

2007

International Cooperation to Defend the Food Supply Chain

John T. Hoffman

Shaun Kennedy

Follow this and additional works at: <https://scholarship.law.vanderbilt.edu/vjtl>



Part of the [International Law Commons](#)

Recommended Citation

John T. Hoffman and Shaun Kennedy, International Cooperation to Defend the Food Supply Chain, 40 *Vanderbilt Law Review* 1171 (2021)

Available at: <https://scholarship.law.vanderbilt.edu/vjtl/vol40/iss4/13>

This Article is brought to you for free and open access by Scholarship@Vanderbilt Law. It has been accepted for inclusion in Vanderbilt Journal of Transnational Law by an authorized editor of Scholarship@Vanderbilt Law. For more information, please contact mark.j.williams@vanderbilt.edu.

International Cooperation to Defend the Food Supply Chain: Nations Are Talking; Next Step—Action

*John T. Hoffman**
*Shaun Kennedy***

TABLE OF CONTENTS

I.	INTRODUCTION	1172
II	THE THREAT: IS IT REAL?	1173
III.	IS TERRORISM TARGETING FOOD A CRIME?.....	1174
IV.	INTERNATIONAL ACTION HAS BEEN SLOW TO DEVELOP.....	1175
V.	REGIONAL EFFORTS TO PROTECT FOOD AND AGRICULTURE ARE GROWING	1178
VI.	BILATERAL INITIATIVES HAVE GAINED SOME MOMENTUM	1180
VII.	EFFORTS BY THE UNITED STATES PROVIDE SUBSTANTIVE PROGRESS	1181
VIII.	HOW DO WE MOVE FROM RHETORIC TO INTERNATIONAL ACTION?	1182
IX.	GLOBAL FOOD CHAIN DEFENSE PROSPECTS ARE POOR UNLESS THERE IS ACTION ON THE PART OF THE INTERNATIONAL COMMUNITY.....	1186

* John Hoffman is a retired Colonel from the United States Army and is currently a Senior Research Fellow at the National Center for Food Protection & Defense, A Homeland Security Center of Excellence.

** Shaun Kennedy is the Deputy Director of the National Center for Food Protection & Defense, A Homeland Security Center of Excellence. He is also an Associate Director of the Center for Animal Health & Food Safety, at the University of Minnesota.

I. INTRODUCTION

Global Food System Defense is an area where, so far, we have not yet obtained real traction in this post-September 11, 2001 world of international terrorism. Cooperative international efforts to defend and protect the global food supply system may well be crucial to the security of every developed nation in the coming years. Affordable energy—currently fossil fuels—and food are at the heart of the security and prosperity of every nation. Yet the food protection efforts that have been historically supported by the international community have focused on traditional “food security,” defined as access to sufficient calories and nutrition to sustain the population—usually meant as poor, underfed populations.¹ For the purposes of this Article, this is not the same as food defense. As Dr. Marc Ostfield, Senior Advisor for Bioterrorism, Biodefense, and Health Security, U.S. Department of State, pointed out in his recent remarks to the European Institute, “[m]any have used these terms interchangeably and, I would argue, erroneously, creating confusion during both national and international policy discussions.”² Of course, in countries and regions of the world where food security is a significant concern itself, food defense is a relatively low priority compared to the basics of a sustainable supply of safe and wholesome foods. Unfortunately, however, the global nature of our food system means that primary production or ingredient sourcing from such regions flows directly into countries where food defense has ascended above the base level of the Maslow hierarchy of needs, from physiological to safety needs. Of the few defensive steps designed to protect food supply chains that are in place, these are usually centered on protecting food stocks from theft or misappropriation by both local government and insurgent groups.³ The concept of a large-scale effort to defend the global food supply chain from adulteration or destruction that might target an entire population is relatively new.

1. Marc L. Ostfield, Senior Advisor for Bioterrorism, Biodefense, and Health Sec., Remarks to the European Institute: Transatlantic Dimensions of Biodefense Cooperation and Collaboration Event (Nov. 20, 2006), *available at* <http://www.state.gov/g/oes/rls/rm/2006/77206.htm>.

2. *Id.*

3. *Id.*

II THE THREAT: IS IT REAL?

Malnutrition and food shortages in many areas of the world already contribute to social and civil unrest. Efforts to fight regional malnutrition can be undermined if the food itself is suspect. With the increase in international terrorism and the clear evidence that terrorist groups, such as radical extremists and those associated with Al Qaeda, have considered targeting food, it is time for more aggressive action to defend the world's fragile food supply system against potential acts by fanatical groups.⁴ History reflects numerous instances where food has been targeted by both nation states, as components of military strategy, and by insurgent or terrorist groups.⁵ The United States has suffered from several domestic terrorist acts against food. For example, in an Al Qaeda training manual found in Manchester, UK, there is a section on how to employ contaminated food as a weapon.⁶ In September 1984, the Rajneeshee cult contaminated salad bars in restaurants in Wasco County, Oregon, with *Salmonella typhimurium* in an effort to influence a local election.⁷ In 2002, U.S. Armed Forces discovered documents⁸ in an al Qaeda training camp in Afghanistan that indicated that this group had considered the use of biological and chemical weapons to target agriculture and food supplies. The threat is, indeed, real, and many consider the probability of another terrorist strike against food to be high, as has been reported in a recent paper by Stinson and Kinsey entitled, *How Should America's Anti-Terrorism Budget Be Allocated? Findings from a National Survey of Attitudes of U.S. Residents about Terrorism*.⁹ It is also worth noting that the

4. *Id.* (noting that materials discovered at Al Qaeda training camps in Afghanistan "show knowledge of specific agents that could be used to contaminate the food supply").

