1540 COMPASS

SUMMER 2012 — VOLUME 1 ISSUE 2

International Atomic Energy Agency promotes and facilitates UNSCR 1540 implementation — p. 25

Building a global biosafety and biosecurity culture with the International Federation of Biosafety Associations — p. 38

Export controls and secure trade in Singapore and Malaysia — p. 17 and p. 22

Dmitriy Nikonov

1540 Compass

http://cits.uga.edu/publications/compass

A journal of views, comments, and ideas for effective implementation of UN Security Council Resolution 1540 to prevent WMD proliferation and terrorism by non-state actors.

Published by the Center for International Trade & Security, University of Georgia in cooperation with the United Nations Office for Disarmament Affairs.

CITS
CENTER FOR INTERNATIONAL TRADE & SECURITY
THE UNIVERSITY OF GEORGIA

UNODA
United Nations Office for Disarmament Affairs

The views expressed within are those of the authors and do not necessarily reflect those of the Center for International Trade & Security or the United Nations.

The Compass welcomes letters and articles from all concerned with 1540 implementation. Articles should be 1,500-2,000 words in length and written in English. Digital photographs should be submitted in their native format, typically JPEG; scanned photographs should be saved in a lossless format like TIFF or BMP. Send submissions to compass@cits.uga.edu.

Contents

From the Editor 2
Igor Khripunov

Letters 3

STRATEGY AND POLICY

A Blueprint of CBRN Security Culture 8
Igor Khripunov, Arthur Eyzaguirre, Jessica Alcorn

Developing National Legislation for Nuclear Security 12
Carlton Stoiber

REGIONAL AND NATIONAL FOCUS

Export Controls in the ASEAN Region 17
George Tan

Facilitating Trade in a Secure Trading Environment 22
Mohamed Shahabar Abdul Kareem

INTERNATIONAL ORGANIZATIONS

IAEA: 1540 Promoter, Facilitator, and Implementer 25
Khammar Mrabit

The Centres of Excellence: A New 1540 Player 30
Marian de Bruijn, Odhran McCarthy

STAKEHOLDERS' PERSPECTIVE

VERTIC: Legal and Regulatory Assistance 33
Rocío Escauriaza Leal

Building a Global Biosafety and Biosecurity Culture 38
Maureen Ellis, RBP

DOCUMENTS AND EVENTS

Conference of International, Regional and Sub-regional Industry Associations on UNSCR 1540 42
Claudia Schneider

Events of Interest 45

From the Editor:

This second issue of the 1540 Compass is a step forward toward our goals of clear, specific, interactive commentary on matters of vital interest—as originally set forth as the rationale for the journal. It is heartening that the first issue elicited much reaction from our readers, as reflected in our Discussion Forum. Their letters cover diverse topics, ranging from specific suggestions, ideas, and feedback to announcements of upcoming events. We would like to strongly encourage our readers to follow this example and likewise contribute to the Forum. I am particularly interested in your recommendations for topics to be covered in our next issues and on how to make the journal relevant to your intellectual and professional needs. Also, we will appreciate your contributions to "Events of Interest," the last section of this issue, which lists future conferences, workshops, and meetings that have a bearing on UNSCR 1540.

This issue features more actionable, more user-friendly content. This is the course the journal will stay on in the future. You will read about ongoing efforts to develop a concept of chemical, biological, radiological, and nuclear (CBRN) security culture—a project for which UN Security Council resolution (UNSCR) 1540 may become an effective vehicle, given its multidimensional nature and coverage. This issue provides useful tips for countries that are planning or in the process of developing national laws on nuclear security but want to avoid legal and other pitfalls. Two articles from Southeast Asia provide regional and national perspectives on emerging export control systems but caution that adoption of laws and regulations is just the beginning of a prolonged, arduous road to consistent implementation. We previously highlighted the Organization for the Prohibition of Chemical Weapons (OPCW) as an international 1540 player. We now highlight the International Atomic Energy Agency (IAEA).

We will continue to introduce 1540 stakeholders to you who can provide assistance, offer additional implementation tools, or even take the lead in promoting high standards of security. The World Federation of Biosafety Associations is one stakeholder among many. Last but not least, this issue is about specific steps to put the provisions of UNSCR 1977 (2011) into effect. Last April's Industry Forum in Wiesbaden, Germany brought together the global business community to debate security-related matters. It was the first such gathering.

I hope you will find this issue engaging, informative, and thought-provoking. Letters from Our Readers

IGOR KHRIPUNOV
EDITOR, 1540 COMPASS
CENTER FOR INTERNATIONAL TRADE & SECURITY

Tarnow Chemical Plant is Poland's leading manufacturer of engineering plastics, mineral fertilizers, and chemicals.

CHEMICAL SAFETY AND SECURITY

The first issue of the 1540 Compass included an article which described in detail the contribution of the Organization for the Prohibition of Chemical Weapons to achieving the objectives of UNSCR 1540 implementation. Indeed, chemical terrorism by non-state actors are on the list of the threats covered by the resolution. In this context, it would be of interest to Compass readers to know about the initiative by Poland to launch the new International Center for Chemical Safety and Security. Located in the city of Tarnow and established in October 2011, the Center's mission is to respond to challenges resulting from the fast growth of the chemical industry and globalized access to chemicals, whose safety and security of production, infrastructure, and supply chain have become a priority for all stakeholders: government, industry, local communities, and NGOs.

The next step will be to hold an international conference on chemical safety and security, tentatively scheduled for November 8-9, 2012 in Tarnow. The event will be co-organized with the G8 Global Partnership, pertinent international organizations, and the business and academic communities. It is expected that the meeting will consider and adopt the Tarnow Declaration on Global Chemical Safety and Security Culture, among other documents. For those Compass readers who want to learn more about the Tarnow Center and its future activities, contact me at l.blancha@umt.tarnow.pl.

Lukasz Blacha
COORDINATOR OF THE TARNOW CENTER
TARNOW, POLAND

CHINA AND UNSCR 1540

Let me first congratulate you for your success in launching the 1540 Compass. The international effort to stop the dangerous flow of weapons of mass destruction (WMD) has been enhanced by your endeavor in this publication, including its translation into Spanish, French, and Arabic.

I would suggest that a further boost might come from translating the 1540 Compass into Chinese. Obviously, China shares the goal of defeating such proliferation of weapons of mass destruction, and has taken various national measures and sought international cooperation for this purpose. Nevertheless, threats of this nature will not cease in the short term, and continued government efforts with public support are essential to thwart this danger.

Despite the fact that there has been already some quite significant academic and policy research and publications in China on the issue of the UNSCR 1540 and its follow-up in UNSCR 1977, the introduction of a Chinese version of 1540 Compass would supply our government and public more convenient access to international deliberations on this subject.

The first issue of 1540 Compass has well described the strategic development of global efforts to combat weapons of mass destruction since the making of UNSCR 1540 eight years ago. It is interesting to see how this has promoted various regional efforts to strengthen the work of fighting trafficking of materials and technologies associated with the deadly weapons. Also, it has introduced a number of international organizations to help implement UNSCR 1540 since then.

While the 1540 Compass has established itself as a leading publication in addressing a topic at the frontier of international security issues, China, as a key stakeholder in this global cooperation, could derive more benefit from a Chinese version, and contribute better to the publication its own thoughts and experiences. The 1540 Compass could serve better as an exchange and educational tool, and interact more effectively with the most populous country in the world.

Shen Dingli
PROFESSOR AND EXECUTIVE DEAN, INSTITUTE OF INTERNATIONAL STUDIES
FUDAN UNIVERSITY, SHANGHAI, CHINA

INDONESIA: NUCLEAR SECURITY LEGISLATIVE FRAMEWORK

The extension of UNSCR 1540 (2004) is an indication that the world community has embarked on a long-term campaign to prevent sub-state actors from acquiring and using weapons of mass destruction and related materials. The protection against the theft or sabotage of nuclear materials and facilities by terrorist or criminal groups, as outlined by UNSCR 1540, is a major focus for Indonesia, a country that has felt the atrocities of terrorism.

To this end, Indonesia's contribution to the March 2012 Nuclear Security Summit was its proposal to create a national legislation kit designed to facilitate the legislative process in individual countries and strengthen their nuclear security regimes. This initiative was supported by 27 countries that participated in the Seoul Summit. It can provide states with references to a wide array of consolidated elements and provisions from different nuclear security conventions and treaties, as well as other international legal instruments and frameworks. The main challenge in developing such comprehensive model legislation is the fact that there are often many overlapping international instruments, some of which are legally binding in nature, while others are voluntary or nonbinding. At the national level, their implementation involves a wide range of stakeholders whose roles need to be defined on the basis of international best-practice sharing and adjusted to requirements in each country.

One of the recommended actions in the post-Seoul Summit period is to assign a coordinating role to the International Atomic Energy Agency (IAEA) in drawing up such a single, user-friendly reference. It is my humble opinion that these global efforts must involve the 1540 Committee as a major player. After all, UNSCR 1540 speaks of the need to "adopt and enforce appropriate effective laws which prohibit any non-state actor to manufacture, acquire, process, develop, transport, transfer, or use nuclear, chemical, or biological weapons and their means of delivery, in particular for terrorist purposes..."

Khairul Khairul
PHYSICAL PROTECTION MANAGER
NATIONAL ATOMIC ENERGY AGENCY, INDONESIA

THE EUROPEAN UNION AS A 1540 REGIONAL PLAYER

Reading resolution 1977 from last year, it is clear that one key issue for the extended ten-year mandate of the 1540 Committee is strengthening implementation through cooperation. In the text of the resolution, the UN Security Council repeatedly urges the 1540 Committee, regional organizations, and states to enhance their cooperation, information sharing, exchanges of best practices, and transparency in assistance programs to fully implement resolution 1540.

The space designated for a cooperative and transparent assistance process in resolution 1977 raises questions about the current dynamics among the Committee, states, and regional/international organizations in implementing the assistance part of resolution 1540. Although there are shared objectives among stakeholders, each has specific mandates, skills, legal and political frameworks, exposures, and so on, that are not fully identified in states' national reports to the Committee. The 1540 Committee's first outreach to industry in April 2012 raised hopes that the network of potential assistance providers will be even more versatile in the future. For the purpose of implementing the mandates of resolutions 1540 and 1977, it seems important to improve our understanding of the institutional constraints under which the different actors operate.

The European Union is an interesting case to study in this regard. Although not specifically mentioned in the resolutions, the European Union ought to be one of the regional organizations most fully engaged in implementation. Twenty-one of 27 EU member states report having assistance programs in place and being willing to further engage in either bilateral or multilateral assistance programs. In addition, all EU member states fund assistance programs through the EU budget, two of which have directly targeted facilitating the work of the 1540 Committee since 2004. The European Union, however, is not a unitary actor but consists of member states, various institutions, technical organizations, civil society, and industry. Who are the main European actors in helping states implement resolution 1540, and what are the trends in the assistance based on which actor provides the assistance? What forms does assistance take, and how transparent is the process? These are some of the

questions I intend to explore in my work at the Stockholm International Peace Research Institute.

Lina Grip
RESEARCHER, ARMS CONTROL AND NONPROLIFERATION PROGRAM
STOCKHOLM INTERNATIONAL PEACE RESEARCH INSTITUTE, SWEDEN

KYRGYZSTAN: NATIONAL ACTION PLAN

A challenge to some young, independent countries whose political systems have yet to reach full maturity is to develop interagency coordination among all national players involved in implementing UNSCR 1540. In this sense, as suggested by UNSCR 1977, a significant step forward would be to develop a national implementation plan which can help map out 1540-related national priorities and programs.

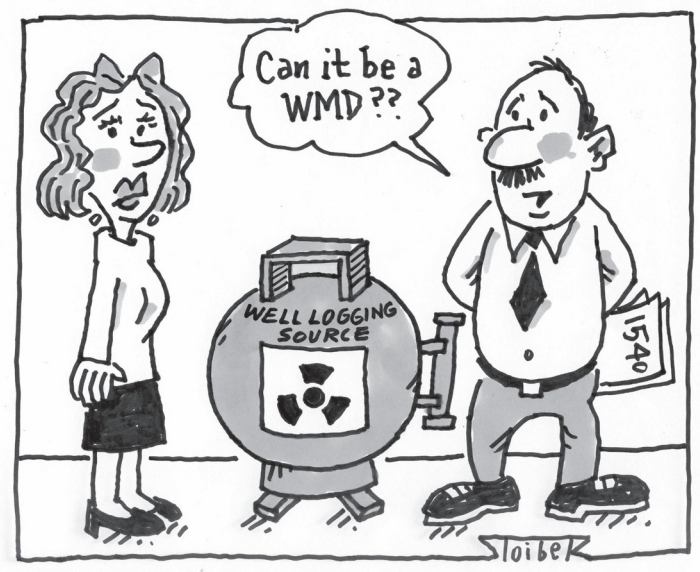
The action plan, in the view of Kyrgyzstan, can become an important vehicle for coordination among relevant ministries and agencies, as well as enhance the overall effectiveness of national governance as a spillover effect. The UNSCR 1540 Workshop held in September 2011 in Astana, Kazakhstan, provided an opportunity to establish working contacts with international counterparts and request assistance in developing the national action plan.

Concurrently, the Kyrgyz government set up an interagency group charged with this task. With the support of the Organization for Security and Cooperation in Europe (OSCE), the interagency group held consultations with international experts in Bishkek and Vienna regarding the format and the content of this plan. The Kyrgyz government is expected to approve the plan before the end of this year. In the long-term perspective, the action plan will enable Kyrgyzstan to streamline the assistance programs supported by donors and serve as a roadmap for complying with its international obligations in the areas of nonproliferation, security, and counterterrorism.

Taalaibek Bektashev
HEAD OF TRADE POLICY DEPARTMENT
MINISTRY OF ECONOMY AND ANTIMONOPOLY POLICY, KYRGYZ REPUBLIC

WMD OR CBRN?

Last year's decision to extend the mandate of the 1540 Committee for ten years offers a welcome opportunity not just to rush ahead, but to step back and



think about the whole process, and perhaps make adjustments.

