

Terrorists potentially target millions in makeshift biological weapons 'laboratories', UN forum hears

Rapid advances in gene editing and so-called "DIY biological laboratories" which could be used by extremists, threaten to derail efforts to prevent biological weapons from being used against civilians, the world's only international forum on the issue has heard.

At meetings taking place at the United Nations in Geneva which ended on Thursday, representatives from more than 100 Member States which have signed up to the Biological Weapons Convention ([BWC](#)) – together with civilian experts and academics – also discussed how they could ensure that science is used to positive ends, in line with the [disarmament blueprint](#) set out by UN [Secretary-General António Guterres](#).

Although the potential impact of a biological weapons attack could be huge, the likelihood is not currently believed to be high. The last attack dates back to 2001, when letters containing toxic anthrax spores, killed five people in the US, just days after Al Qaeda terrorists perpetrated the 9/11 attacks on New York and Washington.

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Nonetheless, the rise of extremist groups and the potential risk of research programmes being misused, has focused attention on the work of the BWC.

"There's interest from terror groups and we're also seeing the erosion of norms on chemical weapons," said Daniel Feakes, head of the BWC Implementation Support Unit at the UN in Geneva.

"That could spread to biological weapons as well," he said, adding that "at the worst, you could be talking of epidemics on the scale of the Ebola outbreak in West Africa, or even a global pandemic that could result in millions of deaths."

In a bid to stay on top of the latest biological developments and threats, the BWC's 181 Member States hold a series of meetings with experts every year, traditionally in the summer. The reports that are discussed during these sessions are then formally appraised in December.

At the eight-day session just ended, science and technology issues were debated for two days – a measure of their importance.

Among the developments discussed was the groundbreaking gene-editing technique CRISPR. It can be applied – in theory – to any organism. Outside the Geneva body, CRISPR's use has raised ethical questions, Mr. Feakes said, but among Member States, security ramifications dominated discussions.

“Potentially, it could be used to develop more effective biological weapons,” he said, noting that the meetings addressed the growing trend of “DIY biological labs”. However, the meetings also focused on the promotion of “responsible science” so that “scientists are part of the solution, not the problem”.

In addition to concerns that the Biological Weapons Convention lacks full international backing, the body has also faced criticism that its Members are not obliged to allow external checks on any illegal stockpiles they might have.

The issue highlights the fact that the BWC lacks a strong institution, its handful of administrators dwarfed by larger sister organizations including the [OPCW](#) – the [Organisation for the Prohibition of Chemical Weapons](#).

The OPCW's 500-strong staff – based in the Hague – have weapons inspectors training facilities, Feakes notes, explaining that the BWC's focus is therefore much more “about what States do at a national level”.

Concern for the future

Looking ahead, and aside from the rapid pace of scientific change, the biggest challenge is keeping the Biological Weapons Convention relevant – which appears to still be the case today.

“There are no States that say they need biological weapons,” Mr. Feakes says. “That norm needs to be maintained and properly managed. You can't ban CRISPR or gene editing, because they can do so much good, like finding cures for diseases or combating climate change. But we still need to manage these techniques and technologies to ensure they are used responsibly.” Gene editing, in simple terms, involves the copying of exact strands of DNA, similar to cutting and pasting text on a computer.

The latest BWC session in the Swiss city also involved key intergovernmental organizations, scientific and professional associations, academic institutions, think tanks and other non-governmental entities.

Formally known as the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, the BWC was the first multilateral disarmament treaty to ban an entire category of weapons.

It opened for signature in 1972 and entered into force in 1975. It currently has 181 States Parties, and six States that have signed but not yet ratified it.