5. *Id.* (providing various U.S. and international examples of intentional contamination of food in recent history).

6. See *Sixteenth Lesson: Assassination Using Poisons and Cold Steel*, in THE AL QAEDA MANUAL: DECLARATION OF JIHAD (HOLY WAR) AGAINST THE COUNTRY'S TYRANTS MILITARY SERIES, available at <http://www.thesmokinggun.com/archive/jihadmanual.html> (providing detailed instructions for preparing and administering various poisons).

7. Ostfield, *supra* note 1.

8. See generally *Al Qaeda Documents Outline Serious Weapons Program*, CNN, Jan. 25, 2002, <http://archives.cnn.com/2002/US/01/24/inv.al.qaeda.documents/index.html> (discussing the documents found at Tarnak Farms in Central Afghanistan in 2002).

9. THOMAS F. STINSON ET AL., HOW SHOULD AMERICA'S ANTI-TERRORISM BUDGET BE ALLOCATED? FINDINGS FROM A NATIONAL SURVEY OF ATTITUDE OF U.S. RESIDENTS ABOUT TERRORISM (Univ. of Minn. 2006), available at <http://agecon.lib.umn.edu/mn/tr06-01.pdf>. Former Secretary Tommy G. Thompson stated upon leaving office in December 2004 that not only did he consider the threat

Report of the National Intelligence Council's 2020 Project stated that "[o]ur greatest concern is that these groups might acquire biological agents or less likely, a nuclear device, either of which could cause mass casualties"¹⁰ The Government Accounting Office January 2007 publication, "High Risk Series: An Update," further highlights the concerns with food, added as a high risk area for the first time.¹¹

III. IS TERRORISM TARGETING FOOD A CRIME?

Except for specific disaster events where emergency food supplies were rapidly transported from one area of the world to another to stave off starvation in impacted populations (Iran, Asia, Philippines, Central Africa, Berlin Airlift, etc.), most efforts in the past have been via government-sponsored international aid organizations, Non-Governmental Organizations (NGOs), and United Nations (UN) organizations such as the Food & Agriculture Organization (FAO).¹² These organizations have not historically engaged in "anti-terrorism" defensive measures because these were not politically acceptable areas of engagement for them.¹³ Until the late 1980s, most nations viewed terrorism as "political" activity, not a crime, and would not become involved in any manner, defensively or protectively.¹⁴ Indeed, until relatively recently, INTERPOL did not even engage in investigations of terrorism because Article 3 of its constitution, adopted in 1951, precluded the "[o]rganization to undertake any intervention or activities of a political, military, religious or racial character."¹⁵ Even today, not all nations have

real but that he was surprised that it had not happened already. William Branigin et al., *Tommy Thompson Resigns From HHS*, WASH. POST, Dec. 3, 2004, available at <http://www.washingtonpost.com/wp-dyn/articles/A31377-2004Dec3.html>.

10. Nat'l Intelligence Council, Report of the National Intelligence Council's 2020 Project: Pervasive Insecurity, http://www.dni.gov/nic/NIC_globaltrend2020_s4.html#trans (last visited Sept. 22, 2007).

11. U.S. GOV'T ACCOUNTABILITY OFFICE, HIGH RISK SERIES: AN UPDATE (Jan. 2007).

12. See generally David Fisher, *Fast Food: Regulating Food Aid in Sudden-Impact Disasters*, 40 VAND. J. TRANSNAT'L L. 1125 (2007) (discussing the prominence of the role of governmental sponsored aid, NGOs and UN organizations in providing food aid).

13. See, e.g., Food & Agric. Org. of the U.N., About Us, http://www.fao.org/UNFAO/about/index_en.html (last visited Sept. 22, 2007) (stating that the focus of the FAO is to "lead[] international efforts to defeat hunger").

14. See generally Mathieu Deflem & Lindsay C. Maybin, *Interpol and the Policing of International Terrorism: Developments and Dynamics since September 11*, in TERRORISM: RESEARCH, READINGS, & REALITIES 175, 175-76 (Lynne L. Snowden & Bradley C. Whitsel eds., 2005).

15. Interpol, Interpol Constitution and General Regulations of the ICPO-Interpol art. 3 (1956). Mathieu Deflem and Lindsay C. Maybin, in their excellent paper entitled *Interpol and the Policing of International Terrorism: Developments and*

criminal laws that address such terrorist acts. The issue of making such terrorist acts an international crime is even more difficult. As Ben Saul points out, “[m]uch of the international legal debate on terrorism has focused on ideological disputes or the technical mechanics of definition, rather than the underlying policy question of why—or whether—terrorism should be internationally criminalized.”¹⁶ This debate continues and complicates efforts to address international efforts to defend the global food supply.