My first comment regards the relationship between the 1540 regime and other, related regimes: while the inclusive approach adopted in the 1540 resolution (I mean, dealing with various WMD together) has its advantages, more thought should be given to how better avoid duplication and work towards better interoperability instead. This is a delicate task because the Committee cannot coordinate existing, autonomous regimes. But it may help them generate new ideas and at the same time learn from them. The regimes are evolving, in part because they are completing some of their mandated tasks (like the destruction of chemical-weapons stockpiles under the Chemical Weapons Convention (CWC)), in part in response to developments in science and technology (such as the process of convergence of chemistry and biology, which is bringing new challenges for both the Biological and Toxin Weapons Convention (BWC) and CWC). The OPCW, which already has a Scientific Advisory Board, recently decided to add the post of Science Advisor to its staffing structure. The 1540 Committee may also wish to think about how it could be better connected to science, as well as how to make its mission more able to respond to rapidly evolving programs in science and technology.

My second comment is about the 1540 process, which has given rise to some confusion over the definition of weapons of mass destruction. Since 1948, the United Nations has considered WMD "to include atomic explosive weapons, radioactive material weapons, lethal chemical and biological weapons..." (Resolution of the Commission for Conventional Armaments, August 12, 1948). Resolution 1540 did not

intend to give a new definition because its provisions are based on the existing norms of international law, such as the Nonproliferation Treaty, CWC, and BWC. But we have no treaty on radiological weapons. In the process of implementation, two things happened. The first is that a widely shared perception has emerged that the 1540 Committee is dealing with all weapons of mass destruction, including radiological weapons. Many combine them under the abbreviation "CBRN" (chemical, biological, radiological, and nuclear). Secondly, this perception is being reinforced by the work on the ground. This includes national legislation, practical national measures, and the IAEA's efforts to enhance the security of radioactive sources. Such sources might not be suitable for actual nuclear weapons but are very attractive to non-state actors who wish to construct and explode a radiological device. Yet language of 1540 does not include radiological weapons. Maybe it is time for an international norm against such weapons as well?

About 30 years ago, the United States and the USSR submitted a proposal for a ban on radiological weapons to the Conference on Disarmament. It did not fly, because nobody considered such weapons to be a real threat—rightly so in those days. Maybe, with the emerging threat of non-state actors, the situation has changed?

Amb. Sergey Batsanov
DIRECTOR, GENEVA OFFICE, PUGWASH CONFERENCES ON SCIENCE AND WORLD AFFAIRS
MEMBER OF PUGWASH COUNCIL

WIESBADEN INITIATIVE

The World Nuclear Association (WNA) was pleased to participate in the April 2012 Wiesbaden Conference, which focused on UNSCR 1540 (2004) implementation. The World Nuclear Association represents the nuclear industry across the entire supply-chain spectrum, from mining, to construction of new facilities, to transportation, to power generation, to decommissioning, and finally to waste management.

Many countries have now updated their laws to take account of their responsibilities under UNSCR 1540 (2004), and the next phase involves implementing and consolidating the regulatory framework. This is where 1540 and governments need assistance from industry. The 1540 Committee was considering holding dialogue events with industry on a sector or regional basis, and this outreach formed a key part of its work program in Wiesbaden. WNA welcomes this initiative.

> The Conference of International, Regional, and Sub-Regional Industry Associations on UNSCR 1540 was held on 23-25 April. The Conference sought to both enhance ways to work with industries in promoting progress towards the objectives of UNSCR 1540, as well as to draw on relevant expertise from various industry associations and sectors. Participants that represented the nuclear, biological, chemical, transport, finance, and aerospace industries hailed from over 25 international, regional, and subregional associations with constituencies in more than 100 different countries.

Industry plays a vital role in safeguarding nuclear technology, radiological and fissile materials, and dual-use equipment. It is a rule-taker, not a rule-maker, and it is therefore important that regulations be consistent, coherent, and clear. Companies in the nuclear sector already operate quality control systems that incorporate regulations to ensure a high degree of safety and security. Many have adopted human performance improvement programs to support their safety culture and consistently achieve best-in-class performance from their staff and contractors.

WNA would like export control departments and customs officials to recognize that if a company's internal controls on sales and procurement are satisfactory, then they are accepted as authorized economic operators, and granted general licenses to transfer technology and move goods and materials. Governments need to work more closely to reduce the differences in export and import regulations as the nuclear power sector becomes a global industry. We are seeing Korea export reactor technology to the Middle East, Russian and French companies winning contracts in India and China, and U.S. companies transferring technology to Chinese peers to develop new reactor designs. It is an international industry, worth $1.5 trillion in anticipated investment over the next two decades. We need a control regime that facilitates trade while safeguarding the technology against misappropriation, and which no longer relies on an outdated model that assumes that nuclear power is enclosed within impermeable borders.

Greg Kaser
SENIOR PROJECT MANAGER, WORLD NUCLEAR ASSOCIATION

WIESBADEN CONFERENCE

The Wiesbaden Conference was a kickoff for a process in which industry, authorities from different international and regional organizations, and the security community had a chance to learn more about one another's concerns, approaches, and regimes. Hopefully, this process will lead to more understanding, acceptance, and trust among different players. The outcome of this process should be a regime which is as harmonized as possible, letting it meet security concerns while being deemed appropriate and proportionate by those who are to comply with it.

The European Association of the Chemical Distributors (Fecc) and its members, which represent national associations, have been engaged in raising awareness and developing relevant voluntary measures. Against the background of the worldwide Responsible Care/Responsible Distribution Initiative, the Fecc takes its responsibility seriously and facilitates close cooperation with national authorities to prevent any abuse of chemicals, especially by terrorists. The Fecc is a partner in implementing the EU CBRN Action plan.

The Wiesbaden Conference is just the first step toward an acceptable approach which balances effective implementation with a common vision of security. This dialogue and exchange of experience needs to be continued.

Ralph Alberti
CHAIRMAN, PRECURSORS COMMITTEE, EUROPEAN ASSOCIATION OF CHEMICAL DISTRIBUTORS
DIRECTOR OF GERMAN ASSOCIATION OF CHEMICAL DISTRIBUTORS (VCH)

A Blueprint of CBRN Security Culture

Igor Khripunov
CENTER FOR INTERNATIONAL TRADE & SECURITY
UNIVERSITY OF GEORGIA, USA

Arthur Eyzaguirre
RESEARCH ASSOCIATE
CENTER FOR INTERNATIONAL TRADE & SECURITY

Jessica Alcorn
RESEARCH ASSISTANT
CENTER FOR INTERNATIONAL TRADE & SECURITY

The unanimous adoption of UN Security Council resolution (UNSCR) 1977 (2011) did not just extend the timeframe of the 1540 Committee, but made a significant step toward institutionalizing the 1540 process—a process designed to prevent proliferation of weapons of mass destruction (WMD) while keeping these deadly weapons out of the hands of sub-state actors. Its provisions encourage all states to prepare national implementation action plans and to promote the sharing of experience, lessons learned, and effective practices in areas covered by UNSCR 1540. Hence, one of the major tasks to keep this emerging institution on track is to identify a common foundation for threat perceptions and compliance motivation among all those who are supposed to organize, promote, and implement this process in the evolving threat environment.

WHY CBRN SECURITY CULTURE?

A practical tool to achieve this goal is to develop a comprehensive vision of security culture that is applicable to the expanding, very long-term mission of UNSCR 1540. That security culture enhances and supports the security regime was unambiguously recognized by the 2010 and 2012 Nuclear Security Summits. Held in Seoul, the 2012 summit adopted not just a summit communiqué but several statements about individual components of nuclear security. These documents specifically cite the human element as key to achieving such goals as physical protection, transport, and IT security. There are at least four reasons why a common paradigm of security culture—a paradigm that applies to the chemical, biological, radiological, and nuclear fields alike—is becoming a necessity.

Model of nuclear security culture. Source: "Nuclear Security Culture Implementing Guide" IAEA Nuclear Security Series #7, 2008.

1. If we agree that extending 1540 represents a step toward institutionalizing the resolution, then institutions or organizations active in this area must instill common beliefs, assumptions, and values in their workforces. In short, they need to adjust their cultures to the new norms codified by 1540. Without a robust, comprehensive culture reinforcing the counter-WMD mandate, an institution risks falling short of even modest expectations. The goal of sustainability will remain out of reach.

2. Unquestionably, UNSCR 1540's strength lies in its mandatory legal status for all UN member states, and in states' recognition that it helps fill gaps in the international legal framework. The challenge is how to enlist nongovernmental stakeholders whom the resolution does not bind. Such stakeholders include the business community, academia, nongovernmental institutions, and the public. Culture is a crucial motivator where the force of law is lacking.

3. Breakthroughs in science and technology tend to blur the traditional dividing lines between the chemical, biological, radiological, and nuclear domains, affecting more than one domain at the same time. Moreover, modern technologies and their products are less susceptible to the regulatory process. Control of them—at least in the initial stages—depends increasingly on the discretion of human decisionmakers and their perceptions of security. One example is biosynthesis, which allows re-

placement of the original genome in bacterial cells with synthetically produced genomes. This "synthetic biology" produces bacterial cells with new properties. These advances promise many benefits to humankind, but they remain outside the international legal framework and could be used to produce toxic chemicals and toxins through "biologically mediated processes." Another cross-cutting science-driven phenomenon is nanotechnology, which could facilitate miniaturization of nuclear explosive devices to evade detection. Like biosynthesis, attempts to cover molecular nanotechnologies through existing treaties for chemical and biological weapons could be ineffective: their civilian uses are widespread, and there is no direct evidence that they are being put to military use though such eventuality cannot be excluded in the long-term perspective. So far, the driving force for keeping such technologies out of hostile hands comes from nonproliferation advocates and security-conscious personnel.

4. Developing a model for a sustainable CBRN culture would help countries that lack relevant experience and expertise understand the role of the human factor, and enhance security culture as they commission state-of-the-art research and production facilities. A universal methodology and common foundation would help them build national human capacity. On the other hand, if specialists in the chemical, biological, radiological, and nuclear "silos" continue to lack lines of communication and to compete with one another for attention and funding, the nation's defenses will remain porous.

DEFINITION OF SECURITY CULTURE

Of the four CBRN silos, the nuclear sector has made the most progress toward conceptualizing and promoting security culture. The IAEA security-culture design is based on the organizational-culture model devised by Professor Edgar Schein of the Massachusetts Institute of Technology. Schein's model was successfully used in the 1990s to develop nuclear safety culture. The 1986 Chernobyl accident had exposed disastrous human shortcomings, demonstrating that such a culture was indispensable. Chernobyl applied a catalyst for reform.

Schein envisions culture in organizations as existing in layers comprised of underlying assumptions, espoused values, and artifacts. Some of the layers are directly observable, while others are invisible and must be deduced from observing the organization.

Using the three layers of culture as an underlying approach, the IAEA released the "Nuclear Security Culture: Implementing Guide" in 2008 as No. 7 in its Nuclear Security Series. It defined nuclear security culture as the "assembly of characteristics, attitudes, and behavior of individuals, organizations, and institutions which serves as a means to support and enhance nuclear security."

The IAEA model for nuclear security culture breaks the artifacts—the third element of culture—into three categories, yielding a total of five elements (see Figure 1). They are: a) beliefs and attitudes ("The threat is real and security is important"); b) principles for guiding decisions and behavior; c) leadership behavior (specific patterns of behavior and actions which are designed to foster more effective nuclear security); d) management security systems (processes, procedures, and programs which make security a priority and have an impact on the security functions); and e) personnel behavior (the desired outcome of the leadership's efforts and the operation of management systems).

The IAEA has accumulated vast experience in promoting nuclear security throughout the global nuclear sector and is prepared, according to its leadership, to share its best practices with counterparts in the chemical and biological silos. This can contribute usefully to a common architecture of CBRN security culture.

Security culture does exist in many areas beyond the nuclear domain, helping safeguard sensitive materials, protect assets, and prevent acts of sabotage. But efforts to promote and implement culture remain largely isolated from one another absent sufficient horizontal communication. Security experts espouse similar ideas and concepts, but they need a continuous forum to achieve cross-fertilization. For example, an objective of a recently launched project on the "OPCW as a Platform for Enhancing Security

at Chemical Plants" is to establish "a chemical security culture." Documents from the World Health Organization refer to "responsible laboratory practices," defined as protection and control of, and accountability for, sensitive biological materials. Such practices help prevent unauthorized access to or the loss, theft, misuse, diversion, or intentional release of these substances. The International Federation of Biosafety Associations (IFBA) has launched a five-year strategic plan whose mission is defined as "Safe, Secure, and Responsible Work with Biological Materials," but the term "culture" has yet to be embedded firmly in professional parlance. What needs to be done collectively is to identify synergies and build a common approach that yields a shared vision of CBRN security culture, helping deal with current and future risks.

WORK IN PROGRESS

A jointly developed, mutually acceptable methodology for assessing risk, measuring cultural characteristics, conducting evaluations, and monitoring and improving cultural standards constitute an important building block for a common CBRN security culture. Among the most important characteristics are accountability, professionalism, compliance, and vigilance. To instill such characteristics, leaders of organizations must drive efforts to build and improve culture, and they must act as role models for their employees.

The value of CBRN security culture is that it will motivate workforces to comply meticulously with security requirements, select the correct course of action from multiple options, and improvise effectively in the face of the unknown. CBRN security culture is most important at the organizational and individual levels, but its goals can be fully achieved only with adequate input from the national and international levels. At the same time, CBRN security culture will have the most staying power if its underlying standards are embedded in societal values, traditions, and best practices.

A blueprint for a holistic security culture is gradually taking shape. In February 2012, the Center for International Trade and Security (CITS/UGA) in cooperation with the UN Office for Disarmament Affairs hosted a workshop entitled "In Search of Sustainable CBRN Security Culture." The workshop brought together members of the chemical, biological, radiological, and nuclear sectors to begin discussing a comprehensive framework for security culture. The first workshop report, "Radiological and Nuclear Security Culture: A Post-Seoul Summit Agenda," was released in mid-March 2012, before the Seoul Summit. A second, more comprehensive report will come out of this workshop before the end of the year. It will use the roundtable discussion from the workshop as the basis for a preliminary design for a sustainable CBRN security culture.

There are many roadblocks to a common CBRN security culture, but culture promises to become an important item on the agenda of the 2016 review process for UNSCR 1540 and to be enshrined in national and international documents. After all, there is no way to make scientific and technical progress safe and secure without making allies of the people entrusted with handling valuable yet deadly substances and operating sensitive facilities.

