC, failing to put effort into CBRNe is not one that would stink. The range and diversity of the projects is staggering; there is a 'but', of which more later...

Three times the impact

The Staccato project is a Commission-funded support activity, and one of the roles is mapping some of these projects out for the two associations members (others roles are increasing awareness, improving communications, informing on regulations, etc), since the scale of the Preparatory Action for Security Research (PASR) is so vast. Unfortunately, the whole list of projects advertised was not presented, but the projects that were are indicative of the work that is going on.

First up was Impact, which might be familiar to readers of the Winter 2006 edition of CBRNe World (copies of the article can be downloaded from www.cbrneworld.com) and which has subsequently come to an end. Yet at the same time as Impact, another project was running – ASSRBCVUL. This unlovely-sounding project was for the Assessment of RBC Vulnerabilities (clearly the acronym monkey was on holiday) and was to assess the vulnerabilities of modern societies to CBR attacks. Ostensibly, however, the project might as well have been called Impact Lite, as much of the work that was done on Impact was also done on ASSRBCVUL. They ascertained that a CBRN incident

would flow through three tiers: the first was those it directly affects such as people, livestock, infrastructure, etc; the second was societal services like transport and health, etc that are stressed by the attack; the third tier was political will and sustainability of policy. The team, which included quality institutions such as TNO and FOI, came to the conclusion that, if the incident could be contained within one tier, then its impact would be lessened. So far so CBRN Undergraduate. Further conclusions were that agricultural biological attacks would cause less terror but have far longer lasting effects, that there are massive psychosocial effects associated with RBC attacks, that catastrophic events cannot be ruled out, that it is difficult to rank RBC agents for severity in civil attacks, and that a fast response was essential to counter psychosocial effects.

A more recent project, but equally trawling over familiar ground, is the Bio3R. This is to assess bioterrorism resilience, research and reaction to "assess the bio threat and organise a collective and comprehensive response for EU society". The research is an evaluation of the state-of-the-art and identification of operational requirements, reaction is to reinforce crisis management policies and resilience is to make EU societies stronger. It's a new project so it is difficult to assess output, but one driver for the team was to create a handbook for citizens – to boost resilience. This is a laudable, if misguided, objective when it is considered that different European countries have different approaches to CBRN, and anything that attempts to provide a broad approach to link them together would be so bland as to be not worth the paper it is printed on. This has now been recognised, as it is only a model at the moment, but there are still hopes. There is also to be a training kit for hospital workers, but this is likely to suffer from the same problems.

I have put these three projects – Impact, ASSRBCVUL and Bio3R – together on purpose to show one of the major problems with the EC work – gross duplication. The work that has been done, and that is still underway, is not

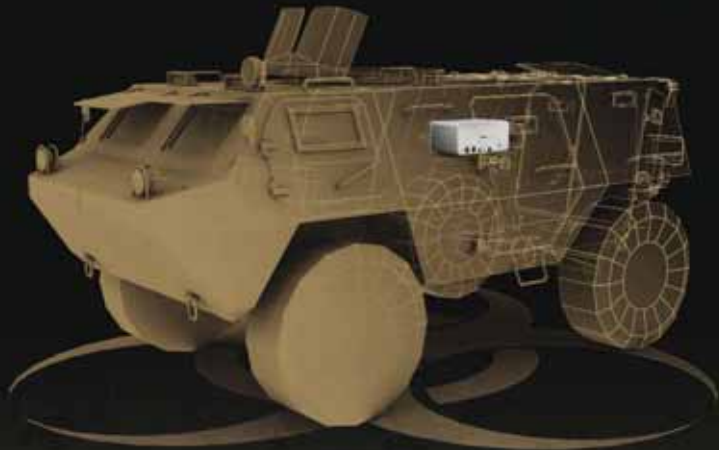
bad – a lot of Impact is good and necessary – but it doesn't need to be redone. There is a lack of strategic control, whereby someone who knows what they are doing could look at the millions of tax-payers euros/pounds/kroner, etc involved in these projects and just not let them get started. You hear the same thing from many of the speakers on all these projects – "The first thing we needed to do was understand the threat and outline some scenarios". How strange: WP100 of Impact did just that. If that didn't cut the mustard there should have been some redress; if it did, why are you duplicating effort? The cynic in me suggests it is because you get paid regardless of duplication, and might even



No, it doesn't mean that you are pregnant. What projects will the EC birth? ©CBRNe World

Book Now! CBRNe Convergence, 22-24 September, JW Marriott, Bucharest - More Information on www.cbrneworld.com

Field Proven, Real Time, Biodetection Systems



- Fluorescence based bioaerosol trigger
- Robust, reliable, and low operating costs
- Fielded by armed forces worldwide

For more information on biological aerosol detection visit www.tsi.com today!



FLAPS™ III Biodetector

TSI Incorporated
Toll Free: 1 800 874 2811 Tel: 651 490 2811
E-mail: answers@tsi.com Web: www.tsi.com

UK—Tel: +44 1494 459200 E-mail: tsiuk@tsi.com



A staccato tune

get paid for the same work three times; the realist suggests it is probably ignorance caused by people working in silos ("Hey, how about this? I call it 'The Wheel!'",). There is also a worrying lack of hard science, something that European (rather than merely national) funding could bring about an areas such as agent fate, where expertise in Vyskov, Brno, CEB, DSTI, FOI, FFI, etc. etc. could be funded and make a concrete contribution to one of the neglected building blocks of CBRN defence. Instead, we have nebulous research into social resilience; worthy, but which will essentially get us no closer to defeating CBRN agents.

