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# A Survey of Priorities and Impediments for a Biosecurity Code of Conduct as a Confidence Building Measure for the Biological Weapons and Toxins Convention

Victoria Sutton

## Abstract

The Biological and Toxins Weapons Convention (BTWC), signed in 1972, is the express sense of 162 nations that as a world community, we agree to the end of the use of biological weapons by state parties. However, the increasing numbers of biological, pharmaceutical and public health facilities, coupled with the biotechnology revolution in the latter part of the 20th century, made the development of preventative code of conduct a priority. Biosafety and biosecurity codes of conduct became a topic for consideration by the BTWC in 2005. To develop this new focus, the BTWC conference held a series of expert meetings culminating with the 2011 Review Conference.

Codes of conduct encourage a community approach to formulate acceptable, effective, and reasonably related principles in order to achieve its goals. In order to achieve a collective definition of the priorities or impediments for a biosecurity code of conduct among the representatives of the States Parties, a survey was designed. The survey instrument was designed to be answered during one of the days of the regular intersessional Meetings of Experts of the BTWC on August 27, 2009. This article provides a review and assessment of results of this survey.

**KEYWORDS:** Biological Weapons and Toxins Convention, biosecurity code, 2011 Review Conference, survey

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## Introduction

The Biological and Toxins Weapons Convention (BTWC), signed in 1972, is the express sense of 162 nations that as a world community, we agree to the end of the use of biological weapons by state parties.<sup>1</sup> The treaty was signed at London, Moscow and Washington on 10 April 1972, and entered into force on 26 March 1975, with official depositories being the United Kingdom, the United States and Soviet governments.<sup>2</sup> The BTWC development process has been criticized because it has failed to move forward with an inspection protocol, which was being negotiated to improve the effectiveness of the Convention, and was similar to the inspection protocol of the Chemical Weapons Convention (CWC).<sup>3</sup> The failure to move forward with these negotiations, the increasing numbers of biological, pharmaceutical and public health facilities, coupled with the biotechnology revolution in the latter part of the 20<sup>th</sup> century, caused the States Parties of the BTWC to take a new direction. These new factors made the development of preventative codes a priority, rather than the development of a compliance protocol. The world of biological threats had quite simply become overly complex. It was this shift in focus that led to making biosafety and biosecurity codes of conduct a topic for consideration by the BTWC in 2005. To develop this new focus, the BTWC conference held a series of expert meetings culminating with the 2011 Review Conference.<sup>4</sup>

In the development of international law, a code of conduct often precedes more binding rules. Such codes of conduct allow for experimentation with principles. More importantly, codes of conduct encourage a community approach to formulate acceptable, effective, and reasonably related principles in order to achieve its goals. However, there is no collective definition of the priorities or impediments for a biosecurity code of conduct among the representatives of the States Parties, which leaves a gap in understanding the priorities of member States. To determine a collective view of the priorities and concerns among the representatives, beyond the traditional diplomatic process of making official statements to the States Parties, a survey was designed. The survey instrument

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<sup>1</sup> See The United Nations Office at Geneva, *Disarmament: The Biological Weapons Convention*, <http://www.unog.ch/80256EE600585943/%28httpPages%29/04FBBDD6315AC720C1257180004B1B2F?OpenDocument> (last visited February 7, 2012).

<sup>2</sup> Council of the European Union, *EU Joint Action in Support of the Biological and Toxin Weapons Convention*, <http://www.euja-btwc.eu/node/23?> (last visited Feb. 7, 2012).

<sup>3</sup> See generally Marie Chevrier, *The Biological Weapons Convention: The Protocol that Almost Was*, VERTIC: VERIFICATION YEARBOOK 2001, [http://www.vertic.org/media/Archived\\_Publications/Yearbooks/2001/VY01\\_Chevrier.pdf](http://www.vertic.org/media/Archived_Publications/Yearbooks/2001/VY01_Chevrier.pdf).

<sup>4</sup> Martin Matishak, *U.S. Prepares for BWC Review Conference*, THE NUCLEAR THREAT INITIATIVE: GLOBAL SECURITY NEWSWIRE, Dec. 14, 2010, <http://www.nti.org/gsn/article/us-prepares-for-bwc-review-conference/>.

was designed to be answered during one of the days of the regular intersessional Meetings of Experts of the BTWC on August 27, 2009.