Developing National Legislation for Nuclear Security

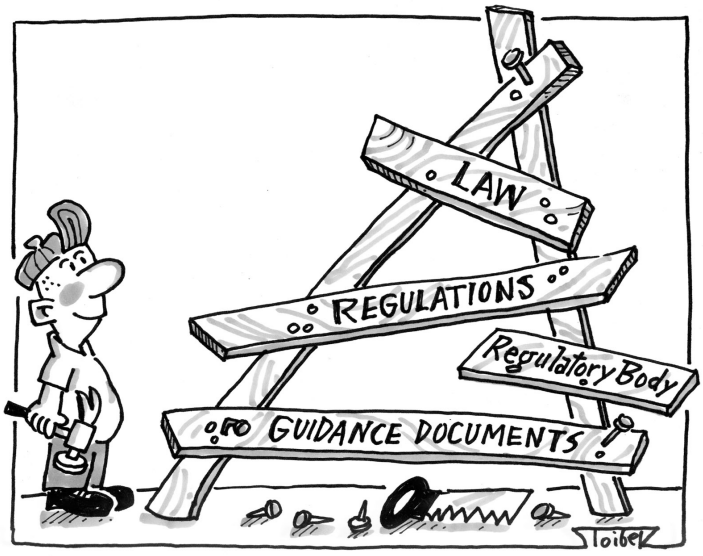
Priority Issues and Basic Approaches

Carlton Stoiber
CHAIRMAN, NUCLEAR SECURITY WORKING GROUP
INTERNATIONAL NUCLEAR LAW ASSOCIATION

In Operative Paragraph 2 of UNSCR 1540, the Security Council decides that all states "shall adopt and enforce effective laws" which prohibit non-state actors from conducting activities related to the development or use of weapons of mass destruction, including nuclear weapons. This article is intended to provide an overview of procedures, elements, and issues relevant for the drafting of national legislation addressing nuclear security. The primary focus of international nuclear lawmaking prior to major terrorist events early in this century was on restraining the proliferation of nuclear weapons. However, after the 9/11 incidents in the United States and similar events in other states, attention has turned increasingly to the threat that terrorists or criminal elements might acquire nuclear or radioactive materials and use them to develop explosives or radiological dispersal devices (dirty bombs), to sabotage nuclear facilities or transport conveyances, or simply to terrorize governments and populations. UNSCR 1540 reflects this broader perspective. Because the field has seen such active recent development, many states should consider whether they should adopt new legislation or revise existing legislation on nuclear security to harmonize their national systems with this developing international legal framework.

CONCEPTUAL APPROACHES

It is recognized that a state's legal and institutional arrangements for nuclear security, as in other fields, must be consistent with its own constitutional structure and legal practices and its social, economic, and cultural values and traditions. Each state will have its own procedure for legislative development. Following normal practice can avoid unproductive debates over formalities and unnecessary delay in the legislative process. Also, a familiar legal structure can be more acceptable to stakeholders, thereby making implementation easier. The substantive elements of a national



law will need to comply with a range of international instruments and guidance documents. A harmonized and consistent approach with international practice will be important for securing assistance and cooperation in dealing with nuclear security issues that may arise, as well as for enhancing mutual efforts to combat potential nuclear security threats, including terrorism. For these reasons, additional or enhanced procedures for developing nuclear security legislation may be warranted.

A threshold issue in drafting nuclear security legislation is whether it should be included in a unified or comprehensive law covering all aspects of nuclear technology in a state, or whether nuclear security should be dealt with separately in a specific law. Another approach adopted in some states is to include nuclear security in broader legislation covering all aspects of national security, including other technologies or threats. A unified or comprehensive law can include common elements (such as licensing) that apply to a range of subjects, thereby avoiding repetition or confusing cross-referencing of provisions in different laws. Also, a unified law helps avoid any inconsistency among separate laws that complicates interpretation of how their provisions are to be applied. Finally, a

unified law is often easier to access and understand for stakeholders who must apply its provisions. In the final analysis, however, the question of which model should be adopted is a matter of judgment by the particular state. Whatever model is adopted, the primary objectives for drafters are clarity, completeness, consistency, and ease of application.

State practice varies widely on the issue of how detailed legislation needs to be to ensure effective implementation. In some states, very detailed (often referred to as "prescriptive") legislation is drafted. In other states, only the main elements are included, with details left to implementing regulations (sometimes called "subsidiary legislation") that are adopted by governmental bodies such as the nuclear regulatory authority. Both approaches have their strengths and weaknesses. Prescriptive laws may provide greater guidance to stakeholders about legal requirements. However, very detailed laws may need frequent revision to address technical, economic, social, or other types of change. Revising primary legislation is typically much more difficult and time-consuming than amending regulations. What is important is that national legislation clearly assign basic responsibilities for nuclear security and reflect the obligations of international instruments to which the state is a party. The model provisions for nuclear security included in Volume II of the IAEA Handbook on Nuclear Law reflect a non-prescriptive approach that reserves detailed guidance to implementing regulations.

PARTICIPANTS IN THE PROCESS

Nuclear security legislation can involve complex technical issues unfamiliar to persons typically responsible for drafting laws. For this reason, initial preparation of such legislation is often assigned to a body with technical expertise, such as a nuclear regulatory authority or an energy ministry or department. While this may help resolve some technical questions, there are other dimensions to nuclear security law that technical experts may not adequately comprehend, including criminal legal matters or the organizational responsibilities of various security agencies.

Legislative development in any field requires that stakeholders—persons, groups, or organizations with interests that may be affected—be involved in the process at the appropriate stage and the appropriate level. Organizing stakeholder participation can raise complex issues regarding potential conflicts of interest, objectivity, and general policy matters. For example, while a party with a direct economic interest in an activity that also has significant public-policy implications should have an opportunity to explain how its interest may be affected, that party should not exercise undue influence or control over developing the legislation.

Several means can be used to solicit and obtain stakeholder input. Public meetings can be convened to explain a legislative initiative and to receive verbal or written comments. A public notice can describe proposed legislation and request comments within a specified period. Electronic means are increasingly used. Many states now place legislative proposals (including even a draft text) on a website while providing an opportunity for comment by electronic mail (e-mail). Early input from the most directly affected stakeholders can be valuable to clarify difficult issues and avoid provisions that are either unneeded, impracticable, or otherwise unacceptable. Additional involvement can be arranged at later stages in the process, particularly for stakeholders with less direct interests. Finally, when a legislative or regulatory proposal is mature enough for the legislature or responsible executive or regulatory body (e.g., parliament, congress, cabinet of ministers) to act on it, a formal hearing may be conducted to receive stakeholder views.

Who are the most significant stakeholders for nuclear security legislation? The following is only a summary listing of persons or organizations most likely to be affected by such legislation:

- Regulated users or licensees will have to apply various security measures, bear the costs of these measures, and deal with security violations and incidents.

- The governmental body responsible for nuclear regulation will need to promulgate regulations and procedures, issue authorizations or licenses, conduct monitoring and inspection, participate in enforcement measures, and provide public information for nuclear security.

- The governmental body responsible for energy policy and development may need to ap-

ply measures to its own facilities while guiding nuclear development policies.

- Law-enforcement agencies (including police) will implement legislative provisions concerning criminal activity involving nuclear and radioactive materials and technology.

- Border control, customs, and immigration agencies will implement controls on movement of controlled materials, technology, and persons relevant to nuclear security.

- The organization(s) responsible for international trade and strategic trade controls will provide a perspective on how controls over nuclear commodities can be implemented in a manner consistent with other applicable laws and procedures.

- Emergency preparedness and response agencies will implement measures to prevent and respond to nuclear security incidents.

- National intelligence agencies will implement measures to identify threats to nuclear security.

- Other national governmental organizations with related responsibilities (e.g., the environment, administration of justice, administrative law, worker protection, transportation) will supply insights into how the legislation will affect their areas of responsibility.

- Scientific bodies (academic institutions, academies of sciences, etc.) can contribute to the technical aspects of legislation.

- Local and regional governments can offer perspective on how measures would affect their responsibilities.

- The press and media will be involved in providing public information on nuclear security measures, and on threats or incidents.

- Interest groups (environmental, energy policy, etc.) and industry or other associations can offer their perspectives on general policy issues as well as specific drafting matters.

- Community groups and the public can voice views on how legislation could influence their interests.

- International organizations (particularly the IAEA) can help harmonize national laws with international instruments and best practices.

- Other states (particularly those in the vicinity of nuclear facilities) may need to take action during nuclear security incidents.

This listing is not intended to be comprehensive. However, experience indicates that effective development and implementation of nuclear security legislation can be significantly enhanced by providing these interested parties the opportunity to participate in the legislative and regulatory process.

ASSESSMENT OF NATIONAL PLANS AND LEGAL FRAMEWORK

A fundamental aspect of drafting nuclear security legislation is an accurate assessment of current and reasonably foreseeable nuclear activities that take place in the state. If only limited activities (such as the use of radioactive sources in medicine, industry, and agriculture) are contemplated, the scope of a law on nuclear security can be much narrower than for a state with an ambitious program for nuclear power. However, since the development of legislation in any area can be complex and time-consuming, adopting a broader scope for a program that remains in its early stages reduces the need for repeated amendments or new legislation to cover future activities. Well before a law is drafted, the government should survey its current and expected future nuclear program, soliciting input from all relevant governmental bodies and selected stakeholders (particularly users and licensees). It must be recognized that nuclear development, particularly for commercial power, can be controversial. Difficulties in drafting nuclear legislation can be significantly reduced if fundamental policy decisions about the scope of the national nuclear program are made before the drafting process begins.

An assessment of the existing legal and regulatory framework should be conducted. Many different laws and regulatory arrangements in a state are relevant to implementing a nuclear program. Failure to ensure consistency between a law on nuclear security and

other legislation can produce confusion, inconsistency, and implementation problems. Indeed, experience demonstrates that clarifying the relationship of a nuclear law with other laws is not only essential but difficult. There are several ways to manage other laws or regulatory regimes. This depends on state practice. An obvious approach is to determine which other laws need to be amended or revised to conform to the regime established under a nuclear security law.

This can be a complicated process involving many laws, some with only a single or few inconsistent or conflicting provisions. In one case familiar to me, some 75 separate laws in a state preparing nuclear legislation needed to be considered for revision. And, of course, the process of amending a large number of laws is time-consuming and difficult. Another approach is to include a provision in the nuclear security law stating that its provisions prevail over those in other laws if a conflict occurs. This concept of having the most recently enacted law (in this case, the nuclear security law) take precedence in case of conflicts with earlier laws constitutes a simple mechanism for resolving conflicts. However, this approach is not used in some states. In practice it depends on an efficient dispute resolution process. Otherwise, applying such a provision can result in protracted disputes among governmental bodies that quarrel over which legislative provision wins out in a particular situation.

A third approach is to address potential conflicts with other laws by writing specific cross-references into the nuclear security law. This may not be as simple as adopting a single "latest in time controls" provision, but it has the advantage of addressing potential conflicts in a single law while acknowledging substantive issues related to other laws. This approach demonstrates that the legislature considered these issues and resolved them in the nuclear security law.

INTERNATIONAL OBLIGATIONS

In the process of developing a nuclear security law, it is important to determine which international legal instruments (both binding and non-binding) are relevant for drafting specific provisions of the law. Most states have adhered to at least some of the international instruments in the nuclear security field. The most relevant of these include:

- Treaty on the Non-Proliferation of Nuclear Weapons
- Convention on the Physical Protection of Nuclear Material (CPPNM) and 2005 Amendment
- International Convention on the Suppression of Nuclear Terrorism
- IAEA Code of Conduct on the Safety and Security of Radioactive Sources
- Statute of the International Atomic Energy Agency
- Comprehensive Safeguards Agreement and Additional Protocol for Enhanced Safeguards

Also, of course, the decisions of the Security Council in UNSCR 1540 impose binding obligations on all states, having been adopted under Chapter VII of the Charter of the United Nations.

This is not intended to be a comprehensive listing. Other sources of guidance may include regional arms control treaties, bilateral nuclear supply agreements, and a variety of other instruments. A failure to meet international obligations through national legislation can undercut a state's ability to attract nuclear-energy cooperation and assistance from states, international organizations, or the global nuclear industry.

What is important is that the state's assessment considers not only those instruments to which the

government has already become a party, but instruments that could help it implement a future program for nuclear development. Legislative practice in some states discourages including provisions that implement international obligations unless and until the state has formally taken on those obligations. While it is understandable that a state may not feel it needs to implement an obligation it has not formally accepted, postponing drafting a nuclear security law until all relevant international instruments are accepted can very substantially complicate and delay the process, which often involves time-consuming legislative approval. One approach some states use is to adopt national legislation that conforms to relevant international instruments, but to do so as a matter of national policy—not because an international obligation demands it.

FINAL STAGES

All stakeholders should be involved preparing a draft nuclear security law. Both technical and legal specialists need to participate in initial drafting. At this stage they should focus on basic policy issues, rather than on details of implementation that are better left to regulations or subsidiary instruments (decrees, memoranda of understanding, etc.). The drafters should identify any inconsistencies or ambiguities that need to be ironed out, particularly regarding conflicts with other national laws. After an initial draft has been prepared, either in outline form or in a complete text, a schedule for further drafting should be adopted. While avoiding undue delay, this schedule should include appropriate opportunities for stakeholders to comment on the initial draft.

After an initial draft has been prepared and revised based on stakeholder comments, the draft law will normally be submitted to the national legislative body. Here states may take a variety of approaches. However, it is important to ensure that expertise in nuclear technology and security are available to legislators and legislative assistants as they refine the language. Because of such laws' highly technical character, non-specialist legislators will need to carefully weigh the input of specialists on how its provisions will affect nuclear security. In turn, however, nuclear specialists must realize that the state's legislative drafting practice determine how certain technical issues are handled.

After lawmakers approve a law, the national executive authority must normally consent to it. It is important, therefore, that the executive be kept informed about the process of legislative development. This helps avoid setbacks and delays in promulgating the law. Also, normal state practice is to publish the law so that all stakeholders have adequate notice of new legal requirements and regulatory arrangements. Some states set a specific time before some or all of a new law's requirements enter into force.

A final matter that should be considered regarding any new law is how to ensure that its provisions are being effectively implemented and whether adjustments or revisions are necessary when practical difficulties arise. The law should identify governmental bodies to conduct such oversight. However, procedures for the legislative body to conduct periodic reviews—through annual hearings, for example—would also let officials assess whether the law is meeting its intended objectives.

With regard to UNSCR 1540, the Security Council obviously recognized that states must put adequate legislative and regulatory frameworks into place to address the diverse subjects covered in the resolution. The council also recognized that establishing such frameworks can only be done "in accordance with [states'] national procedures." In the nuclear arena, as with other WMD technologies, the global picture is mixed. Some states have highly developed legal infrastructures for nuclear security. Others, particularly those with modest nuclear programs (such as the use of radioactive isotopes in medicine, agriculture, or industry), have less complete legal arrangements. I hope that by outlining some approaches that have proved valuable in the past, this article will help states meet their obligations under UNSCR 1540.

