Attribution and Deterrence of Biological Weapon Use

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Thank you, I'd like to thank the Arab Institute for Security Studies, Dr. Khalil, and VERTIC for inviting me to speak at this important international forum.

Before I begin, let me introduce a member of my staff who will be here throughout the conference: Tanya Anthony. Tanya is a biologist and works in my Biological Weapons Affairs office. Please feel free to talk to her over the next three days if you have ideas you'd like to pursue with us. We are open to suggestions. There are many categories of biological activities: biological weapons, bio-terrorism, biosecurity and emerging infectious diseases.

Back in1949, Theodor Rosebury, a biological researcher at what was then called Camp Detrick wrote a book called "Peace or Pestilence." In that book he described the threat of biological weapons research as "science turned upside-down." Sixty years later, I'm still not sure if we've righted that boat. Advances in biology have made the ability to cause harm to people or animals or crops even easier. The threat from synthetic biology or the potential dangers of genetic engineering makes the science fiction literature of even ten years ago seem eerily prescient. Sharing information on the life saving side must not be acquired by those who would use it for death.

My bureau, the Bureau of Verification, Compliance, and Implementation is responsible within the U.S. Government for assessing other nations compliance with the Biological and Toxin Weapons Convention. If a biological event occurred, one of the responsibilities of my bureau is to understand, who (if anybody) was responsible for the event, and where the pathogen came from. This will necessarily require what is called "microbial forensics" and we will seek to do "event attribution." Scientists must be able to determine, first, what was the source of the event what caused the disease; second, determine if the event was natural or deliberately caused; and third, be able to track down its origins. That is an EXTREMELY difficult set of tasks.

First of all, it may be very difficult to recognize that an event occurred, much less identify a location where the event began. As I'm becoming all too well aware, air travel makes it easy to be in Washington, D.C. one day and in Amman, Jordan the next. If I can make the trip, so can a bacteria or a virus. An unusual disease pattern in a food market in Guangdong, China can rapidly become a SARS pandemic in Canada.

We must make sure that our domestic and international capabilities to detect suspicious outbreaks remain vigilant. Will the disease be recognized as something unusual? Or will physicians treat the symptoms which are almost invariably "flu-like with general malaise" and not search for the root cause? If hospitals were able to identify the disease as something unusual, would it be reported to authorities or would it simply be considered the patient was unlucky? Finally, if the disease IS reported to authorities, would they report it to the World Health Organization consistent with International Health Regulations, or consider it "classified information" not to be shared outside its borders? Obviously, the danger of an unreported or under-reported disease is a problem for all of us, not just the host region.

But, suppose a nation does invite others in to assist not just with mitigating an event, but also in trying to determine the source? In the anthrax case, we were extremely fortunate that we were able to determine the anthrax came from somewhere in the U.S. there was a library of anthrax against which to check the anthrax used. But, the technologies necessary to rapidly diagnose pathogens and begin the microbial forensics process are still being developed and are evolving. Without good technology, we can't confirm what happened or even begin the process of determining attribution. If we can't determine who the guilty

party is, there can be no consequence for the action, and there is nothing to deter more biological events from occurring. There is no deterrence value to the agreement. And that's wrong and that's dangerous.

I have spent much of my time as Assistant Secretary meeting with my counterparts in various Ministries around the world to discuss the issue of arms control treaty verification, noncompliance and the challenges we collectively face in trying to respond to noncompliance. The formula is very simple. State Parties have a responsibility to live up to their obligations. If they do not, they deny the other parties the benefits of the agreement.

In many compliance cases it is very difficult to gain sufficient evidence of noncompliance to reach a firm compliance judgment, but there is evidence of serious concern. Then there is verified noncompliance. The violator, at least intentional violators, have already determined that the risk of getting caught and having their violation verified is acceptable and that the benefits to that nations' decisions makers exceed the costs of violation. The compliant parties are thus confronted with the difficult task of changing the minds of those decision makers and persuading them to reverse their violation. Moreover, we must seek to do this in a way that reinforces deterrence. Arms control violations may signal a first stage of broader deterrence failure. If violations go undetected, unverified, unresponded to, or not reversed we can expect even more serious violations and threatening acts. Today's peaceful and prophylactic programs may become tomorrow's offensive programs, which may lead to use of biological weapons.

Determining if another party is cheating is a national responsibility. Even in such organizations as the IAEA, it is the States party that reach noncompliance judgments acting as the board of governors. Thus our nations have a responsibility to ensure that others also live up to their treaty commitments. This doesn't demand fancy satellites. It DOES require vigilance. The U.S. determined that a verification protocol would not solve the verification challenges. Visits to facilities are not likely to be able to provide evidence of noncompliance. But, the visited Party may be violating. Thus false confidence would be created, and we would not pursue other, perhaps better, means to address these problems. I am very encouraged by the intercessional work under the BWC, the VERTIC efforts and by efforts such as this conference to address these issues.

The United States, like all of the world, is concerned about Biosecurity. We understand the impact of the international misuse of a pathogen such as the 2001 mailing of letters laced with anthrax to media outlets and Congressional offices in the United States. I was working on Capitol Hill at the time and remember all too vividly the response of people worried that somehow they had become victims of the attacks, despite their not being even in the same building as the anthrax letters, or "catching" anthrax from someone else. These are events I am sure none of us wish to see occur anywhere in the world.

We're looking for ways how to do that so please pass any ideas you have to Tanya. You can also give your information on how to contact her or others in her office at the Department of State. We want to work with all of you. Thank you again for inviting me to speak with you. I will be here, though popping out for some other meeting. I hope I'll have a chance to talk with many of you. The challenges are many. The consequences of not meeting the challenges are dire.