IV. INTERNATIONAL ACTION HAS BEEN SLOW TO DEVELOP

The impact of ideological disputes continued to thwart real progress in this arena until the post-9/11 period. Since that time, steps have been taken, both unilaterally and cooperatively, by individual nations, the United Nations, and some NGOs.¹⁷ However, what has been done is at a rather low, relatively ineffectual level, or has only included a subset of the required stakeholders. Most cooperative international efforts have been high on rhetoric but low on any real action.

In the G8 efforts, for example, a rather robust plan for international cooperation was proposed under the U.S. Presidency in 2004.¹⁸ These proposed steps included the sharing of best practices from within the private sector groups (within the U.S., this represents the owners of approximately 85 percent of the food production and distribution systems), sharing of new regulatory schemes designed to further the protection of the food supply chains, the sharing of emergency response planning data and lessons learned from past events, senior level discussions of future cooperative efforts, and the conduct of international exercises that would focus on large-scale terrorist events targeting global or regional food supply chains.¹⁹ The G8 presidency has since rested with the United Kingdom (U.K.) and the Russians, and an increase in Global Food Defense from these efforts has not yet become measurable.²⁰

Dynamics since September 11, point out that “efforts in Interpol and many of its member agencies to target terrorism as a crime may not necessarily harmonize with the political, diplomatic, and legal activities against terrorism conducted at the level of the governments of national states.” Deflem & Maybin, *supra* note 14, at 175-76.

16. BEN SAUL, *DEFINING TERRORISM IN INTERNATIONAL LAW* 10 (Oxford Univ. Press 2006).

17. See discussion *infra* Part IV.

18. See generally Sea Island Summit 2004, Sea Island, Ga., June 9, 2004, *G8 Action Plan on Nonproliferation*, available at <http://www.mofa.go.jp/policy/economy/summit/2004/action-7.pdf> [hereinafter G8 Action Plan].

19. *Id.* § 5.

20. See Sea Island Summit 2004, Sea Island, Ga., June 9, 2004, *Chair's Summary*, available at <http://www.mofa.go.jp/policy/economy/summit/2004/summary.pdf>

There has been little real effort to organize the world's more capable nations towards defending the international food supply. As a consequence, little has been done to enable the less capable states to act, either directly or indirectly. Interestingly, there have been several efforts to plan and conduct international food defense exercises to help identify protective gaps, to help train representatives of participating nations, and to improve international cooperation.²¹ As of yet, these efforts have yielded little success, and there has been no major international exercise specifically designed around a large-scale terrorist act targeting the global or even a regional food supply chain. In 2004, at the annual meeting of the Biological Weapons Convention (BWC),²² the issues of protecting the international food supply chain were discussed, and while no concrete action was taken, there was agreement to continue the discussion of potential international action on this matter at future meetings. Subsequent meetings have not produced any substantive progress on broad international cooperation. The 2005 session merely concurred with the results of the 2004 annual meeting, and no concrete action to further defend international food systems was taken or proposed.²³

Asia-Pacific Economic Cooperation (APEC) has addressed the issues of food system defense in the Asia-Pacific Region at conferences and workshops.²⁴ The U.S. has proposed specific actions for APEC to adopt but no steps have yet been taken beyond endorsing

(noting that the U.K. would host the 2005 summit); Gleneagles Summit, Perthshire, Scotland, June 6-8, 2005, *Chair's Summary*, available at <http://www.mofa.go.jp/policy/economy/summit/2005/summary.html> (noting that Russia would host the 2006 summit).

21. See discussion *infra* Part IV.

22. The report of the 2004 Meeting of States parties to the Biological Weapons Convention, issued December 10, 2004, merely states that the State Parties agreed on the value of: supporting the existing networks of relevant international organizations for the surveillance, detection, diagnosis, and combating of infectious diseases and acting to strengthen the WHO, FAO, and OIE programmes, within their mandates, for the continued development and strengthening of, and research into, rapid, effective and reliable activities for the surveillance, detection, diagnosis, and combating of infectious diseases, including in cases of emergencies of international concern; improving, wherever possible, national, and regional disease surveillance capabilities, and, if in a position to do so, assisting and encouraging, with the necessary agreement, other States Parties to do the same; and working to improve communication on disease surveillance, including with the WHO, FAO, and OIE, and among States Parties. Press Release, U.N. Office at Geneva, Meeting of States Parties to the Biological Weapons Convention Concludes, U.N. Doc. 04044e (Dec. 13, 2004).

23. See generally Meeting of the State Parties to the Convention on the Prohibition of the Development, Production, and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on Their Destruction, Geneva, Switz., Dec. 5-9, 2005, *Report of the Meeting of the States Parties* (Dec. 14, 2005), available at http://www.opbw.org/new_process/msp2005/BWC_MSP_2005_3_E.pdf.