Panoramic view of the Port of Singapore

Export Controls in the ASEAN Region

A PRIMER FOR EXPORT CONTROLS IN ASIA

George Tan
DIRECTOR OF ASIA EXPORT CONTROLS, BRYAN CAVE INTERNATIONAL CONSULTING
SINGAPORE

Conceived as a means to contain the emerging communist threat after World War II, export controls spread rapidly among the Western countries and their allies, but remained a foreign concept to most Asian countries throughout the 1950s. Japan was the first Asian country to join the multilateral export control community, acceding to the Coordinating Committee on Multilateral Export Controls (COCOM) in 1952. Japan later went on to become an important member of the community, participating in the establishment of the Nuclear Suppliers Group in 1975, and subsequently of the Australia Group and the Missile Technology Control Regime. In 1967, Japan announced its "Three Principles on Arms Exports," which later formed the basis for its export control legislation. Only Hong Kong has a longer history of export controls in Asia,

having imposed licensing controls on exports since the 1950s.

Export controls emerged as an area of concern in the 1980s for fast-growing East Asian economies such as South Korea and Taiwan, which had adopted export-oriented industrialization (EOI) strategies. While the EOI strategy offered substantial economic success, it also exposed Taiwan and South Korea to significant export control risks. New technology flowed into their economies as they moved up the manufacturing value chain, producing higher-technology components and products. Recognizing the dangers of unregulated trade in increasingly sophisticated products and components, Taiwan and South Korea took their first steps toward controlling exports. Seoul revised its Foreign Trade Act for export control purposes in 1989, while Taipei established export control-related articles under its Foreign Trade Act in 1993.

Due to China's economic opening and the dissolution of the Soviet Union in the 1990s, the communist threat was greatly reduced. COCOM subsequently dissolved on March 31, 1994. An increase in terrorist attacks in the following years, such as the 1995 Sarin gas attack on the Tokyo subway, heralded the emergence of terrorism as a real threat to global security. On July 12, 1996, the Wassenaar Arrangement was formed to regulate conventional arms and dual-use goods and technologies. The infamous September 11, 2001 attack on the World Trade Center was the catalyst for the eventual passage of UN Security Council resolution 1540 (2004), which required all member states to work toward setting up export control measures to minimize the proliferation of weapons of mass destruction.

The spate of terrorist attacks in the ASEAN region highlighted the importance of export controls to local governments whose performance in this domain was varied and uneven. To date, two countries in the ASEAN region have enacted export control legislation, namely Singapore, which implemented a Strategic Goods Control Act (SGCA) in 2003, and Malaysia, which passed a Strategic Trade Act (STA) in 2010. At the moment, Philippines, Vietnam, and Thailand are looking to set up export control legislation or incorporate export control elements into existing legislation. It must be noted that while these countries have not enacted or established official export control legislation or regimes, export control elements already exist in their existing laws. Most of these countries have laws that control military products, arms, explosives, and radioactive, nuclear, and other hazardous substances. However, all of these countries lack dual-use control legislation, a crucial component of export controls.

We examine the reasons behind, procedures for, implementation and enforcement of, and problems encountered during the setup of export control regimes, drawing on the experience and perspectives of countries in the ASEAN region.

REASONS BEHIND THE SETUP OF EXPORT CONTROL REGIMES

Economic interest represents a huge motivating factor for creating export control regimes. This is especially true for ASEAN countries, where the global shift in manufacturing operations to the region in recent decades—especially in the area of high-tech components and products—has generated a need for export control law and procedures. Otherwise they cannot attract multinational investors who seek protection of intellectual property rights for their products. The shift of research-and-development and software-development operations into the region has further amplified this need due to the sensitive nature of these industries and the sophistication of manufacturing facilities and equipment involved.

The security benefits from export controls are important drivers as well. ASEAN governments seek to ensure the safety of their citizens and of potential investors, especially in the face of high-technology transfers and exports of increasingly sophisticated components and products. With the gradual integration of ASEAN countries into the international community, entailing deeper trade and political linkages, these governments find themselves increasingly obligated to help maintain regional and global stability.

ESTABLISHING EXPORT CONTROL REGIMES

ASEAN countries have received substantial export control assistance from the European Union, the United States, and Japan. This help generally takes the form of advice and offers of collaboration as they set up export control regimes. The shift toward collaborative efforts indicates that the international commu-

29.9 million containers passed through Singapore in 2011.

nity recognizes the importance of every country's role in export control.

As a result of collaborative efforts among countries which share similar export control frameworks, the majority of ASEAN countries have adopted or are looking to adopt export control processes consistent with those espoused by the four multilateral export control regimes. Most ASEAN countries follow the EU control lists, albeit on different adoption timelines.

29.9 MILLION CONTAINERS PASSED THROUGH SINGAPORE IN 2011.

Even with external guidance and advice, the drafting of a nation's export control legislation can be an extremely challenging process, owing to the inherent difficulty of balancing efforts to facilitate and regulate trade. The tradeoffs are particularly problematic for ASEAN countries, which depend on export-reliant economies that offer little leeway. The legislative enactment process is another problem for ASEAN countries. The enactment process commonly stretches over several years, especially where parliament is comprised of various stakeholders with different agendas.

Lately, ASEAN governments have shifted towards a more holistic approach to export controls. Governments have started to embrace the term "strategic goods/commodity/trade control" rather than "export control," in hopes of avoiding the negative connotations associated with the latter. Export control, from the industry point of view, implies adverse effects that ultimately undercut profits. By embracing strategic goods/commodities/trade control—notably Singapore's SGCA, Malaysia's STA, Hong Kong's Strategic Commodities Control System, and Taiwan's Strategic High-tech Commodities list—countries have focused on the elements of their export control regimes that promote trade. For example, bulk and multiple permit schemes available under these regimes offer qualifying companies the convenience of one-time approval

for multiple shipments to a single destination, and in some cases, for multiple shipments to multiple destinations. In addition, these regimes offer companies the convenience of applying online for export control permits.

IMPLEMENTATION AND ENFORCEMENT

There is a general consensus that export control implementation and enforcement efforts have been passive throughout the ASEAN and larger Asian regions. Firstly, the acute lack of events and activities to promote export control awareness in most countries means that industry often remains in the dark about export control requirements and penalties. Secondly, limited resources and lack of export control knowledge have put customs authorities in a position where they cannot conduct in-depth investigations. Their inability to detect violations has contributed to pervasive complacency among industry leaders. Finally, the low penalties meted out to transgressors send the message that governments care little about infractions. However, the introduction of the death penalty under Malaysia's Strategic Trade Act, and Japan's recent increases of fines and prison sentences, have begun to heighten industry's awareness that export controls matter.

PROBLEMS ENCOUNTERED BY VARIOUS STAKEHOLDERS

Governments and private sectors have encountered numerous problems while drafting, implementing, and enforcing export control regimes. Problems for governments include the need to sort out various aspects of the interministerial relationship among agencies involved in enforcing export controls. These problems include dysfunctional organizational structures, the number and types of agencies involved, the uncertain scope of responsibility entrusted to each agency, and failure to nominate a lead agency to oversee the entire effort. Capacity building for government officials assigned to run operations presents another challenge. Countries must build up export control expertise from scratch while continually updating and revising their procedures to keep pace with recent developments and their own cultures. In addition, governments must allocate sufficient funds to build crucial infrastructure, such as online licensing application systems, and to organize effective outreach campaigns to industry.

Industry is inevitably affected when export control measures are implemented or revised. The impact of new measures must be evaluated and sufficient resources allocated to comply with them. Due to the need to centralize and standardize global export compliance efforts, most multinational corporations coordinate their export compliance operations out of their main or regional headquarters. As such, these export compliance personnel are usually out of touch with measures and laws unique to countries where their affiliates reside.

This disconnect is evident when an affiliate adopts, in its entirety, the internal compliance program (ICP) developed for their headquarters. This creates problems because the central ICP may not fulfill the distinctive export control requirements that local governments impose on affiliates. Should an affiliate decide to adopt the headquarters' ICP, its leadership must perform gap analysis to identify and remove redundant modules and, more importantly, to identify gaps and develop relevant modules to fill these gaps. All in all, export control compliance professionals in affiliates should keep in mind that local export control laws and requirements take precedence over those of corporate headquarters. They should place high priority on complying with local requirements while also trying to satisfy the parent company.

SUGGESTIONS

More could be done to improve export control regimes and the prevailing industry mindset in the ASEAN region. Firstly, governments can identify at-risk industries and reach out to these companies through specific awareness programs and surveys on compliance efforts. This accomplishes two goals: it educates companies about export control requirements, and it signals that the government is watching.

Due to the unique control lists adopted by each country, companies often find themselves trying to interpret a huge array of different control lists, not to mention the UN Sanctions List when they ship across jurisdictions. In this regard, ASEAN governments should work toward standardizing their control lists to make it more convenient for companies to interpret them. In addition, governments should work to standardize the export control classification numbering system towards a common standard, such as the Harmonized Commodity Description and Coding

System, an internationally standardized system of names and numbers for classifying traded products developed and maintained by the World Customs Organization (WCO). At the same time, countries can facilitate trade with one another by accepting each other's export control licenses.

Regular collaboration and exchanges at the regional or international level would be of great use to keep countries up to date with the latest developments in export controls, such as the nature of the latest trends in illicit activity. Finally, nonprofit organizations (NPOs) and nongovernmental organizations (NGOs) can bridge the gap between the industry and the government. For example, the Center for Information on Security Trade Controls, a Tokyo-based NPO and NGO, has excelled at helping government reach out to industry and reflecting industry concerns and issues back to the government.

Facilitating Trade in a Secure Trading Environment

Mohamed Shahabar Abdul Kareem
STRATEGIC TRADE SECRETARIAT, MINISTRY OF INTERNATIONAL TRADE AND INDUSTRY
KUALA LUMPUR, MALAYSIA

Malaysia is committed towards achieving international peace and security. This is evident from its effort in enacting the Strategic Trade Act of 2010, which seeks to provide for control over export, transshipment, transit, and brokering of strategic items, including arms and related materials, and over other activities that facilitate the design, development, or production of weapons of mass destruction and their delivery systems. The STA also provides for other matters connected therewith, consistent with Malaysia's national security and international obligations.

On August 1, 2010, a team of six was assembled to form the Strategic Trade Secretariat ("Secretariat") in the Ministry of International Trade and Industry of Malaysia (MITI) with the objective of implementing the STA. Though small in terms of numbers, this team is comprised of very determined officers and led by the most senior director in MITI. This article traces the journey of this small team from its humble beginnings toward building up the knowledge and infrastructure necessary to implement export controls on a very urgent basis. The STA was fully implemented on April 1, 2011, just eight months after the establishment of the Secretariat.

The task ahead is of enormous proportion. It is a well-recognized fact that controlling exports is not easy. Changing geopolitical and economic trends further complicate the massive task of finding the delicate balance between security and trade interests. But Malaysia is up to the challenge. Hence, an appropriate approach is very important, and a good first impression on the local as well as the international trade community is vital. With this in mind, the Secretariat chose a tagline—Facilitating Trade in a Secure Trading Environment—which is also an apt title for this article. This simple but significant tagline has been employed since the very first day of the Secretariat's operations, and remains a crucial guide as we perform our duties. It conveys the Secretariat's commitment to facilitating trade without exempting the trading community or the authorities from their responsibilities.

Initially there were some misgivings toward the STA among members of the trade community, as export control is somewhat contradictory to MITI's function of fostering trade. Fortunately, after targeted outreach initiatives, industry leaders have come to appreciate the true objective of the STA. There is now a prevailing awareness that export control and trade promotion are two sides of the same coin. Implementation of Malaysia's export control law is not a mere act of jumping on the bandwagon but a responsible act to protect Malaysia and Malaysian exporters and traders from being exploited by proliferators and those that profit from their activities. In retrospect, it was indeed highly perceptive of the government to place the Secretariat under MITI. This is because officials from MITI are able to understand the requirements of trade and leverage their longstanding connections with the trade community at which the STA is mainly targeted.

Implementation of Malaysia's export control law is not a mere act of jumping on the bandwagon but a responsible act to protect Malaysia and Malaysian exporters and traders.

One of the first challenges faced by the Secretariat was to determine the mechanics for implementing the Act. This was especially formidable because the team assembled had little or no experience in export controls. The only guide was an export control law that was arguably the most thorough enacted by any country. Nevertheless, the Secretariat hit the ground running and began conducting awareness programs vis-Ã -vis major exporters and industry associations. Outreach was not confined to briefings alone, but was also undertaken through traditional mass media and

the internet. Outreach programs are ongoing today and are expected to continue, except that they are now more sector-specific, helping traders understand how the STA applies to particular industries and firms.

Within three months of the Secretariat's establishment, in October 2010, online preregistration was made available. Potential applicants for STA permits are required to register details about their companies, products, importers and customers, and authorized officers with the Secretariat. This enables the Secretariat to conduct preliminary checks prior to considering any permit application. By July 2011, three months after the STA's full implementation, online permits were issued. Going online underscores the business-friendly approach through which the STA is administered. It allows for a quick decisionmaking process that keeps abreast with the rapidly changing business environment while providing easier access to and sharing of data among relevant decisionmakers. Another milestone was reached in March 2012, when Royal Malaysian Customs commenced validating STA permits through the Customs Information System. This paved the way for effective enforcement of the STA.

Because we keep our ears to the ground, several amendments to the Strategic Trade Regulations were made late last year. This was a result of our observations, and our discourses and deliberations with industry and government stakeholders. The amendments, which came into force on December 1, 2011, in no way reduced or absolved industry from its obligations. On the contrary, and as intended, they facilitated more faithful compliance with the STA.

Riding on the momentum generated so far, the Secretariat will soon audit companies to verify that permit holders comply with the conditions of permits issued to them under the STA, and to gauge the level of awareness among various industry sectors. The Secretariat is also focusing on increasing awareness of technology transfer and how it relates to the STA. While at the outset its focus was on goods, the Secretariat is now expanding its emphasis to such transfers as intangible technology transfers. We are presently engaging brokers, scientists, and academia to explore avenues for collaboration in the various fields involved.