Two previous surveys have been conducted among the representatives of the States Parties to the Biological and Toxins Weapons Convention. The first was conducted in 2002 by Vertic, a non-governmental organization seeking implementation of the BWTC.<sup>5</sup> Vertic sent the survey questionnaire to the ministries, which focused on the passage of domestic legislation making criminal the violation of the terms of the treaty, by individuals, in compliance with the BWTC.<sup>6</sup> The results of the survey led Vertic to draft model biological weapons national legislation for all state parties to consider adopting. The second was a survey conducted by the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism among various UN government officials regarding their policies and laws to prevent the proliferation of weapons of mass destruction.<sup>7</sup>

## **Methodology**

The survey population was the attendees to the Biological and Toxin Weapons Convention, Meeting of Experts, which took place in Geneva, Switzerland at the Palais de Nations from August 23-29, 2009. Although this survey could be considered an administrative survey, a “human-subjects” application was submitted and approved by the author’s academic institution for conducting this research survey among the representatives of the States Parties.<sup>8</sup> According to the Implementation Support Unit (ISU), which is responsible for administration of the Meeting of Experts, there were nearly 500 registrants for the meeting.<sup>9</sup> The ISU

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<sup>5</sup> See *BWC Legislation Database*, VERTIC, [http://www.vertic.org/pages/homepage/databases/bwc-legislation-database/introduction.php?searchresult=1&sstring=2002+Survey#wb\\_87](http://www.vertic.org/pages/homepage/databases/bwc-legislation-database/introduction.php?searchresult=1&sstring=2002+Survey#wb_87) (last visited Feb. 8, 2012).

<sup>6</sup> See *id.*

<sup>7</sup> See Report of the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism: Hearing Before the H. Comm. on Armed Services, 111<sup>th</sup> Cong. (Jan. 22, 2009) (statement of Dr. Graham Alison, member of the Commission), *available at* [http://216.109.75.135/e\\_research/source\\_docs/us/congress/house\\_representatives/97.pdf](http://216.109.75.135/e_research/source_docs/us/congress/house_representatives/97.pdf).

<sup>8</sup> Human Subject testing is regulated by “the common rule,” 45 C.F.R. § 46 (2011), for federally funded research supported by most federal agencies. A protocol must be developed and submitted to the institutional review board (IRB) and based on the benefits and risks, determines whether the research can proceed. The rule is widely followed even when no federal research is being conducted, because it has gained such wide acceptance and desirability. This is the typical practice for all universities in the U.S., including for research such as this.

<sup>9</sup> See *Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons (BTWC)*, THE NUCLEAR THREAT INITIATIVE,

estimated that there were 250 attendees in the morning session room where the survey was distributed on Thursday, August 27, 2009. The survey was administered on August 27, 2009 from 9:00 a.m. to 5:00 p.m. during the regular session of the meeting and during the final poster session. At the close of the opening session at 1:00 p.m., 31 surveys had been collected; and at the end of the official poster session at 5:30 p.m., a total of 53 surveys were collected. This provided a return rate of approximately 20% for the population of registrants tested on the day of the survey.

The survey instrument was designed to be completed in less than five minutes, in handwriting on hard copy, with seven questions on one page. The seven questions included four “yes/no” questions; one “ranking” question; one “check only one” priority question; and two “open ended” questions that allowed for further narrative answers about anything that was important to each of the respondents that had not been included in the choices available on the survey.<sup>10</sup>

The survey was distributed to delegates and non-governmental organization (NGO) representatives in the meeting room at the Palais de Nations, at 9:45 a.m. on Thursday, August 27, 2009. There were two announcements urging participants to complete the survey during the morning session from 10am to 1pm. At the end of the session at 1:00 p.m., the Chair, in his second announcement, told the delegates and NGO representatives that they should return their completed surveys to the administration as they exited the room for the lunchtime break. At that time, 31 surveys were submitted to the administration and ISU staff.

The Poster Session provided a second opportunity for respondents to submit their surveys at 3:30 p.m. the same day, and delegates and NGO representatives attending the poster session were asked to complete a survey at the poster session. At the close of the poster session at 5:30 p.m., there were 53 completed surveys submitted.

The quality of the surveys was high, in that all were fully completed, with only two surveys missing data. They were all determined to be sufficiently completed surveys, and they were completed consistent with the survey directions. The data was analyzed using Microsoft Office Word Access© to create tables and cross tabulations.