24. See U.S. Dep't of State, *APEC Food Defense Initiative* (Nov. 3, 2006), <http://www.state.gov/r/pa/prs/ps/2006/75537.htm> [hereinafter *APEC Food Defense*] (noting that APEC members had met in November of 2006 at a workshop in Bangkok, Thailand).

the need for improved security of the food supply system on the part of member states.²⁵ APEC conducted a food defense workshop in Thailand in November 2006, where senior officials of member nations discussed actions each nation had undertaken to protect their food supply chains, and looked at methodologies for assessing vulnerabilities in the food supply system.²⁶ The stated purpose of the workshop was to “begin a regional dialogue on protecting the food supply from deliberate contamination.”²⁷ While this information-sharing is helpful, no specific international cooperative action was adopted.²⁸ On the positive side, the private sector participated in the APEC Food Defense Workshop in Bangkok.²⁹ APEC also held a symposium on “Total Supply Chain Security” in Singapore in July 2006.³⁰ This meeting focused on the threat of international terrorism targeting the food supply chains.³¹ The meeting addressed actions of individual member states and recommended broader cooperative efforts to include both public and private sector initiatives.³² No specific international actions were agreed upon beyond recommending more discussion and cooperation. In 2007, APEC plans to address issues surrounding the recovery of the international food supply chain after an attack in the food supply system.³³

The World Health Organization (WHO) has published several useful guidance documents that address the defense of food supply systems. For example, the 2002 Guidance on “Terrorist Threats to Food,” which was published as a food safety issue, provides useful guidance on protecting food supply chains and emergency response systems.³⁴ Interestingly, this document is one of the few

25. *Id.*

26. *Id.*

27. *Id.*

28. See generally APEC Food Defense Workshop, Bangkok, Thai., Nov. 1-3, 2006, *Summary of the APEC Food Defense Workshop*, available at http://www.apec.org/content/apec/documents_reports/senior_officials_meetings/2006.html (follow “Summary of the APEC Food Defense Workshop Held in Bangkok” hyperlink) (observing collaboration and communication which took place at workshop in Bangkok, but making no mention of any kind of international cooperative action taking place).

29. APEC Food Defense, *supra* note 24.

30. *Total Supply Chain Security in the APEC Region*, APEC E-NEWSLETTER (Asia-Pacific Economic Cooperation, Singapore), July 2006, http://www.apec.org/apec/enewsletter/july_vol9/onlinenewsc.html# (last visited Dec. 5, 2007).

31. *Id.*

32. *Id.*

33. See Fifteenth APEC Economic Leaders' Meeting, Sydney, Austl., Sept. 8-9, 2007, *Background Information*, at 15, available at <http://www.international.gc.ca/commerce/apec/pdf/APEC-2007-Media-Backgrounder-EN.pdf> (acknowledging as a priority for 2007 “total supply chain security”).

34. Food Safety Dep't, World Health Org., *Terrorist Threats to Food: Guidance for Establishing and Strengthening Prevention and Response Systems* (2002), available at <http://www.who.int/foodsafety/publications/general/en/terrorist.pdf> [hereinafter *Terrorist Threats*].

international publications that provides specific guidance to both governments and the private sector food industry.³⁵ Yet even this document does not address the specific need for broader international cooperation and action on protecting the global food supply chain.³⁶ The WHO also maintains the Global Outbreak Alert and Response Network³⁷ to provide rapid assistance for public health emergencies that could be related to contaminated food, among a number of potential bio-terrorism possibilities. But this is an example of a broad bio-response effort, and as with most existing international programs, does not address the need for improving the overall defense and protection of global food supply chains in order to reduce the terrorism risk to this vital global infrastructure.

There have been some efforts by organizations, such as FAO to develop food supply system defensive programs, but these are still primarily targeting food safety and sanitary issues in specific countries where insurgencies and famine are prevalent already.³⁸ The United States is actively working with the FAO to assist in these efforts, and discussions are underway to develop further information-sharing on best practices, defensive measures programs, emergency response, and risk assessment and reduction, as well as increasing available calories and nutrition to these populations.³⁹ These programs are mainly focused on Africa and regions in Asia where the need for such efforts is, indeed, significant.⁴⁰

V. REGIONAL EFFORTS TO PROTECT FOOD AND AGRICULTURE ARE GROWING

There have been other food system defensive efforts on a continental basis. For example, the European Union has been rapidly

35. See *id.* at 1 (asserting that prevention is most effective when it is a “cooperative effort” between industry and governments, and establishing that this document seeks to “provide guidance” for this cooperation).

36. *Id.*

37. See Global Outbreak Alert & Response Network, <http://www.who.int/csr/outbreaknetwork/en/> (last visited Sept. 22, 2007); see also Terrorist Threat, *supra* note 34, at 32.

38. The FAO has partnered with a number of international organizations to operate a web portal that addresses food safety and food defense issues. International Portal on Food Safety, Animal & Plant Health, <http://www.ipfsaph.org/En/default.jsp> (last visited Sept. 22, 2007).

39. See, e.g., Press Release, Food & Agric. Org. of the U.N., FAO and US Department of Agriculture Sign Agreement to Strengthen Collaboration (Mar. 14, 2007), available at <http://www.fao.org/newsroom/en/news/2007/1000509/index.html>.