The Secretariat also interacts with and consults the enforcement and other relevant government agencies frequently to ensure that the Act is implemented consistently and transparently. It is important to maintain predictability in the implementation of the Act, so as to retain industry confidence in and encourage voluntary compliance with the Act. An interagency coordination committee named the Strategic Trade Action Committee was established and had its first meeting in November 2010. This committee, which is chaired by the Strategic Trade Controller, consists of licensing agencies, enforcement agencies, and several other relevant government agencies. Presently, we have a technical officer and a customs officer stationed at the Secretariat. Their expertise is particularly useful in helping us make fast and accurate decisions regarding classification, technical assessments, matters related to cargo declarations, and enforcement at the various ports.

Malaysia, being the second country in ASEAN to have an export control law, is increasingly looked upon as a model to emulate, both regionally and internationally. While the facets of export control may differ from region to region, the objective and the challenges remain similar. Globalization has made trading seamless, while the advancement of technology has made it borderless. These highlight the importance of cooperation in combating the mutual threats that we all face.

We are fortunate to have benefitted from technical assistance from the United States, the European Union, Australia, and Japan, which have decades of experience in implementing export controls and extended strategic partnerships. Officers from the Secretariat have been exposed to best practices in licensing procedures, internal compliance programs, and commodity identification training. Regular and repeated interactions with industry have also increased our practical knowledge and experience. Skills are being honed daily, and expertise built steadily.

All the same, for the effective implementation of the STA in particular and export controls in general, several imperative lessons have been learnt so far through our experience:

- Learning from the experience of others, especially our neighbors, is important to get a

better handle on the various aspects of export controls.

- Implementation can be quick if the implementing agency understands trade and the trading environment.

- Interagency cooperation is vital and indispensable in enforcement.

- Working closely with industry leaders and listening to them further smoothens implementation. Consultation should commence at the very start, when the export control law is being drafted.

- Assistance is available from various donor countries and UN organizations that can be used to build expertise.

- Outreach is a vital tool for industry awareness and compliance.

- Information technology should be used to the fullest. Online registration, application for permits, and approvals are key to facilitating trade.

- Developing expertise among the implementing and enforcement agencies by capitalizing on support and assistance available from the various sources is vital for successfully implementing export control measures.

The staffing in the Strategic Trade Secretariat has more than doubled in number since its establishment in August 2010. We are working at full throttle to sustain a safe trading environment—both in the ASEAN region and beyond.

IAEA: 1540 Promoter, Facilitator, and Implementer

Khammar Mrabit
DIRECTOR, IAEA OFFICE OF NUCLEAR SECURITY

In its resolution 1540, the UN Security Council calls on states to renew and fulfill their commitment to multilateral cooperation, in particular within the framework of the IAEA. They must also take effective measures to account for, secure, and physically protect sensitive materials, such as those required by the Convention on the Physical Protection of Nuclear Materials and those recommended by the IAEA Code of Conduct on the Safety and Security of Radioactive Sources. The decisions and requirements of that resolution were reiterated in UNSCR 1977. By helping member states prevent nuclear materials and related technologies from falling into the wrong hands—in particular those of non-state actors—the IAEA helps states fulfill their obligations under these resolutions.

By implementing UNSCR 1540, states develop and maintain effective measures to account for and secure such items in production, use, storage, or transport; develop and maintain effective physical-protection measures; develop and maintain effective border controls and law-enforcement efforts to detect, deter, prevent, and combat—through international cooperation when necessary—illicit trafficking and brokering in such items in accordance with their national legal authorities and legislation and consistent with international law.

In various resolutions, most recently GS (55)/RES/10, the IAEA General Conference has invited the IAEA Secretariat to provide assistance to member states upon request, helping them fulfill their obligations under UNSCR 1540 and to the 1540 Committee,

With assistance from the IAEA, many countries have a capacity to check containers for radiation.

provided their requests fall within the scope of the Agency's statutory responsibilities. IAEA assistance proceeds under the aegis of the IAEA Nuclear Security Plans, the first of which was approved by the Board of Governors in March 2002. Relevant IAEA programs and activities undertaken pursuant to those Plans include:

1. Legislative assistance to enable states to implement legal instruments, such as the Safeguards Agreements and Additional Protocols, the Convention on the Physical Protection of Nuclear Material and its 2005 Amendment, and the Code of Conduct on the Safety and Security of Radioactive Sources

2. Support to states in establishing effective State Systems of Accounting for and Control of Nuclear Material and related technology;

3. Assistance to states in implementing high standards of physical protection of nuclear material and nuclear facilities, primarily through guidance, training, and assessment services

4. Support for states' efforts to detect and interdict incidents of theft, illicit possession, and illicit nuclear trafficking, in particular by helping them upgrade border controls and establish and maintain Illicit Trafficking Databases (ITDB).

The main results of IAEA assistance to national efforts since 2002 are briefly listed below.

PHYSICAL PROTECTION UPGRADES AND RISK REDUCTION MEASURES

Since 2002, more than 100 physical-protection systems at nuclear sites in 34 states have been upgraded with technical, financial, and administrative support from the IAEA, in particular through use of donor contributions to the Nuclear Security Fund.

The IAEA has also provided assistance in implementation of programs and projects on elimination of highly enriched uranium (HEU) from civilian use, in particular from research-reactor sites. Around 1,720 kg of research-reactor fresh and spent HEU fuel has been repatriated to the countries of origin (Russia or the United States). One way the IAEA has supported initiatives for reducing HEU fuel in research reactors is through participation in the Reduced Enrichment for Research and Test Reactors Program and the Global Threat Reduction Initiative.

Although the above mentioned resolution GS (55)/RES/10 does not specifically cover radiological sources, the preamble recognizes that some states have made commitments to follow the recommendations set forth in the IAEA Code of Conduct on the Safety and Security of Radioactive Sources. To reduce the risk that radioactive sources could be stolen and used for radiological dispersal devices, the IAEA assists states in applying appropriate controls to the protection of radioactive material, including dismantling and bringing disused vulnerable sources to safe and secure storage, and helping return them to their country of origin. Between 2002-2011, more than 6,000 dangerous radioactive sources were secured in 35 states with Agency support, including the repatriation of about 170 vulnerable sources to supplier states.

The Tripartite Initiative on the Securing and Managing of Radioactive Sources was established among the IAEA, the Russian Federation, and the United States to facilitate identifying and securing high-activity, vulnerable radioactive sources. Total activity of 2,120 TBq was secured under this Initiative.

LEGAL ASSISTANCE

Legislative and regulatory assistance to help national nuclear security regulators and law-enforcement agencies was provided to 90 member states in the period 2004-2011. Assistance included advisory missions, training, and assistance in drafting or reviewing national legislation. Currently, 175 states have implemented IAEA Safeguards Agreements, of which 110 have Additional Protocols in force. The IAEA will coordinate development of a National Legislation Implementation Kit on Nuclear Security as proposed by

Indonesia at the March 2012 Seoul Summit with support from 27 other countries.

It should be noted that as of March 1, 2012, 145 states had joined the Convention on the Physical Protection of Nuclear Material and 54 states had adhered to its Amendment. One hundred seven member states, moreover, had made political commitments under the IAEA Code of Conduct on the Safety and Security of Radioactive Sources.

NUCLEAR SECURITY PEER REVIEWS AND ADVISORY SERVICES

During the period of 2002-2011, the Agency arranged 41 International Physical Protection Assessment Service Missions, which evaluate the effectiveness of existing physical-protection (PP) arrangements and measures in states and at particular nuclear facilities and sites, as well as make recommendations and suggestions for enhancing PP systems.

The International State Systems of Accounting for and Control of Nuclear Material Advisory Service (ISSAC) mission assists states in enhancing their nuclear-material accounting and control systems, which are essential for nuclear security and safeguards. A total of 13 ISSAC missions were conducted in the years 2002-2011.

Another IAEA advisory service is the International Nuclear Security Advisory Service (INSServ), which identifies a state's overall nuclear security requirements and the measures needed to meet these requirements. In 2002-2011 the Agency carried out 39 INSServ missions.

The effectiveness of measures to account for, secure, and physically protect sensitive materials depends strongly on how well states coordinate these measures. To provide comprehensive and coordinated support for states' efforts to establish sustainable national nuclear security regimes, the IAEA works with states to develop Integrated Nuclear Security Support Plans (INNSPs), which identify nuclear security needs and responsibilities to achieve that goal. As of January 3, 2012, more than 60 states had their INSSPs approved or were in advanced stages of preparation.

DETECTING NUCLEAR AND OTHER RADIOACTIVE MATERIALS OUTSIDE OF REGULATORY CONTROL

The IAEA provides assistance to enhance national capabilities to detect nuclear and other radioactive materials outside of regulatory control. The primary focus for such assistance is border controls in states. Equipping frontline officers such as customs officials with radiation detection instruments, supported by training and response mechanisms, helps them implement effective border controls and to secure border crossing points. Such measures help identify any illegal or unauthorized movement of material, thereby reducing the risk of such materials' being used for malicious purposes.

More than 500 instruments have been provided to seven states in the course of IAEA projects, helping ensure nuclear security at major public events. The Agency acquired about 250 instruments, including personal radiation detectors, radionuclide identification devices, neutron search devices, portable radiation scanners, and expert-level equipment, to loan to states. More are being procured. Twenty-one remote monitoring systems were deployed to facilitate the transfer of alarm systems to an external alarm station in one state, guaranteeing that national response forces would be notified automatically when problems arose. More than 415 radionuclide identification devices and 48 radiation portal monitors were provided to states under this IAEA project.

The IAEA also oversees a Coordinated Research Project (CRP) on development and implementation of instruments and methods for detecting nuclear and other radioactive materials in support of the border monitoring activities.

NUCLEAR FORENSICS

Nuclear forensics is a key element of assistance to states, as part of national response preparedness and efforts to address the threat of nuclear or other radioactive material that lies beyond regulatory control. Through a program of assistance to states, the IAEA is promoting technical capacity and confidence in nuclear forensics among states. The IAEA Nuclear Forensics CRP will outline measures and procedures to preserve material for nuclear forensic analysis, ensur-

ing that evidence in criminal investigations is secure and no material is compromised.

ILLICIT TRAFFICKING DATABASE

The IAEA's Illicit Trafficking Database contains data on illicit trafficking and other unauthorized activities and events from 1993 onwards. The IAEA facilitates the exchange of authoritative information about such incidents and collects, maintains, and analyzes the data with a view toward identifying common threats, trends, patterns, vulnerabilities, and priorities.

The membership of the ITDB program has expanded and now numbers 112 member states and one non-member state. By December 31, 2011, of 2,164 confirmed incidents, 399 involved unauthorized possession and related criminal activities. Incidents included in this category involved illegal possession, movement, or attempts to illegally trade in or use nuclear material or radioactive sources. Sixteen incidents in this category involved HEU or plutonium. There were 588 incidents reported that involved the theft or loss of nuclear or other radioactive material, and a total of 1,124 cases involving other unauthorized activities, including the unauthorized disposal of radioactive material or discovery of uncontrolled sources.

CHALLENGES IN UNSCR 1540 IMPLEMENTATION

One major challenge to UNSCR 1540 implementation is the low rate at which governments are ratifying the international legal instruments relevant for UNSCR 1540, including the 2005 Amendment to the CPPNM.

The world nuclear sector is expanding, with many countries planning to embark on or expand their use of nuclear energy and related technologies. This will require more use of nuclear materials, operation of new nuclear-fuel-cycle facilities, and expanded transportation of nuclear and other radioactive materials, with the attendant security risks. Globalization of the trade in nuclear technology requires that governments implement relevant international legal instruments speedily, embrace IAEA guidance and standards, and move aggressively in such areas as information protection, physical protection, material accounting and control, and measures to detect and respond to trafficking in such materials. National response plans and contingency measures should be implemented in a systematic manner, within sustainable national nuclear security regimes. Collectively, this will contribute to global peace and security.

CONCLUSION

For over ten years, the IAEA has implemented a comprehensive program to help states establish robust, comprehensive, and sustainable national nuclear security regimes. Under this program, the IAEA assists states in meeting their obligations under UNSCR 1540. The IAEA's unique role has been recognized in various General Conference resolutions and other forums. The IAEA believes that the simplest way is for states requiring IAEA assistance to work directly with the Agency and to report progress toward fulfilling their obligations to the 1540 Committee.

At the same time, the IAEA recognizes that assistance is available from other international organizations and initiatives. In order to best leverage this assistance, the IAEA has instituted a program of information-exchange meetings designed to bring together relevant organizations to identify synergies while avoiding costly duplication of effort.

The Centres of Excellence

A New 1540 Player

Marian de Bruijn
PROGRAMME COORDINATOR, SECURITY GOVERNANCE/ COUNTER-TERRORISM
UNICRI

Odhran McCarthy
ANALYST, SECURITY GOVERNANCE/COUNTER-TERRORISM
UNICRI

The European Union launched the "CBRN Centres of Excellence" (CoE) Initiative to mitigate the threat posed by the criminal use of CBRN materials, as well as the risk of accidents and natural disasters such as pandemics. Conceived as a vehicle to facilitate compliance with UNSCR resolution 1540, the Initiative is being jointly implemented by the United Nations Interregional Crime and Justice Research Institute (UNICRI) and the European Commission's Joint Research Centre (JRC). This article will demonstrate the important and complimentary role the Initiative plays in international efforts to address the CBRN threat, to advance resolution 1540, and to develop a CBRN security culture.

UN SECURITY COUNCIL RESOLUTION 1540—AN ARDUOUS TASKMASTER

Resolution 1540 carries with it the weight of Chapter VII of the UN Charter, rendering it mandatory for all states to comply with its provisions. Still, the implementation process has proven challenging. Indeed, a myriad of interlocked and fundamental problems hinder implementation.

With the aim of nurturing a network to mobilize national, regional, and international resources to achieve the common objective of developing coherent CBRN policies and capabilities at the national, regional, and international levels, the CoE Initiative presents a remarkable opportunity to complement international efforts related to the resolution and to help states meet their obligations.

The European Union launched the Initiative in May 2010, entrusting UNICRI and JRC with developing methodology, coordinating the implementation of activities, and promoting the CoE Initiative itself. It is being implemented in eight different regions: Southeastern Europe, the Caucasus, Moldova, and Ukraine; Southeast Asia; North Africa; the African Atlantic coast; the Middle East; Central Asia; Sub-Saharan Africa; and the Gulf Cooperation Council countries. Since early 2012, Regional Secretariats have been established in the first five regions and commenced initial operations. It is envisaged that they will become fully operational in the weeks ahead. In addition to this, National Focal Points (NFPs) have been identified in 35 different participating countries to facilitate coordination and cooperation. A network of over 400 CBRN experts has already been assembled.

