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Comments on the report “World at Risk” from the Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism, chaired by Bob Graham and Jim Talent, with Graham Allison, Robin Cleveland, Steve Rademaker, Tim Roemer, Wendy Sherman, Henry Sokolski and Rich Verma,

The Commission’s report is timely and of great import and significance to national security. I will address the sections dealing with biological weapons and with areas of general recommendations.

In one of its main messages, on page 11 the Commission concludes the “In this respect, the *biological threat is greater than the nuclear* (emphasis added by me); the acquisition of deadly pathogens, and their weaponization and dissemination in aerosol form, would entail fewer technical hurdles than the theft or production of weapons grade uranium or plutonium and its assembly into an improvised nuclear device.” On page 24 the Commission calls for the following-“The Commission believes that it should make the more likely threat—bioterrorism—a higher priority.” I agree with this assessment although it remains a controversial point of view. The point is that we have no metric or quantitative threat assessment tool to actually predict the likelihood of a biological attack. Furthermore, we have only rudimentary probabilistic tools to calculate the full extent of a biological attack. This should have been stressed.

The Action Items and the Recommendations that address the issue of bioterrorism are well described and while not entirely new, represent the thinking of many academics and scientists involved in this policy and research arena.

The discussion gives a short description of the National Science Advisory Board for Biosecurity (NSABB). Full disclosure: I am a voting member of this Advisory Board, nevertheless I think the activities of the NSABB should have been discussed at greater length—especially the work we have done to bring the issues of biosecurity before the international scientific and policy community.

The description of the trials and tribulations of the Biological Weapons Convention (BWC) are well described. The recommendation to the new administration to “reject any efforts” to restart the BWC Protocol negotiations are balanced by a series of suggestions on how to reengage in the process. While this is controversial I agree with the Commission’s recommendations here—as long as the balance is stressed, not just the “rejection” angle.

The call for bio surveillance and global disease surveillance networks is something we have written about and lectured on for several years now and I completely agree with the

recommendations. However there is a bit of naïveté in the discussion of this issue. One of the major problems is that there is no apparent recognition of the difficulty of the question of who has the responsibility, jurisdiction, resources and expertise to act on the data that is collected. There is also no discussion of the kind of data-types that will be reported and who will analyze the data into actionable items. This may be too much detail to ask for in this report but these details have been sticking points for years and must be resolved.

I am a member of a National Academy of Sciences Committee on contract to the DOD to advise on the extension of the Biological Cooperative Threat Reduction Program (Reducing Biological Threats to Improve Security and Health: The Role of the Cooperative Threat Reduction Program of The Department of Defense). The National Defense Authorization Act of 2008 calls for a study by the National Academy of Sciences (NAS) on *Prevention of Proliferation of Biological Weapons*. The study was to consider several issues concerning U.S. cooperation in this field with developing countries other than states of the former Soviet Union (FSU) within the framework of the Cooperative Threat Reduction (CTR) program that is administered by the Department of Defense (DOD). Specifically, the Congress requested that the study (a) assess the capacity of developing countries to control dual-use technologies, (b) assess cooperative non-proliferation approaches used in the FSU that could be used in other countries, (c) review other international programs that may contribute to non-proliferation, and (d) recommend steps for integrating DOD's nonproliferation activities with other relevant U.S. government programs outside the FSU. While our report is not yet finalized, we discovered that there is extensive activity in this arena that is in the public domain and should have been included, or at least mentioned in the Commission report.

The sections of the Commission report on Government Organization and Culture and on the Role of the Citizen are especially compelling and I agree with most of the recommendations. I want to highlight the section on future needs—these are most important and the call for building a national security workforce for the 21<sup>st</sup> century is perhaps one of the recommendations that should be featured and one that will have, if done properly, a lasting positive impact on national security. Methods and resources should be identified and committed so that institutions of higher learning can be given incentives to engage in this endeavor.

The opinions in this document reflect those of the author and not necessarily those of the various committees mentioned in the document.