40. See generally Winn S. Collins, *The Commission's Delegation Dilemma: Is the European Food Safety Authority an Accountable Agency?*, 10 U.C. DAVIS J. INT'L & POL'Y 277, 280-93 (2004) (providing background on the increased regulation in the European Union in regards to food safety).

expanding its regulatory authority and available food processing and handling guidelines to improve the defense of its food supply chains from terrorist acts, as well as to improve the overall safety of its food systems.⁴¹ In North America, the U.S., Canada, and Mexico have been developing and implementing new regulatory authorities that target defense of their respective food supply systems.⁴² Furthermore, these countries have been exploring cooperative steps to harden their shared food supply chains against terrorist acts.⁴³ Thus far, however, the steps have been timid at best.⁴⁴ The efforts to date, developed under the Security and Prosperity Partnership for North America (SPP),⁴⁵ include a specific goal (#8) to “develop and implement a North American bioprotection strategy to assess, prevent, protect, detect, and respond to intentional, as well as applicable naturally occurring threats to public health and the food and agriculture system.”⁴⁶ While some progress has been made in furthering security at borders and risk reduction efforts between Canada and the U.S., most of the SPP efforts have been hampered or delayed due to a lack of funding support.⁴⁷ Thus, the real defensive value appears to be limited despite such a prominent program.

There have been attempts to broaden cooperation between the European Union and the U.S., including exchange of information, threat data, and technology.⁴⁸ However, the efforts are limited due to the combination of commercial interests, the reluctance to address potential criminality issues, and the predisposition in many countries that existing food safety programs will provide sufficient defense

41. See generally *id.* at 280-93 (providing background on the increased regulation in the European Union in regards to food safety).

42. See Press Release, The White House, Security and Prosperity Partnership of North America Agenda (Mar. 23, 2005), available at <http://www.whitehouse.gov/news/releases/2005/03/20050323-1.html> [hereinafter SPP Agenda].

43. See Press Release, The White House, Joint Statement by President Bush, President Fox, and Prime Minister Martin: Security and Prosperity Partnership of North America (Mar. 23, 2005), available at <http://www.whitehouse.gov/news/releases/2005/03/20050323-2.html>. See generally Security and Prosperity Partnership of North America, <http://www.spp.gov>.

44. See generally Greg Anderson & Christopher Sands, *Negotiating North America: The Security and Prosperity Partnership*, HUDSON INSTITUTE, at 22, (Summer 2007), available at http://hudson.org/files/pdf_upload/HudsonNegotiatingNorthAmericadvanceproof2.pdf (noting that after the first year, “tangible progress on the SPP agenda was difficult to access”).

45. See Security and Prosperity Partnership of North America, *supra* note 43.

46. SPP Agenda, *supra* note 42.

47. See Security and Prosperity Partnership, *2006 Report to Leaders*, http://www.spp.gov/2006_report_to_leaders/index.asp?dName=2006_report_to_leaders; Anderson, *supra* note 44 (observing that many of the areas of progress in the SPP agenda after the first year were primarily bilateral between the U.S. and Canada).

48. See generally Fourth Meeting of the New Defence Agenda’s Bioterrorism Reporting Group Co-Organized with the Chemical and Biological Arm Control Institute (CBACI), Brussels, Belg., Apr. 25, 2005, *Countering Bioterrorism: How Can Europe and the United States Work Together* [hereinafter *Countering Bioterrorism*].

against terrorist acts targeting food.⁴⁹ There is limited consensus on what to actually do to protect the food supply chains.⁵⁰ Even where there is consensus by experts from the various nations joining the discussions, the resulting recommendations have not been followed up. For example, following an informative conference in Brussels in 2005 entitled "Countering Bioterrorism: How can Europe and the United States work together?" the Chemical and Biological Arms Control Institute (CBACI) published a document entitled "Counter Bioterrorism: How can Europe and the United States work together?"⁵¹ While protecting the global food supply system was touched upon in the conference, most of the related discussion focused on existing food safety efforts.⁵² The conference report contains several recommendations, none of which specifically address protecting food systems from intentional contamination or disruption.⁵³

VI. BILATERAL INITIATIVES HAVE GAINED SOME MOMENTUM

There are several bilateral initiatives to develop food system defense programs. The United States has developed useful strategies for combating bioterrorism, including the type of bioterrorism which could target food systems.⁵⁴ To implement these strategies, the U.S. has directly engaged several nations on cooperative efforts, such as Italy, the United Kingdom, Israel, Australia, and Japan.⁵⁵ Yet these efforts are focused primarily on defending and protecting the food supply chains of the participating nations; while these arrangements would certainly provide some limited collateral benefit to the global food supply system, they are not generally directed toward such a broad-based purpose.⁵⁶

49. See generally *id.* at 15 (noting the lack of "real cooperation" displayed between the parties at a recent conference). See also Marc L. Ostfield, Senior Advisor on Bioterrorism, Biodefense, and Health Sec., U.S. Dep't of State, Remarks at NATO Conference on Elements of Combating WMD Terrorism, Intersectoral and International Cooperation on Combating Bioterrorism (Sept. 14, 2005), available at <http://www.state.gov/oes/rls/rm/56614.htm>.

50. See *id.* See generally Countering Bioterrorism, *supra* note 48.

51. Countering Bioterrorism, *supra* note 48.

52. See generally *id.*

53. See *id.* at 6, 9.

54. See Ostfield, *supra* note 49.

55. See generally Sixth Ministerial Meeting on the Global Health Security Initiative, Rome, Italy, Nov. 18, 2005, Statement, available at <http://www.state.gov/oes/rls/or/57804.htm>.