Through its ongoing cycle of activities, the Initiative enables countries to realize their objectives under the Resolution. In particular, the CoE contributes to the achievement of the key requirements of UNSCR 1540 by supplying assistance and technical support to help governments assess national and regional needs and to help develop tailored CBRN CoE Projects to plug CBRN gaps.

Furthermore, in the same vein as the resolution, the CoE Initiative endeavors to facilitate regional and international cooperation to enhance CBRN policies and capabilities, and to develop a comprehensive package to fight against CBRN risks. In this regard, it is worth noting that UNICRI and the JRC work closely with leading international and regional organizations in the field of CBRN to implement the CoE Initiative, including the United Nations, the IAEA, the World Health Organization, the OPCW, the World Customs Organization, the BWC Implementation Support Unit, INTERPOL, EUROPOL, the League of Arab States, the African Union, and ASEAN.

Cycle of Activities for newly established and future Centers of Excellence

FURTHERING RESOLUTION 1540 WITHIN THE CBRN COE COUNTRIES AND REGIONS

One of the key principles of the CoE Initiative is local ownership, which implies that the primary responsibility for mitigating CBRN risk lies with partner countries. The role of the CBRN CoE, therefore, focuses on strengthening institutional capacity at the national and regional levels to mitigate CBRN risk, and on providing the methodology and structure to help countries reach their own objectives. Countries are encouraged to act as owners of the Initiative from the very outset, and to establish National CBRN Teams composed of experts and representatives of all ministries and agencies involved. The National CBRN Teams are key players in the Initiative. They assess national needs and help coordinate national CBRN policy and develop National CBRN Action Plans. The CoE Initiative provides all NFPs with the necessary support and assistance to establish such teams, and to subsequently take action. In particular, it supplies NFPs with the CBRN Need Assessment Tool, a detailed questionnaire that helps a country conduct a self-assessment of its current status, detect gaps, and identify possible areas for cooperation. This ensures that each country has a structured and integrated coordination mechanism dedicated to CBRN concerns.

In addition to this, Regional Secretariats are currently being established in each region of the CBRN CoE Initiative to cooperate with NFPs and regional experts, and to provide technical support to National CBRN Teams as they discharge their responsibilities. In particular, the Regional Secretariats provide additional technical support and assistance to National CBRN Teams as they appraise national and regional CBRN needs. Secretariats also collect and evaluate

project proposals from National CBRN Teams to remedy needs or gaps the teams unearth. Over 50 project proposals have been developed thus far, with the assistance of the CBRN CoE Regional Secretariats. The proposals have gone before the funding mechanism of the CBRN CoE Initiative for review. Every six months, new project proposals are assessed and resources are allocated to execute approved projects. The expertise required to undertake and implement the approved actions comes from partner countries and EU member states, complemented where necessary by international organizations and other stakeholders.

The funded projects deal with key CBRN issues such as improving CBRN legal frameworks, enhancing chemical and biological waste management, assessing the risk of CBRN misuse, improving biosecurity and biosafety, building capacity to counter illicit trafficking in chemical agents or nuclear or radiological substances, raising awareness about CBRN-related topics, bolstering the emergency response to CBRN events, and promoting secure exchanges of data about CBRN-related events.

The genuine local ownership and execution of policy fostered by the CBRN CoE Initiative promises to enhance partner countries' political commitment.

As a precursor to implementation of these CBRN CoE projects, two pilot projects intended to build national and regional capacity are undergoing testing in Southeast Asia. The first, which concerns illicit trafficking of nuclear materials, aims to build capacity in nuclear security. It is being carried out by the JRC's Institute for Transuranium Elements, Karlsruhe, Germany. The second focuses on biosecurity and biosafety. L. Sacco University Hospital, Milan, Italy, is carrying it out. It will help the European Union and countries in Southeast Asia gain a common understanding of these challenges. The outcomes of and lessons learned from these pilot projects will inform the full-scale implementation of CBRN CoE projects starting in the second half of 2012.

In addition to this, an international tabletop exercise, CHEMSHIELD 2011, was organized jointly with the Dutch Coordinator for Counterterrorism and Security, INTERPOL, the OPCW, and the Netherlands Forensic Institute (NFI). The exercise took place in November 2011 at the NFI Field Lab, The Hague. More than 120 representatives from some 35 countries and organizations participated in this exercise, which was designed to increase awareness of the risks of chemical threats; examine coordination among sectors and governments; enhance communication and cooperation among participating sectors and countries; and build a trusted community. A similar exercise in another sector of the CBRN field will convene in late 2012.

CONCLUSION

The objectives of UNSCR 1540 are crucial for ensuring that a strong regime is put into place, preventing non-state actors from using CBRN materials to threaten international peace and security. The soft approach represented by the CoE Initiative goes a long way toward facilitating the early achievement of these objectives, and toward overcoming the implementation difficulties. The Seoul Summit communiqué welcomed the establishment of Centers of Excellence and commended the role they play. Indeed, many of the projects carried out under the EU CBRN CoE Initiative relate directly to obligations set forth in UNSCR 1540. By prosecuting the CBRN CoE Initiative, the European Union and UNICRI help states meet their international obligations. In turn they enable countries to assess their own needs and design suitable policies. The genuine local ownership and execution of policy fostered by the CBRN CoE Initiative promises to enhance partner countries' political commitment—fostering their will to coordinate and cooperate, helping them instill a vibrant CBRN security culture.

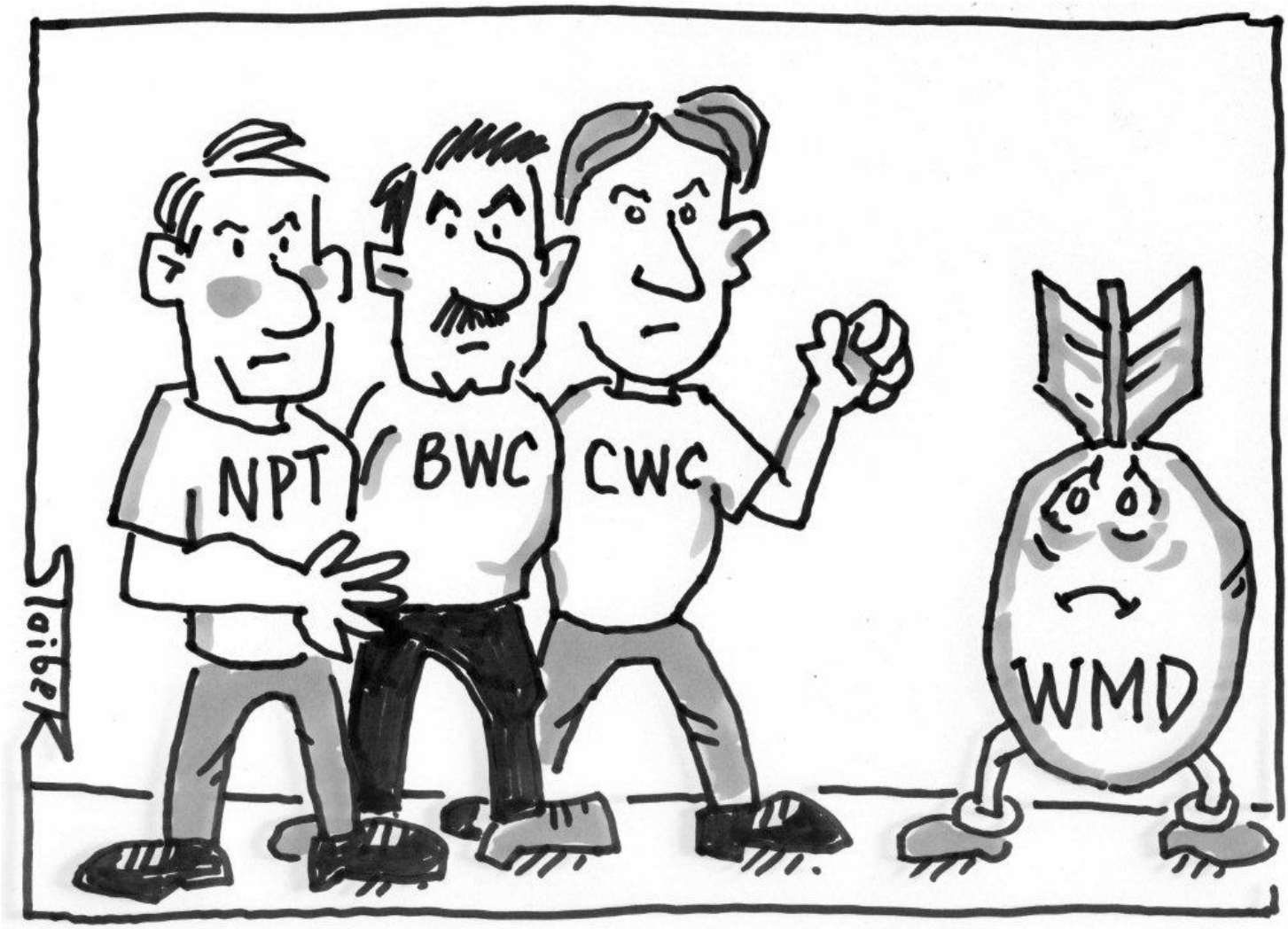
VERTIC: Legal and Regulatory Assistance

Rocío Escauriaza Leal
VERTIC LEGAL OFFICER

On April 20, 2011, the UN Security Council adopted UNSCR 1977, extending the 1540 Committee's mandate for ten years and urging it to engage actively with relevant international, regional, and subregional organizations. Operative Paragraph 12 of UNSCR 1977 requested the 1540 Committee to "draw also on relevant expertise, including, civil society and the private sector (...)." More recently, paragraph 33 of the "2011 Review of the Implementation of UNSCR 1540," released in February of this year, stated that "...Civil society and the private sector ... may be helpful as co-sponsors of workshops on the implementation of resolution 1540 (2004) and in providing assistance."

A wide range of civil-society actors study and provide technical assistance on arms control, disarmament, and nonproliferation issues, exerting significant and positive influence on efforts to implement UNSCR 1540. Such actors include research institutes, academia, and nongovernmental organizations. Some governments have solicited such support to ensure that they can meet their international obligations, as civil society has proved capable of providing technical expertise and of doing so with professionalism and independence.

The Verification Research, Training, and Information Center, commonly known as VERTIC, has been working on arms control and disarmament issues since 1986. VERTIC's National Implementation Measures (NIM) Program began in 2005 as a pilot project and became fully operational in October 2008. Drawing from its research and experiences in the field, VERTIC's NIM Program has expanded, providing more services and tailoring them more adequately to meet countries' needs. No longer working on its own,



VERTIC has forged partnerships with other organizations and has become a key actor in promoting and facilitating UNSCR 1540 implementation.

VERTIC'S EXPERIENCE: THE NIM PROGRAM

Since its launch, the NIM Program has conducted analysis of biological-weapons-related legislation and provided legislative assistance toward implementing the Biological Weapons Convention, the Chemical Weapons Convention, and UNSCR 1540. It has also furnished technical assistance to governments working toward ratification of and accession to the BWC and CWC.

VERTIC has completed 136 surveys of countries' national laws and regulations for implementing the BWC. These surveys proceed based on a template with 96 criteria that covering the core obligations under the BWC and the BW-related provisions of UNSCR 1540, including definitions, criminal offenses, jurisdiction, control lists, biosecurity and biosafety measures, transfer controls, and enforcement. The surveys have proven extremely useful in identifying major legislative gaps that need to be addressed to comply fully with BW-related obligations imposed by UNSCR 1540. States can use the surveys to develop the country reports they are required to submit to the 1540 Committee, and to fill in Form E under the BWC Confidence-Building Measures mechanism.

VERTIC has provided assistance to over 30 states from most regions of the world on how to craft legislation that implements the BWC, the CWC, and the BW- and CW-related aspects of UNSCR 1540. Mostly focusing on BWC implementation, bills often criminalize activities related to biological weapons and illicit applications of dual-use materials. They also include transfer controls, enforcement measures, and biosafety and biosecurity measures. Implementation assistance is tailored to the country's needs and its legal tradition (whether civil law, common law, or mixed). Anti-proliferation law is typically strengthened by enacting a stand-alone bill or a WMD omnibus bill, or by modifying existing legislation.

Operative Paragraph 8 (OP 8) of UNSCR 1540 calls on states to promote the universal adoption of multilateral treaties preventing the proliferation of nuclear, biological, and chemical weapons. To that end, VERTIC raises awareness of and promotes universal accession to the BWC and CWC through ongoing dialogue with government officials from states that remain outside these accords. Such exchanges take place through non-members' embassies and permanent missions, at workshops, and during treaty meetings. Emphasizing the benefits of joining these conventions and highlighting the availability of ongoing support for states parties are key components of VERTIC's outreach campaign. To date, VERTIC has worked with 18 states on adhering to the BWC and CWC.

SOME LESSONS LEARNED

VERTIC has provided legislative assistance for over five years, and many lessons have been learned and taken aboard. These lessons should enable legislative assistance to be carried out in an effective manner, now and into the future.

First and foremost, states are responsible for implementing UNSCR 1540. They are the owners of the implementing process, and therefore they should undertake it at their discretion. It is up to them how they do it.

Second, it is essential to find a "national champion" to initiate the implementing process. The national champion takes the lead. That person requests any assistance needed, organizes the national implementing process, and supports the desired outcome, including the adoption of a bill. Participation by all relevant stakeholders is a must. Their interests must be represented and adequately reflected in the implementation process.

Third, states should avoid overlegislating. All current legislation should be considered before drafting new legislation. Legislative gaps should then be addressed accordingly.

Fourth, model laws are an excellent starting point, but there is no "one size fits all" solution. Every provision should therefore be considered carefully and tailored to national needs in accordance with constitutional processes and national legal traditions. Whenever possible, the national language should be used to draft new legislation, reducing the chances of mistranslation.

Fifth, regional implementation strategies and best practices should be taken into account. States relate to their regional contexts and should participate in regional implementation strategies.

EXISTING GAPS IN LEGISLATION IMPLEMENTING THE BWC

Most states have legislation implementing certain aspects of the BWC and the BW-related obligations under UNSCR 1540. Existing legislation often serves other purposes while connecting indirectly with UNSCR 1540. For instance, a national health law establishing the national health system might contain provisions relevant to accountability for or security of biological agents. A law on the transport of dangerous goods might also contain accountability and security measures.

> VERTIC has provided assistance to over 30 states from most regions of the world on how to craft legislation that implements the BWC, the CWC, and the BW- and CW-related aspects of UNSCR 1540.