The worst excess

The three projects above are perhaps the worst excess of EC duplication, but they should not be taken as indicative of a lack of constructive work on CBRN. Biosafety Europe was tasked with attempting to count how many BSL3 and BSL4 labs there were in Europe and how safe they were. This is the sort of thing that you would expect a researcher to be able to find in the Big European Book of Facts after a quick swoop through an appendix, but no. Instead, the team warned that they still didn't know the answer; there was no way to offer a quick snapshot of the scale of the problem. Some countries, such as the UK, would not play ball and gave out no data while others, like the Swiss, gave too much sensitive information. Also, there was no clear idea of what constituted a BSL3/4 lab – there was no accepted qualification, and labs often interpreted it at will. Equally worrying, the same varied approach to biosafety was shown through a questionnaire that was sent out. This is exactly the sort of work that the EC should be funding: preliminary steps towards a safer Europe. Admittedly, the fact that the questionnaire didn't include individuals' knowledge and whether there was personnel vetting in their safety was a worrying omission – that will be dealt with in further questionnaires – but the results they have will allow them to move towards a voluntary BioSafety/Security standard which responsible labs can sign up to.

Equally valuable is the Crop Biosecurity project which looked at the introduction of biological agents, either naturally or through malevolent means into the plant and crop cycle. It looked at the impact on direct (production) and indirect (trade) risk to European agriculture, and also the cultural and

psychosocial effect. This generated a list of hosts and products at risk, a diagnostic tool for the identification of plant pathogens, a study on the psychological effect on the population from food being impacted and (the ubiquitous) development of scenarios. It also came out with some solid recommendations: that there need to be better labs with better diagnostic tools, enhanced communication between them, a database of pathogens and improved modelling of them and their effects, presumably by a European Center for Plant Disease Modelling, which was also needed. It provided a risk assessment of the difficulty of impacting plants – difficult unless perfect conditions – and seed crop – easier and difficult to trace. They are also working on a new field – that of microbial forensics – which will help distinguish whether an outbreak was natural or criminal/terrorist.

Both Biosafety Europe and Plant Biosecurity are examples of the sort of research that Europe should be doing. The Bode programme, however, is the sort of programme that European CBRN has been begging for. Bode is for the stand-off detection of bio agents, something that is going on in a variety of European militaries – the UK and France for two. Bode is a short range (~500m) bio identifier for use in urban environments. This is a huge leap when most militaries are looking at greater range but less discrimination – a detect-to-warn rather than detect-to-treat capability. As well as doing bio it is planned to be able to detect pollutants and chemical weapons – guaranteeing it 'peace-time' applicability in heavy industrial areas. Funding wise, it is small beer for a project like this – 2.5 million euros – and has a short life – out to April 2009 (and a worryingly short trial period). The team is bullish; they are also getting interest from the European Defence Agency, and this is exactly the sort of project that the EC should be funding. It has a clear need – a mobile, light, urban stand-off detector. There is a capability gap – national testing is for larger, military systems and none have made it into the equipment catalogue yet – and it will end in a product that is going to undergo trials, rather than just a report to be filed, Raider's of the Lost Ark-style, in some vault. Do I think they will be able to produce a short-range stand-off CB identifier in 12 months? No,

but I think we will be a great deal closer to it than we would have been if we had been working in national silos; the Bode project brings together a range of European experts.

Playing in symphony

A trawl through the project flyers that weren't presented provides the same sort of impression – that there is some good, some very good and some bad work going on, but what is really lacking is a sense of clear direction. Some of these projects fall under the Security Directorate, some under Justice and some under Health and Consumer Protection (this is just a snapshot; I'm sure a 'funded study' would find that CBRNe is the MSG of all European projects – it adds flavour but little substance). When John Peter Paul of Health and Consumer Protection was asked why there wasn't a comprehensive library of all the various studies and reports, which could reduce or even (heavens!) stop duplication, he replied that with all the various studies ongoing in the EC and beyond (Nato, EDA, OPCW, etc. etc) it would be too complicated. Instead, they were going to try and set up 'Communities of Practice' to try and streamline the process. Yet it is this lack of a single customer interface that stops the right people being able to get the information. Often the information is only used incestuously, if at all, with projects borrowing parts of each others work. Yet concrete work, that would benefit police and CBRN responders who would make use of it, is done but not known about. For example, if you are a police/hazmat chief trying to set up a quick-response CBRN unit – as so many are – they should be able to know that they can pick up a report – Impact's WP250 – which will provide them with invaluable suggestions and studies. But where can they get it from; who updates them (and other agencies) that this is available? Why is it not happening? It shows a lack of marketing and communication; instead of reaching outwards, many of these programmes reach inwards and, eventually, they will swallow their own tail and only be of service to themselves. EC projects should not become the exercise in their own right because too much good work is being done. The duplication needs to stop, and aggressive marketing and communication needs to start – if for no other reason than feedback from the user community will help keep the projects relevant.

Book Now! CBRNe Convergence, 22-24 September, JW Marriott, Bucharest - More Information on www.cbrneworld.com