56. *Id.*

Canada, in collaboration with the WHO, established the web-based Global Public Health Information Network (GPHIN),⁵⁷ which employs technology to scan the Web to identify suspected disease outbreaks. This system could aid in detecting and responding to a terrorist attack on food, but it was not specifically created to target food defense needs.⁵⁸ Furthermore, the GPHIN is an example of a primarily unilateral action, even though it was created in collaboration with the WHO.⁵⁹

VII. EFFORTS BY THE UNITED STATES PROVIDE SUBSTANTIVE PROGRESS

The United States also has several unilateral programs to monitor the safety of the food products within the global supply chain. In January of 2003, the President issued Homeland Security Presidential Directive 9, which declared the nation's food supply chain as a Critical Infrastructure and mandated necessary protective actions.⁶⁰ Presidential Directive 9 represents the first time the food supply chain was identified as critical to the nation.⁶¹ This document sets forth actions that will improve the protection of the food supply chain, both within the United States and for our food and agriculture trading partners. U.S. policy clearly appreciates the potential global impact of any serious terrorist strike against the food supply chain. Indeed, Homeland Security Presidential Directive 10, "Biodefense for the 21st Century," specifically states: "[a]ttacks with biological weapons could . . . [c]reate cascading international effects by disrupting and damaging international trade relationships, potentially globalizing the impacts of an attack on United States

57. See Global Public Health Intelligence Network (GPHIN), http://www.phac.aspc.gc.ca/media/nr-rp/2004/2004_gphin-rmispbk_e.html (last visited Sept. 22, 2007).

58. See Global Public Health Intelligence Network, § 2: General Information Regarding the Database, <http://www2.itssti.hc-sc.gc.ca/clf/hecsinventory.nsf/idview/040319101925-JP-YN?OpenDocument&lang=E#sect2> (last visited Sept. 22, 2007). The purpose of the database is

to provide 24 hour-per-day, 7 day-a-week monitoring of global infectious disease outbreaks and natural disasters in terms of the details of outbreak events. The goal is to identify potential international health risks and to provide an early warning to programs and public health clients (e.g., the World Health Organization) who assess and manage risk.

Id.

59. *Id.* § 1 (noting that the database is maintained solely by Health Canada).

60. See Press Release, The White House, Homeland Security Presidential Directive/HSPD-9: Defense of United States Agriculture and Food (Feb. 3, 2004), available at <http://www.whitehouse.gov/news/releases/2004/02/print/20040203-2.html>.

61. See *id.*

soil.”⁶² Furthermore, this document proposes four “Pillars” of a bio-defense program (Threat Awareness, Prevention and Protection, Surveillance and Detection, and Response and Recovery) to “continue to build international coalitions to support these efforts, encouraging increased political and financial support for nonproliferation and threat reduction programs.”⁶³

Recent bioterrorism laws⁶⁴ enacted after 9/11 require advance notification of all movements of food products into the U.S. The United States Department of Agriculture (USDA) has an “Offshore Pest Information System”⁶⁵ program in place in several foreign ports to pre-inspect agricultural products prior to their shipment to the U.S. The Department of Defense (DoD) maintains a program under the Armed Forces Medical Intelligence Center⁶⁶ that monitors potential overseas biological threats to troops deployed in foreign countries that has a direct benefit on our national bio-security efforts.

Finally, while not staffed to optimum levels, according to the recent GAO report,⁶⁷ DHS conducts surveillance on goods shipped into the U.S. as part of a long-established program to prevent the intentional or accidental introduction of biological agents from international shipping arriving in the US via ships, planes, or ground-border crossing points.⁶⁸ Each of these efforts certainly supports overall food supply chain risk reduction in North America, but may provide only minimal added protection to that of the rest of the world.

VIII. HOW DO WE MOVE FROM RHETORIC TO INTERNATIONAL ACTION?

For real progress to be made in defending the global food supply system, the more developed and capable nations must take the lead and follow through on commitments they have already made. At the

62. Press Release, The White House, Homeland Security Presidential Directive/HSPD-10: Biodefense for the 21st Century (Apr. 28, 2004), *available at* <http://www.fas.org/irp/offdocs/nspd/hspd-10.html>.

63. *Id.*

64. See Public Health Security and Bioterrorism Preparedness and Response Act of 2002, Pub. L. No. 107-188 (codified in scattered sections of 42 U.S.C.).

65. See Animal and Plant Health Inspection Service, Crop Biosecurity and Emergency Management, <http://www.aphis.usda.gov/ppq/biosecurity/opis.html> (last visited Sept. 22, 2007).

66. See AFMIC, <http://www.detrack.army.mil/tenants/afmic.cfm> (last visited Sept. 22, 2007) (discussing the Armed Forces Medical Intelligence Center's efforts).

67. U.S. GOV'T ACCOUNTABILITY OFFICE, HOMELAND SECURITY: MUCH IS BEING DONE TO PROTECT AGRICULTURE FROM A TERRORIST ATTACK, BUT IMPORTANT CHALLENGES REMAIN 4, 12 (Mar. 2005).

68. See U.S. Customs & Border Protection, *Agriculture*, May 2006, http://www.cbp.gov/linkhandler/cgov/newsroom/fact_sheets/agriculture/agriculture.ctt/agriculture.pdf.