Based on the 136 surveys described above, VERTIC has identified major gaps in the implementation of the BWC and the BW-related obligations under UNSCR 1540. While these surveys cover all regions of the world, Europe is the least represented.

Thirty-nine percent of the countries surveyed have implemented the BW prohibitions in Operative Paragraph 2, while 48 of the 136 states surveyed prohibit the "manufacture" of a biological weapon (OP 2 of UNSCR 1540 requires states to adopt effective laws that prohibit non-state actors from manufacturing, acquiring, possessing, developing, transporting, transfering, or using BW). Just 31 prohibit the "development" of biological weapons.

Fifty-eight percent of the countries surveyed require a permit to import or export biological agents.

Permit systems may refer to the transfer of human, animal, or plant pathogens, but not necessarily all three. They usually do not distinguish the most dangerous pathogens and toxins of proliferation concern. In fact, only 24 percent of the surveyed countries have adopted control lists for biological agents and toxins. Additional measures to prevent proliferation through transfers are weak. For instance, only 20 percent of the countries surveyed request an end-user certificate when exporting.

But the major gap remains in the implementation of Operative Paragraph 3, parts a and b (OP3 a and b of UNSCR 1540 require states to establish domestic controls to prevent proliferation: develop and maintain measures to (a) account for and secure related material and (b) physical protection measures). On average, only 13 percent of the surveyed countries have legislation requiring the adoption of accountability measures, including accountability in use, storage, or transport. And again, only 13 percent require the adoption of security measures for handling biological agents in facilities or while undergoing transport. Only 39 of 136 surveyed countries have licensing systems for laboratories. Those that do often have licensing systems only for laboratories working with one type of pathogen (human, animal, or plant), but not all three.

There is an urgent need to address these gaps, particularly given the rapid advances in science and technology. Greater awareness of the benefits gained from implementing the BW-related obligations under UNSCR 1540 is needed. Ensuring safe diagnostics and research for prophylactic purposes would strengthen national health, including efforts to address endemic diseases and outbreaks. The establishment of effective response mechanisms for biological emergencies can also help prevent or manage outbreaks that impose mass casualties and tremendous social and economic costs.

FUTURE OF THE NIM PROGRAM

Due to the gap in international assistance caused by the ongoing absence of an oversight organization for the BWC, VERTIC will continue to work extensively on legislation for implementing the BWC and the BW-related provisions of UNSCR 1540. However, in response to a growing number of requests from states, VERTIC's NIM Program has expanded to provide assistance with comprehensive implementation of UNSCR 1540.

Some countries have expressed interest in implementing UNSCR 1540 through one piece of legislation. This is particularly relevant to those countries with very limited quantities of and little use for dual-use CBRN materials. An omnibus CBRN bill enables them to maximize their limited financial and human resources. Moreover, one technical assistance visit could suffice to help them meet their international CBRN obligations.

VERTIC's staff has acquired the necessary expertise, including in nuclear law, to provide legislative assistance throughout the international CBRN legal framework. VERTIC can also cooperate with states interested in working on comprehensive implementing legislation for resolution 1540, including measures to combat illicit trafficking in nuclear and other radioactive materials.

NEW WAYS OF WORKING TOWARD UNSCR 1540 IMPLEMENTATION

The lack an oversight organization for the BWC has spawned a network approach to implementing the BWC and the BW-related obligations of UNSCR 1540. VERTIC has established a reputation as a knowledgeable and impartial technical assistance provider, one that UNSCR 1540-related assistance coordinators routinely call upon to provide expertise on BW-related legislative assistance. Being a key node in this network, VERTIC has moved in recent years from working solo to cooperating and coordinating with other actors working on UNSCR 1540 implementation.

VERTIC has joined forces with governments, international organizations, regional organizations, subregional organizations, and other civil-society actors to help discharge its mission. The partnership approach helps avoid duplication of work while tapping the benefits of complementary expertise. Enhancing cooperation mechanisms results in an adequate, effective method for achieving UNSCR 1540 implementation. For instance, VERTIC has worked alongside the BWC Implementation Support Unit and European Union Joint Action for the BWC on assistance missions to raise awareness about the BWC and UNSCR 1540. While all the organizations involved raise

awareness, each organization brings different technical expertise.

VERTIC's work at the regional or subregional levels includes invitations to cooperate in ongoing projects aimed at implementing UNSCR 1540. Because each process is very different from the others, VERTIC has been called on to provide input on the development of a regional model law, to help review and draft UNSCR 1540 National Action Plans, and to raise awareness of BW issues.

Longstanding cooperative mechanisms have been established with key organizations that provide assistance. Ongoing collaboration with donor countries fosters continuity of assistance efforts and sustainability in the implementation processes.

CONCLUSION

VERTIC's extensive experience in the field has advanced the adoption of legislation to implement UNSCR 1540 BW-related obligations and plug major gaps, particularly on biosafety and biosecurity. The existence of knowledgeable and experienced civil-society actors has helped address gaps in countries' BWC implementation while offsetting the absence of an oversight organization for the BWC. Efforts to fulfill BW-related UNSCR 1540 obligations have also benefited from this approach.

Lessons learned from the field and the growing need to implement UNSCR 1540 in a more comprehensive way (spanning CBRN) have led to the expansion of VERTIC's NIM Program and assistance efforts. But coordination with the other key assistance providers and the UNSCR 1540 regional processes is needed to avoid duplication of effort and to target assistance more accurately.

The adoption of Operative Paragraph 12 of UNSCR 1977 indicates that the Security Council recognizes the valuable expertise that civil society can provide to ensure full implementation of UNSCR 1540. The door is therefore open to build on and enhance existing efforts.

The WHO Biosafety and Laboratory Biosecurity program works with stakeholders such as the IFBA to promote safe and secure workplace practices in the handling of pathogenic organisms.

Building a Global Biosafety and Biosecurity Culture

Maureen Ellis, RBP
EXECUTIVE DIRECTOR, INTERNATIONAL FEDERATION OF BIOSAFETY ASSOCIATIONS

The International Federation of Biosafety Associations (IFBA) is a global community of research scientists, biosafety professionals, laboratory personnel, NGOs, academics, and policymakers from around the world who recognize that biological security is an important element within the greater framework of strengthening global CBRN security and biological nonproliferation. Established in 2001, IFBA has developed global reach with diverse networks of local, regional, and international members crisscrossing all continents and found in all corners of the world. IFBA's mission statement—"safe, secure and responsible work with biological materials"—highlights the need to protect and promote a culture of biological security, and lays the foundation for the implementation of strategies to minimize the serious dangers that can arise from the failure to implement sound practices when working with dangerous pathogens.

IFBA's portfolio of programs addresses multiple threats to human security, reaching across the entire spectrum of biological threats from naturally occurring outbreaks of infectious diseases, to research, to bioterrorism preparedness and response. IFBA's multifaceted and interconnected program areas span multiple sectors and deliver sustainable capacity-building programs across disciplines and borders. Special emphasis is placed on building strategies to strengthen biosecurity programs at the national and regional levels, where they are needed most.

Over the past year, IFBA has developed a comprehensive Five-Year Strategic Plan that builds upon the priority goals and programs identified for action by the global biosafety community, as articulated in

the IFBA Bangkok Declaration on Advancing Global Biosafety & Biosecurity of February 17, 2011. The plan describes in detail IFBA's strategic objectives and action plans for strengthening global biosafety and biosecurity in collaboration and partnership with its member and observer organizations. These objectives draw attention to the priorities identified by our members worldwide, including the need for advocacy at national levels, and the development of innovative approaches to develop affordable biosafety and biosecurity capacity appropriate for those areas of the world with limited resources. Specific strategies and technologies for linking, leveraging, and endorsing resources, expertise, and support are also included in the work plan. Ensuring that all our members have equal access to IFBA's information and tools to participate effectively is a key driver of the plan.

BIOLOGICAL SECURITY

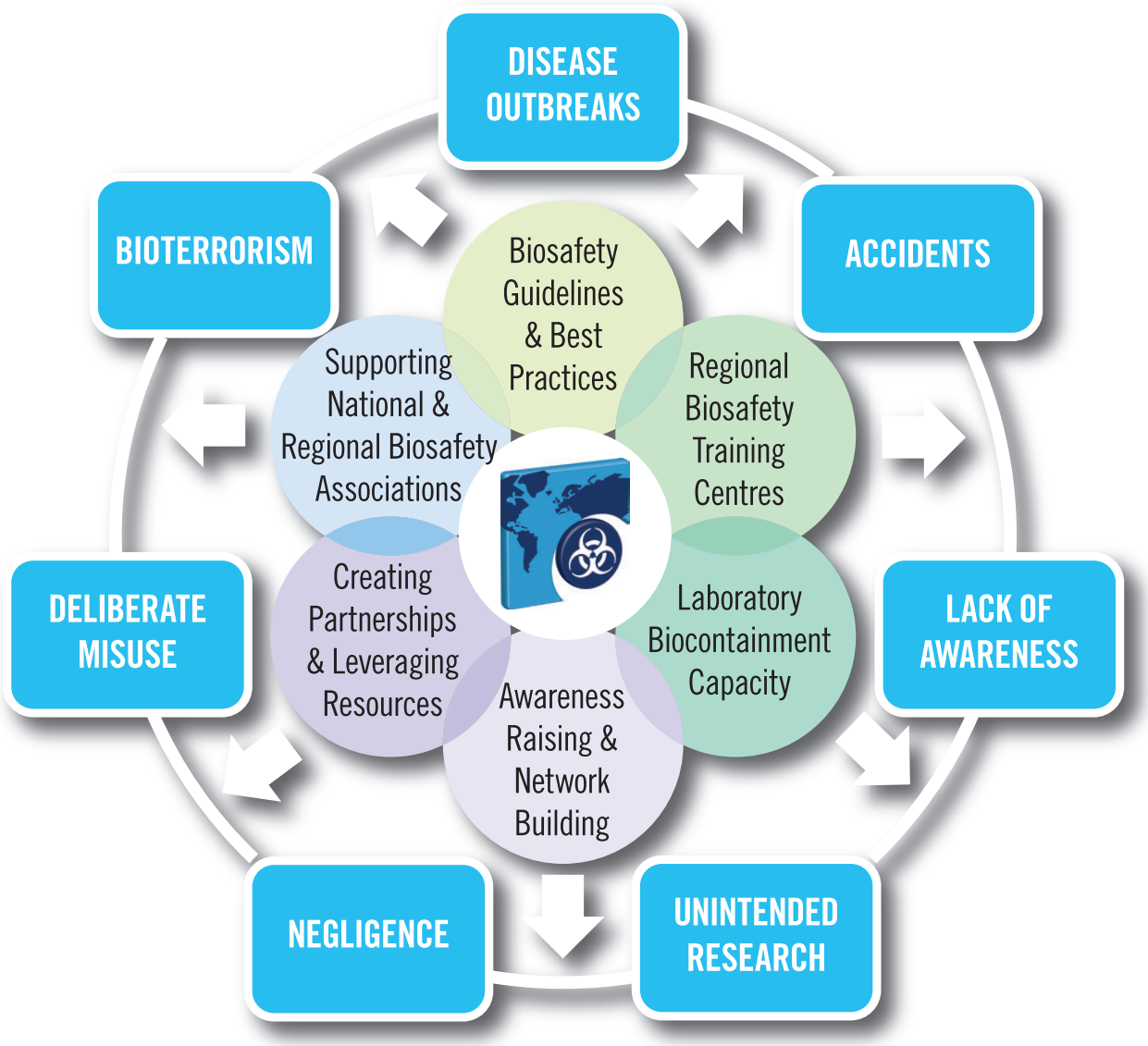
Biological agents require a fundamentally different approach to CBRN security given their self-replicating character. Benign pathogens, furthermore, can be rendered pathogenic through genetic engineering. There exists no mechanism to detect removal of pathogens from a facility, and theft of a minute quantity could present a serious threat. They are often present in many types of biological laboratories around the world that are typically accessible to the public and often have diverse and changing workforces (e.g., hospitals and universities). A small quantity of pathogenic material in the wrong hands would be sufficient to develop a robust biological-weapons capacity and could cause a major disease outbreak or global pandemic. The dual-use nature of biological agents and the difficulties associated with determining whether pathogens have been removed from laboratory facilities necessitates an approach to biological security that emphasizes a culture of responsibility and accountability. As a result, securing biological materials is highly dependent on the integrity of the individuals who have access to them.

A small quantity of pathogenic material in the wrong hands would be sufficient to develop a robust biological-weapons capacity and could cause a major disease outbreak or global pandemic.

Countless dangerous biological materials remain unprotected in laboratories around the world. A recent report from Sandia National Laboratories, "Strengthening Risk Governance in Bioscience Laboratories," (2009), surveyed the state of biosecurity in facilities across the globe and identified at least 63 incidents involving theft, inventory discrepancies, inappropriate shipments of biological agents, unauthorized access, and inadequate security measures. These findings were further articulated in a 2009 Applied Biosafety article (Survey of Bioscience Research and Biosafety and Biosecurity Practices in Asia, Eastern Europe, Latin America and the Middle East), which concluded that "physical security to reduce the risk of unauthorized access to a laboratory is relatively weak in nearly every region."

Addressing these biosecurity challenges across the globe requires collective action. Widespread and lasting results can only be realized by harnessing the power of multiple stakeholders, including non-governmental organizations such as IFBA and its member biosafety associations. NGOs are among the most highly skilled and experienced entities working on the ground. They understand the local "realities," have a better understanding of local needs, and can act as cultural sounding boards in addition to providing needed expertise. NGOs are often able to implement innovative programming, are flexible and adaptable, assume more risks, and are able to work speedily with limited funding. NGOs can also complement and supplement the efforts of governments and multilateral agencies.

IFBA's community of biosafety associations has grown to over 50 member biosafety associations and organizations and is reaching down to the local level to address biological risk management, biological security, and biological nonproliferation issues in virtually every geographic region of the globe. These national/regional/international biosafety associations are working in partnership and leveraging resources to strengthen national and regional biosecurity programs and foster a culture of security among scientists with access to dangerous biological materials. Over the past several years, these associations have disseminated best practices and guidelines, assisted countries in strengthening their own policies, and conducted outreach and



IFBA programs are grounded in the broader context of a worldwide strategy for expanding collaboration and communication in all aspects of health care.

training workshops, with a particular focus on raising awareness about biological risk management, dual-use issues, and biological security.