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<http://www.nti.org/treaties-and-regimes/convention-prohibition-development-production-and-stockpiling-bacteriological-biological-and-toxin-weapons-btwc/> (last visited Feb. 9, 2012).

<sup>10</sup> The survey instrument is attached as an Appendix.

## **Results**

The raw data taken from the survey responses for each of the seven questions is described below:

1. Demographics. There were 41 delegates, 11 non-delegates and 1 no answer.
2. When asked to rank from 1-4 or 5, priorities for a biosecurity ethic, the ranking was evenly distributed with a standard of error  $\pm 5$ . The ranking in order expressed by the participants in order of priority was the following: (1) "laboratory research and clinical laboratories biologics" (highest priority); (2) "emerging infectious diseases control" (second ranked choice); (3) "bioterrorism or intentional use of biological agents to cause harm" (third choice); and (4) "GMOs Genetically Modified Organisms" (a distant fourth choice).
3. When asked to consider the biggest impediment to global biosecurity, the first ranked choice with the greatest frequency was "lack of training and information." The next two ranked choices, which were ranked with equal frequency, were "the unique challenges of regulating living and /or infectious biological materials," and "the rapid advancement of biotechnologies in the world." Both of these choices address the unique characteristics of biological weapons in comparison to other weapons of mass destruction.
4. When asked whether a biosecurity code of ethics would be useful in the global community, the overwhelming response was "yes." 45 respondents said "yes," while only 6 respondents marked "no," and 2 were unmarked or marked with a question mark. Several comments were made in the space, which included two somewhat related concepts: "individual guidelines," and "not global, but national might work."
5. When asked whether we should be concerned that there are currently offensive biological weapons activities, 47 responded "yes," 4 responded "no," with 2 non-responses.
6. When asked whether the respondent's country had either a law, code or regulation for biosecurity or biosafety, 28 responded that they had either or both biosafety and/or biosecurity codes, while 21 responded that they had neither, with 4 non-responses.
7. Finally, the last question gave the respondents an opportunity to add anything else about their priorities for biosecurity.

## Analysis

These results for Questions Two (priorities) and Three (impediments) were then cross-tabulated with whether the respondent was a delegate or a non-delegate. The results of both groups (delegates and non-delegates) showed no variation in either their selection of priorities or identification of impediments to the development of a biosecurity ethic, and were the same as the overall results stated in numbers two and three, above.

The results for Questions Two (priorities) and Three (impediments) cross-tabulated with Question Six (whether the respondent's country had biosafety and/or biosecurity laws or regulations) showed some variation in the priority ranking for countries without laws compared to countries with laws. Countries without laws ranked as their number one priority, "laboratory research and clinical laboratories biologics," almost 20% more often than their second or third ranked priorities; whereas, the countries with laws, selected three of the four top choices with equal frequency, showing no preference among priorities.

There was some observed variation among countries that do have laws compared to countries that do not have laws (Question Six), and those who are not concerned about offensive programs (Question Five), which have as their highest priority, "laboratories research and clinical laboratories biologics." With regard to those concerned about offensive programs, whether or not their countries have biosecurity or biosafety laws, their first priority is "bioterrorism or intentional use of biological agents to cause harm."

When all respondents were asked whether a biosecurity code of ethics would be useful in the global community (Question Four), the overwhelming response was "yes," with 87% responding in the affirmative.

The clearest priority for inclusion in a Biosecurity Code of Conduct was "emerging infectious diseases." This was in contrast to a finding that the respondents had no clear priority between the next two ranked choices for inclusion in a Biosecurity Code of Conduct, "bioterrorism" and "laboratory research and clinical laboratories."<sup>11</sup>

The same consistency was seen in the impediments question (Question Three), where all respondents and classes of respondents selected "lack of training and information" as the primary impediment for a code of conduct in biosecurity,

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<sup>11</sup> "Bioterrorism" as a concern was almost equally spread in the frequency. It was selected as the first (13), second (9), third (11) and fourth (11) ranked priority, suggesting a widely varying view of the level of concern for prioritizing bioterrorism in a biosecurity ethic. The choice, "Laboratory research and clinical laboratories" was selected as the first (14), second(9), third (11) and fourth (11) ranked priority, also suggesting a widely varying opinion on the prioritization that should be given laboratory biosafety. Of all the choices, "emerging infectious diseases," was selected more often as first (11) and second (16) choices, compared to the third (10) and fourth (9).

with greater frequency than the second and third ranked choices of impediments: “unique challenges of biological materials” and “the rapid advancement of biotechnology.” The fourth ranked choice, “Lack of interest of governments,” was a distant fourth in the frequency in which it was chosen as an impediment to global biosecurity.