2004 Sea Island Summit, the *G8 Action Plan on Non-Proliferation* articulated the G8 commitment to defending against bioterrorism.⁶⁹ G8 countries pledged to initiate new bio-surveillance activities, increase protection of the global food supply, and mitigate intentional uses of biological weapons.⁷⁰ Indeed, the G8 Action Plan on Nonproliferation, issued at Sea Island, Georgia, on June 9, 2004, states in paragraph 5:

Bioterrorism poses unique, grave threats to the security of all nations, and could endanger public health and disrupt economies. We commit to concrete national and international steps to: expand or, where necessary, initiate new biosurveillance capabilities to detect bioterror attacks against humans, animals, and crops; improve our prevention and response capabilities; increase protection of the global food supply; and respond to, investigate, and mitigate the effects of alleged uses of biological weapons or suspicious outbreaks of disease.⁷¹

The Sea Island Summit was followed by a G8 Bioterrorism Experts Group (BTEX) meeting in September of 2004 where the issue of the role of the G8 in bioterrorism in general, and defending food supply chains in particular, was broadly discussed.⁷² During this meeting, representatives of several G8 nations took the position that G8 actions duplicated the work of others, such as the Global Health Security Action Group (GHSAG).⁷³ Upon review, however, the efforts proposed for the G8 do not duplicate the GHSAG efforts, and further, the GHSAG does not have the force of action or global standing of the entire G8.⁷⁴ Additionally, directly addressing the protection of the global food supply chain has not been a focus of the GHSAG. Indeed, the report of the Sixth Ministerial meeting on the Global Health Security Initiative from Rome, Italy on November 18, 2005, did not even mention protection of the food chain.⁷⁵ There was also a ministerial statement from the December 2006 GHSAG ministerial meeting in Tokyo, but once again, there was no mention of food defense.⁷⁶

Some G8 representatives have expressed reservations about G8 initiatives because there might be a perception that bioterrorism is

69. G8 Action Plan, *supra* note 18.

70. *Id.*

71. *Id.*

72. Conference on Strengthening European Action on WMD Non-Proliferation and Disarmament: How Can Community Instruments Contribute?, Brussels, Belg., Dec. 7-8, 2005, *From Bio Threat Reduction to Cooperation in Biological Proliferation Prevention: Background Paper 4*, at 32, (prepared by Roger Roffey), available at <http://www.pugwash.se/SIPRIEUPilotBioCTRROffeyBP4.pdf>.

73. *Id.*

74. *See generally id.*

75. *Id.*

76. Seventh Ministerial Meeting on the Global Health Security Initiative, Tokyo, Japan, Dec. 7, 2006, *Ministerial Statements*, available at <http://www.ghsi.ca/english/statementtokyoDec2006.asp>.

only the concern of wealthier nations.⁷⁷ Clearly, if any group of nations is going to act on behalf of protecting the world's food supply chain, it must be the more prosperous ones. Others have expressed concern that measures to protect the global food supply chain might actually end up acting as unintentional trade barriers.⁷⁸ There was also extended discussion about national stockpiles of medical countermeasures (vaccines and drugs) and the problems of exporting and importing "approved" drugs between nations.⁷⁹ As a result, many representatives preferred to focus on the sharing of information about national plans for preparedness and response.⁸⁰ Still, the outcome of this September 2004 G8 BTEX meeting was very promising in three areas⁸¹ identified in the Sea Island report:

I. Strengthening National and International Biosurveillance Capabilities

The group agreed that plant and animal disease surveillance remained a significant weakness in international bioterrorism preparedness and proposed a virtual working group to study ways to strengthen efforts by the FAO and the International Plant Protection Convention (IPPC).⁸² Further, the group agreed to foster information sharing among G8 member states on national zoonotic disease surveillance.⁸³

II. Increasing Protection of Global Food Production and Supply

Recognizing that many member states have their own tools for food supply chain defense, the group requested each member state to share information about its own programs and food system defense tools.⁸⁴ The U.S. agreed to host a risk assessment workshop, which was held in April of 2005.⁸⁵ Most member states provided some level of information. For example, the UK agreed to host a similar workshop on best practices, which was held later that year.⁸⁶ This workshop focused primarily on important areas identified by the regulatory agency of each nation, but it did not provide a forum for exchange of ideas from the private sector,

77. Roffey, *supra* note 72. The author also draws on his experiences participating in G8 discussions on bioterrorism, and his recollection of the statements made by delegates there.

78. *Id.*

79. *Id.*

80. The Author participated in the 2004 and 2005 G8 BTEX meetings as a representative of the U.S. Department of Homeland Security, where at the time he served as the Program Manager, Food & Agriculture within the Infrastructure Partnership Division, Preparedness directorate.