THAILAND'S BIOLOGICAL RISK MANAGEMENT CHAMPIONS PROGRAM

A recent highlight of IFBA's work at the local level in Southeast Asia is the collaborative implementation of a national biological risk-management and biosecurity program in Thailand. Working with senior governmental officials within Thailand's Ministry of Public Health, IFBA successfully delivered a "Biorisk Management Champions" training program to a cadre of scientists handling dangerous biological agents in Thailand's many diagnostic and research laboratories. The training is part of a broader collaborative strategy within the country to develop a comprehensive national program for managing biosecurity issues, including the implementation of national legislation, regulations, and guidelines for biological pathogens.

The success of Thailand's program would not have been possible without the dedicated vision and leadership of Dr. Siripan Wongwanich, Department of Medical Devices. Under her direction, the Thailand Ministry of Health has successfully enacted its new Pathogens and Toxins Act, which controls the import/export, possession, and use of human and zoonotic pathogens in Thailand. At present, 60 governmental organizations and 537 laboratories have registered with the department and are in compliance with national biosafety and biosecurity requirements. IFBA was pleased to recognize this remarkable achieve-

ment, presenting Dr. Wongwanich the 2012 Biosafety Heroes Award.

Senior governmental officials from Thailand, including the permanent secretary of public health, continue to support efforts to enhance biological security, both within their own country and worldwide. In addition to hosting IFBA's international conference on "Global Biosafety and Biosecurity: Taking Collective Action" in February 2011, IFBA's executive director was invited to deliver the keynote address at the Department of Medical Sciences annual conference in the summer of 2011. As a next step, Thailand's deputy director general for medical services attended IFBA's international conference held in South Africa in June 2012 to promote biosecurity advocacy and share best practices for developing national biological risk-management programs within African countries.

BIOSAFETY ASSOCIATIONS AND SECURITY COUNCIL RESOLUTION 1540

Looking to the future, IFBA and its regional and subregional associations recognize the unique opportunity we have to strengthen and promote the implementation of Security Council Resolution 1540 and the Biological Weapons Convention. UNSCR 1540 was adopted to prevent the development of biological and other weapons and their related materials. International and regional professional associations play an important role in disseminating information and best practices among their networks and members in the relevant areas covered by the resolution. IFBA's global community, which includes countries that are not active participants in the Biological Weapons Convention, is an invaluable resource for work related to the convention and to resolution 1540. Our task is to help ensure that all states have the biosafety, biosecurity, and biological nonproliferation knowledge and tools they require. Collaboration with international, regional, and national biosafety associations provides a direct channel to those who actually run the facilities that conduct biological research and work with dangerous biological agents. The biosafety community can also act as a useful bridge between governments and the private sector, and become an influential partner in generating greater buy-in and encouraging closer engagement.

Our task is to help ensure that all states have the biosafety, biosecurity, and biological nonproliferation knowledge and tools they require.

Through ongoing interaction with the BWC Implementation Support Unit, the 1540 Committee, and the UN Office of Disarmament Affairs, biosafety associations can assist in efforts to build capacity and support states as they fulfill the requirements of resolution 1540. IFBA and its regional representatives from Europe, Southeast Asia, Africa, and Central Asia were pleased to participate in the April 2012 Conference of International, Regional and Sub-Regional Industry Associations on "Promoting the Implementation of UN Security Council Resolution 1540," held in Wiesbaden, Germany. The conference was organized by the UN Office of Disarmament Affairs and supported by the German, Norwegian, and the United States governments. Its aim was to bring together over 25 industry representatives from the different nuclear, biological, and chemical sectors to share ideas, experiences, and best practices on how industry associations can better help states meet UNSCR 1540 objectives. Discussions centered around the growing recognition of the synergies among our missions and the development of important partnerships in achieving our complementary biosecurity goals across the world.

In June 2012, IFBA's biosafety community gathered together again in Johannesburg, South Africa, to continue the dialogue and raise awareness among biosafety professionals worldwide about resolution 1540, the BWC, and biosecurity issues. This conference, "Global Biosafety and Biosecurity: Building Sustainable Capacity," included an interactive session on "Implementing UN Security Council Resolution 1540: The Role of Biosafety Associations," which was intended to give participants the opportunity to familiarize themselves with the provisions of resolution 1540 and to share practices related to its implementation. In the age of biological risk management, there is an increased need to harmonize efforts to achieve our common biosecurity goals. However, with resource constraints being a constant challenge for all, working together not only makes sense; it is critical for future success.

Report on Conference of International, Regional and Sub-regional Industry Associations on UNSCR 1540

Claudia Schneider
POLICY OFFICER, GERMAN FEDERAL FOREIGN OFFICE
DISARMAMENT, ARMS CONTROL, AND NON-PROLIFERATION

The first Conference of International, Regional and Sub-regional Industry Associations on UN Security Council Resolution 1540 (2004) took place in Wiesbaden from April 23-25, 2012. It was hosted by the government of Germany and organized by the UN Office for Disarmament Affairs (UNODA) and the German Federal Office for Economics and Export Control, the latter acting in its capacity as implementing agent for the project "Cooperation in Export Control of Dual-use Goods," funded by the European Union's Instrument for Stability. Additional financial support was provided by the governments of Norway and the United States.

The Security Council explicitly encourages the 1540 Committee "[...] to draw also on relevant expertise, including civil society and the private sector [...]" (Operative Paragraph 12 of UNSCR 1977 (2011). Industry is an important stakeholder in combating the proliferation of weapons of mass destruction to non-state actors, as it implements the measures taken by states in accordance with UNSCR 1540 (2004) on a daily basis.

Implementation of UNSCR 1540 can thus be furthered at various levels. Establishing a good partnership between states and their respective industries, which involves regular information sharing, is one pertinent task. Industry actors can also learn from each other, with cross-sector exchanges offering use-

Participants in the Wiesbaden conference discuss implementing UNSCR 1540.

ful "outside the box" input. Last but not least, industry associations may be seen as particularly relevant. They are effective multipliers and ideally placed at the intersection of national, regional, and sometimes even global efforts.

The Wiesbaden Conference was one of the first of its kind to promote awareness-raising and effective sharing of practices among UNSCR 1540 industry actors. The organizers thus chose international, regional, and subregional industry associations as the primary target group. The organizers were pleased to welcome over 20 representatives of the nuclear, biological, chemical, transport, finance, and aerospace industries, representing constituencies of several thousand companies and entities in over 100 countries worldwide. More than ten participants from international organizations, as well as additional speakers from relevant industry companies, civil society, and academia, contributed to the conference. The 1540 Committee was represented by the German coordinator of the Working Group on Implementation and Monitoring, by its Pakistani representative, and by two Committee experts. Altogether, more than 80 persons accepted the invitation extended by the government of Germany and UNODA.

The first day was dedicated to setting the theoretical framework, as well as to "breaking the ice," by allowing for short introductory presentations by all participants. In the opening session, speakers from the host country, the organizers, and the financial contributors all stressed the added value that industry can provide to states' efforts in support of UNSCR 1540. This was followed by a presentation by the 1540 Committee experts on the resolution's objectives, on the status of its implementation and related challenges, and on its relevance for industry. A representative of one global industry player then spoke about the company's "learning curve" with regard to nonproliferation efforts, and placed the issue within the broader framework of corporate social responsibility. The host government also presented a case study which focused on the role of industry in strategic trade controls. All nine international organizations present provided their points of view. Finally, a "side event" with presentations by representatives of think tanks and universities offered a thoughtful—and thought-provoking—conclusion to the first day.

The second began with detailed examinations of best practices in different industry sectors. It featured, inter alia, presentations by two globally active compa-

nies (EADS, Deutsche Post AG). The Indian Chemical Council took part as an example of relevant efforts by a national industry association. Ample speaking opportunity was also given to representatives of the target group. Here, a representative of the European Chemical Industry Council reflected on the "success story" that the cooperation between states and industry on the Chemical Weapons Convention has become. Participants also learned about the numerous practical outreach activities that the International Federation of Biosafety Associations has developed to facilitate assistance to its members in developing national strategies for biosafety and biosecurity. A representative of the World Nuclear Association argued that forging partnerships with industry could improve existing safeguards and security regimes, while a representative of the European Association of Public Banks underlined the need for a clear assignment of responsibility to each actor in a transaction: the authorities, industry, and financial institutions. Presentations on related activities were also given by the International Astronautical Federation and the Port Management Association of the Caribbean.

The Conference then became even more interactive and practically oriented with two parallel breakout sessions that focused on identifying possible contributions and cooperation of industry associations in the promotion of UNSCR 1540. These breakout sessions were co-moderated by 1540 Committee experts, who effectively guided the discussions in the right direction. The discussions took place under "Chatham House Rules" to allow for a free flow of ideas. Nevertheless, some general observations may be made. First, notwithstanding the fact that primary responsibility for implementing UNSCR 1540 rests with states, many industry representatives acknowledged the relevance of 1540 for their own work. Secondly, many effective practices already exist, but need to be better publicized. Mechanisms may have to be developed with the help of the 1540 Committee. Thirdly, information-sharing between governments and industries remains of utmost importance. More extensive outreach to industry may be in order, as it may be argued that the more awareness is raised, the more open for cooperation they will become. Existing communication channels such as newsletters could be used to that effect. Additionally, points of information within individual industries and industry associations could be created. Fourthly, specific industries require specific approaches. Lastly, particular attention should be directed to the specific needs of small- and medium-sized companies. The latter may in fact depend to a greater extent on relevant industry associations and outside support, including the 1540 Committee.

The discussions also touched upon a number of challenges. The means to enforce the obligations derived from resolution 1540 admittedly remain limited. As the private sector will continue to pursue a risk-based approach, it would profit from more information-sharing and guidance on these issues. Last but not least, the exact role of the private sector in the implementation of resolution 1540 is still in need of precise definition.

The organizers were encouraged by the fact that participating industry associations characterized the conference as a useful exercise and that they expressed their readiness to maintain communication and to disseminate relevant practices and guidelines.

Many participants also expressed their wish for a substantial follow-up to this conference. The government of Germany has already indicated its readiness to contribute to any sustainable "Wiesbaden follow-up process." More specifically, the German Federal Foreign Office would be willing to co-host further conferences and focused workshops, with a future event possibly taking up a sector-specific or (sub-) regional approach.

Events of Interest

DATE	TITLE	ORGANIZERS/SPONSORS	LOCATION
7-10 August	Basic course for the personnel of National Authorities	OPCW	The Hague, the Netherlands
27-31 August	The Second Extraordinary Meeting and the Organisational Meeting of the Contracting Parties to the Convention on Nuclear Safety	IAEA	Vienna, Austria
28-29 August	Global Partnership Working Group (GPWG) meeting	USA	Stockholm, Sweden
30 August	GPWG event	SIPRI	Stockholm, Sweden
2-7 September	Third Annual Summer Program on Disarmament and Non-Proliferation of Weapons of Mass Destruction in a Changing World	Asser Institute & OPCW	The Hague, the Netherlands
3-14 September	International Training Course (ITC) on Physical Protection of Nuclear Material and Facilities	IAEA	Beijing, China
4 September	Regional Workshop Facilitating Adherence to and Implementation of the 2005 CPPNM Amendment	IAEA	Buenos Aires, Argentina
6-8 September	2012 Moscow Non-proliferation Conference	Center for Energy and Security Studies	Moscow, Russia
3-7 September	2nd Consultancy Meeting on International Cooperation and Assistance	IAEA	Vienna, Austria
10-14 September	2nd Consultancy Meeting on Legislative and Regulatory Framework	IAEA	Vienna, Austria
13-14 September	Workshop and Roundtable on "Science Collaboration and Security: New CBRN Challenges and Threats Reduction Programs Beyond",	International Working Group - Landau Network Centro Volta (IWG-LNCV), with the contribution of the US National Nuclear Security Administration and in cooperation with the DoS Bureau of International Security and Nonproliferation (ISN).	Cernobbio-Como, Italy
18-19 September	Chemical and Explosives Terrorism Prevention Global Conference	INTERPOL	Tallinn, Estonia

Events of Interest

DATE	TITLE	ORGANIZERS/SPONSORS	LOCATION
18-20 September	4th Annually Conference "Regional Biosafety and Biosecurity: moving towards international standards"	Biosafety Association for Central Asia and the Caucasus (BACAC)	Almaty, Kazakhstan,
1-5 October	The 63rd International Astronautical Congress	Iinternational Astronautical Federation	Naples, Italy
10-12 October	4th Annual International Symposium on Bio-security and Bio-safety: Future Trends and Solutions	Clinical Microbiology L. Sacco University Hospital Milan, in collaboration with EBSA and with the support of the Italian Presidency of the Council of Ministers, Ministry of Foreign Affairs, Ministry of Defence and Ministry of Interior	Milan, Italy
15-19 October	Advisory Group on Nuclear Security Meeting (AdSec)	IAEA	Vienna, Austria
22-24 October	International Symposium on Development of CBRN Defence Capabilities	German Association for Defence Technologies	Berlin, Germany
22-26 October	Workshop on Fundamentals of Security for Nuclear Facilities and Materials	IAEA	London, UK
29 October	Counter-Terrorism Implementation Task Force (CTITF) Briefing to Member States	CTITF Office	New York
8-9 November	International meeting on chemical safety and security: Promoting Global Chemical Safety and Security Culture	Poland in cooperation with G8 GP and international partners	Tarnow, Poland
17 November	Meeting of the ASEAN Political—Security Community (APSC) Council	ASEAN	Phnom Penh, Cambodia
3-7 December	3rd Consultancy Meeting on Nuclear Security Culture	IAEA	Vienna, Austria
10-14 December	Meeting of BWC States Parties	Implementation Support Unit for BWC	Geneva, Switzerland
18 December	CTITF Briefing to Member States	CTITF Office	New York

The 1540 Compass
Center for International Trade & Security
120 Holmes/Hunter Academic Building
Athens, GA 30602
USA


Holmes/Hunter Academic Building, University of Georgia

The 1540 Compass is a publication of the Center for International Trade & Security at the University of Georgia

The Center for International Trade & Security's mission is to mitigate the global spread of nuclear, biological, and chemical weapons. The Center carries out this mission by researching the dynamics of arms trade control, training government and industry representatives to implement policies that limit the spread of these weapons, and educating students in the discipline of nonproliferation and international security. With offices on the University of Georgia campus and in the U.S. capital, CITS bridges the worlds of research and policy, bringing the best of each to the other.

706-542-2985 http://cits.uga.edu

Contact the Compass:

http://cits.uga.edu/publications/compass

Editor in Chief: Igor Khripunov
i.khripunov@cits.uga.edu

Managing Editor: Christopher Tucker
c.tucker@cits.uga.edu