## **Conclusion**

In summary, the first priority of the respondents for a code of conduct in biosecurity was a focus on “laboratory research and clinical laboratories,” although it was a weak preference among the other priorities. The highest ranked impediment to a biosecurity code of conduct was the “lack of information and training.” This suggests that focus should be prioritized for laboratory research and clinical laboratories and for implementing a training and information program, in conjunction with the adoption of a biosecurity code of conduct either globally or by each nation or political subdivision.

The results also indicate that, among the delegates, there is a striking level of agreement in the value in having a biosecurity code of ethics (87%). Among the priorities, the overall result was that essentially equal weight was given to three priorities for a biosecurity code of ethics: (1) Laboratory research and clinical laboratories biologics; (2) Bioterrorism or intentional use of biological agents to cause harm; and (3) Emerging Infectious Diseases Control. A distant fourth priority in the ranking was genetically modified organisms. .

The respondents were clear that it is not a lack of interest on the part of governments that impedes the development of biosecurity codes and codes of conduct.

One of the predominate conclusions from the survey is that there was a high frequency of concern about current offensive biological weapons programs. It is significant that 47 of 51 respondents said that we should be concerned that there are offensive biological weapons programs. This concern, coupled with the significant support for biosecurity codes of conduct (87%), suggests that codes of conduct are viewed as an effective tool against offensive biological weapons programs. The policy implications are that focus should continue to be on the use of biosecurity codes of conduct as a measure to address potential offensive programs.

There is a distinction in concern about offensive biological programs between countries that have laws or codes for biosecurity, compared to those who do not. Those respondents from countries, which have not enacted laws or codes for biosecurity, are more concerned about offensive biological programs than those who are from countries that do have laws for biosecurity. Policy implications from this observation indicate that countries without laws or codes or



conduct should be given more focus and assistance to address the need to development laws and codes of conduct.

These findings, while not statistically significant, given the small sample size, are nonetheless indicative and suggestive of a trend among those who attended the Meeting of the Experts in August 2009. However, given that these responses are from experts, their indications and suggestions should be given weight when the States Parties consider further actions in the coming Convention Review Conferences.

APPENDIX

Biosecurity Code of Ethics SURVEY

\_\_\_\_\_  
DATE

The Global Biosecurity Law Project is conducting this anonymous survey of delegates of the BWC about their priorities for a code of ethics in biosecurity as it relates to the goals of the Biological and Toxins Weapons Convention will provide data for policy makers:

- (1) Are you a delegate to the BWC Meeting of the Experts?  
 yes  
 no
- (2) Rank from 1- 4 or 5 your priorities for a biosecurity ethic?  
 GMOs (Genetically Modified Organisms)  
 Laboratory research and clinical laboratories biologics  
 Bioterrorism or intentional use of biological agents to cause harm  
 Emerging Infectious Diseases Control  
 Other \_\_\_\_\_
- (3) What do you consider to be the biggest impediment to global biosecurity?  
PLEASE CHECK ONLY ONE:  
 the unique challenges of regulating living and/or infectious biological materials  
 lack of training and information  
 the rapid advancement of biotechnologies in the world  
 lack of interest from governments  
 other \_\_\_\_\_
- (4) Do you think a code of ethics in biosecurity would be useful to the global community?  
 yes  
 no
- (5) Do you think we should be concerned that there are currently offensive biological weapons activities?  
 yes  
 no
- (6) Does your country have a law, code or regulation for biosecurity or biosafety? If so, if you would like to describe it, please do so (Please write on the back if you wish):

- (7) Is there anything else you would like to add about your priorities for biosecurity?

THANK YOU VERY MUCH FOR COMPLETING THE SURVEY.

If you have questions, please contact Prof. Victoria Sutton, Director, Global Biosecurity Law Project, Texas Tech University School of Law at [vickie.sutton@ttu.edu](mailto:vickie.sutton@ttu.edu).