81. Roffey, *supra* note 72, at 32.

82. *Id.*

83. *Id.*

84. *Id.*

85. *Id.*

86. *Id.*

which actually operates the food supply chains of the member states.⁸⁷

III. Improving Response and Mitigation Capabilities

Finally, the group agreed upon the importance of information sharing and its value in identifying strengths and weaknesses in international capabilities and cooperation.⁸⁸ To this end, the group agreed to contribute to a shared listing of planned emergency preparedness events that representatives of other member states might observe.⁸⁹ The group also agreed to continue discussions on legal and licensing issues involved in sharing medical countermeasures.⁹⁰ The group agreed to share national response plans and information on training resources in forensic epidemiology.⁹¹

So, where is the G8 effort today? Unfortunately, not much concrete progress has been made in defense of the global food supply chain. The meetings planned in the U.K. took place with little actual result, and no BTEX meeting took place in Russia.⁹² However, on the positive side, there has been an increase in information sharing. For example, some response and defense plans have been shared (mainly between the U.S., the U.K., and Germany).⁹³ There have also been further discussions on sharing vaccines, but no definitive plans have been made.⁹⁴ Additionally, there have been a few national level exercises where G8 members have served as observers.⁹⁵ Risk- and vulnerability-assessment tools have been shared, but no steps have been taken to broaden their use in defending food supply channels.⁹⁶

The G8 steps proposed in 2004 remain the best proposed action plan to date.⁹⁷ But to see real progress, there must be concurrent commitment to action and enabling resources. If such commitment happens, these steps can have tremendous impact on the overall defense of the food supply systems. For example, we need to build partnerships to create familiarity and function coordination between the various national systems participating. Where appropriate, the community needs to help “partner states” build capacity through technology implementation, process sharing, and exercise facilitation, to both stretch them and provide useful models to employ. Exercises

87. *Id.*

88. *Id.*

89. *Id.*

90. *Id.*

91. *Id.*

92. *Id.*

93. *Id.*

94. *Id.*

95. *Id.*

96. *Id.*

97. G8 Action Plan, *supra* note 18.

also provide threat-stream sharing and risk/vulnerability assessments.

We need to institutionalize the process of international and regional terrorism exercises, particularly for the more ubiquitous open infrastructures, such as the global food supply system. In the 1970s and 1980s, the North Atlantic Treaty Organization (NATO) turned the exercise system into the means to build both partnership and functionality into the alliance.⁹⁸ The result was a formidable defense system made up of parts that did not always mesh perfectly. Not only did the system function effectively, however, but it also stimulated defense improvements in each member state.⁹⁹

Exercises provide a means to build similar partnerships and mold some cohesion into the global food protection efforts of the wealthier nations. They can help nations identify gaps and preparedness, improve risk assessment processes, develop mitigation and protective strategies, and identify technology gaps where Research and Development (R&D) can come into play to develop solutions. These steps will, in turn, stimulate the wealthier nations' own "client" states, with whom they trade, to participate with them in defensive efforts of their mutual food supply chains.

The private sector must also be directly engaged in this process given its fundamental control of the supply system. To facilitate such engagement, the international community must provide mechanisms to protect proprietary information; accordingly, legal definitions and statutes must be developed to uniformly criminalize food terrorism acts. Only when the wealthier, more capable nations take such steps will the rest of the world benefit from a more protected and secure global food supply chain. The United States and the other G8 nations are in the best position, and are the best equipped, to lead such an effort.

IX. GLOBAL FOOD CHAIN DEFENSE PROSPECTS ARE POOR UNLESS THERE IS ACTION ON THE PART OF THE INTERNATIONAL COMMUNITY

Any expectation of a rapid conclusion to the war on terrorism, the use of terrorism by a variety of radical groups, or a near-term conclusive peace in Iraq or Afghanistan is unfounded. The sad reality is that until there is a fundamental change in the culture and educational system in the Muslim community in many parts of the world, there will be no relief from the threat of terrorism. As long as radical extremists have a cause for which they are willing to kill, or

98. *Id.*

99. *Id.*

as long as young Muslims are given a religious education that is based upon an ideology that fanatical Islam must take over the world and that acts of mass murder are the fastest path to Heaven, we will face the dangers of international terrorism. Unfortunately, the means of mass murder have moved beyond guns and bombs. The leaders of such fanatical movements, not limited to Muslim extremists, have demonstrated an interest in finding new ways to attack society. In the case of Muslim extremists, this includes the drive to kill non-believers as well as to intimidate the world to bend to their goals of regional and, ultimately, world domination.¹⁰⁰

Unfortunately, we may be presently suffering from the “stop light” syndrome. At the international cooperative level, we seem unable or unwilling to act until the first major “wreck” occurs. This has historically been the case within many countries (including the U.S.) and is certainly the case with most international cooperative programs. Whether that “wreck” occurs in the U.S. or elsewhere in the world will not matter; from that point forward, absent actions beforehand to protect the global food supply chain, the U.S. public and that of the rest of the world will no longer be able to fully trust their food supply chains. The loss in confidence of the major international private food sector firms would be very detrimental to the equity markets globally—threatening the solvency of firms and markets.¹⁰¹ Probably worse, the public’s confidence in its government’s ability to protect it will forever be shattered in a manner not seen since Europe and Asia faced World War II. The result may well be chaos in U.S. food supply chains, potentially creating new levels of international distrust and suspicion that could make the Cold War seem a very minor concern by comparison.

100. See, e.g., Kenneth Anderson, *Goodbye to All That? A Requiem for Neoconservatism*, 22 AM. U. INT’L L. REV. 277, 318 (2007) (“[T]he [Muslim] extremists fantasize and dream, steeped in the unlimited resentments and unlimited field of action that fantasy allows, of war, jihad, and terror.”).

101. See Jim McWhinney, *Understanding the Consumer Confidence Index*, INVESTOPEDIA, Jan. 6, 2005, <http://www.investopedia.com/articles/05/010604.asp>.
