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THE JOURNAL DEDICATED TO THE OBJECTIVES OF UNITED NATIONS SECURITY COUNCIL RESOLUTION 1540
for preventing the proliferation of weapons of mass destruction by non-state actors

1540 Compass



1540
Compass

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The logo for 'Compass' features the word 'Compass' in a bold, purple, sans-serif font. The number '1540' is positioned above the 'p' in a smaller, lighter purple font. A stylized compass needle, represented by a purple arrowhead, points upwards and to the right, passing through the 'p'. A thin purple arc is positioned above and below the needle, suggesting a circular path or a compass dial.

ACKNOWLEDGEMENTS

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You can find resolution 1540 in full [here](#).

If you would like more information about the work of the 1540 Committee, please see: <https://www.un.org/en/sc/1540/>

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The *1540 Compass* was originally launched in 2012 by the Center for International Trade and Security (CITS) at the University of Georgia in hard copy format. Under the initial direction of Dr Igor Khripunov, and in cooperation with the UN Office for Disarmament Affairs, the *1540 Compass* was designed to provide an accessible forum on the effective implementation of UN Security Council resolution 1540. Back issues of the *1540 Compass* can be found at: <https://spia.uga.edu/departments-centers/center-for-international-trade-and-security-cits/publications/compass/>

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NOTE FROM THE EDITOR



EDITOR-IN-CHIEF | 1540 COMPASS
Francesco Marelli

UNICRI Head of Unit | CBRN Risk Mitigation and Security Governance

Dear Readers, Colleagues, and Contributors,

Welcome to the third edition of *1540 Compass* and our last issue of 2024. As we reflect on our successful first year, it is inspiring to see how this journal has grown into a vibrant platform for diverse voices, bridging regions, disciplines, and sectors in support of UNSCR 1540. With 2025 only a few weeks away, we look forward to continuing our journey of fostering thoughtful discussion and practical insights into the resolution's implementation.

Our primary focus in this third issue is on domestic controls and measures to secure, account for and physically protect sensitive materials and related items. As called for in operative paragraph 3 (a) and (b), these measures and controls safeguard nuclear, chemical, and biological materials, as well as other sensitive items, at every stage of their life cycle. With the growing prominence of these materials for peaceful purposes, ensuring their secure production, use, storage and transport is vital.

We are privileged to present a rich selection of contributions from across the globe on this theme, including insights from Indonesia, Japan, Kenya, and the United States, as well as from the Organisation for the Prohibition of Chemical Weapons (OPCW), an agency renowned for its work in assisting States to strengthen their domestic control measures.

Our interview section features a range of thought leaders and champions who bring unique perspectives to the challenges and opportunities in implementing UNSCR 1540. Maria Rosa Sabbatelli provides insights into the European Union's multifaceted support for the resolution. Janice Sacedon-Dimayacyac shares her expertise on effective trade management in the Philippines. Elena Buglova discusses the critical role of the Incident and Trafficking Database

(ITDB) in combating illicit trafficking of sensitive materials. Redouane Houssaini reflects on Morocco's focus on collaborative efforts, noting that "no single nation can effectively combat WMD proliferation in isolation." Finally, Asep Hermawan shares practices from the radiological sphere that can inform nuclear security measures.

This issue also delves into innovative approaches and regional insights, offering fresh perspectives on aligning UNSCR 1540's implementation with broader global priorities. An article from the Stimson Center explores how the resolution intersects with sustainable development. Other articles, including from the Organization for American States and the United Nations Office of Counter-Terrorism, underscore the importance of regional and international cooperation. Additionally, the World Customs Organization (WCO) outlines its strategies for enhancing strategic trade control through customs enforcement, offering practical lessons for practitioners worldwide.

We are particularly pleased to see the enthusiastic response to our Letters-to-the-Editor section, launched in the previous issue. Your contributions and perspectives enrich this dialogue and play a vital role in shaping the discourse around UNSCR 1540. This issue features a range of reflections that we hope will inspire others to submit their thoughts, articles, or questions for future editions.

As we close this final issue of 2024, I want to emphasize the collective responsibility that lies at the heart of UNSCR 1540. Domestic controls and physical protection measures are not merely technical requirements; they are vital building blocks in our shared effort to prevent the proliferation of weapons of mass destruction. By strengthening these systems, we are not only upholding international obligations, but actively contributing to a safer, more secure global community.

Thank you for your continued support of the *1540 Compass*. We hope this issue inspires you to reflect, engage, and act as we advance the mission of UNSCR 1540 together.

Warm regards,

Francesco Marelli

Note from the Editor

The second issue of the 1540 Compass focused on operative paragraph 3 (c) and (d) of UNSCR 1540, and especially on the topic of export controls. While this issue was rich in content, it was not possible to mention exhaustively all the forms of assistance provided to States in the area of export controls, as called for by UNSCR 1540. This letter is intended to summarize the work of two of the largest providers of export control related assistance: the European Union's Partner-to-Partner and the United States' Export Control Related Border Security programmes.

LETTERS TO THE EDITOR

Please send any letters to the Editor-in-Chief at UNICRI-1540compass@un.org

Letters should not exceed 750 words



Sylvain Paile-Calvo and Office of Export Control Cooperation – US Department of State

DR SYLVAIN PAILE-CALVO IS A SENIOR RESEARCHER IN THE EUROPEAN STUDIES UNIT OF THE UNIVERSITY OF LIÈGE (BELGIUM) AND THE TECHNICAL DIRECTOR AND TEAM LEADER OF PROJECTS OF THE EUROPEAN UNION PARTNER-TO-PARTNER EXPORT CONTROL PROGRAMME FOR DUAL-USE GOODS.

THE OFFICE OF EXPORT CONTROL COOPERATION – US DEPARTMENT OF STATE IS THE ADMINISTERING ORGANIZATION OF THE EXPORT CONTROL AND RELATED BORDER SECURITY PROGRAM, WHICH SEEKS TO PREVENT THE PROLIFERATION OF WEAPONS OF MASS DESTRUCTION (WMD) AND DESTABILIZING ACCUMULATIONS AND IRRESPONSIBLE TRANSFERS OF CONVENTIONAL WEAPONS.



EU P2P and EXBS partnerships for supporting the implementation of the resolution 1540

The implementation of United Nations Security Council resolution 1540 (UNSCR 1540) remains a critical component in the global effort to prevent the proliferation of nuclear, chemical, and biological weapons to and by non-State actors. In support of its implementation, the Export Control and Related Border Security Program (EXBS), administered by the Department of State's Office of Export Control Cooperation (ECC), and the European Union Export Control Programme for Dual-use Goods (EU P2P) have made significant strides since its adoption in 2004. Together, they have thrived to establish partnerships globally towards implementing operative paragraphs 3 (c), 3 (d), as well as the complementary operative paragraphs 6 and 8 (d), and advocating adherence to effective export control criteria. As we mark the 20th anniversary of this landmark resolution, it is imperative to reflect on its achievements and the challenges that lie ahead.

The EXBS Program has worked to advance the implementation of UNSCR 1540 and especially of its provisions prohibiting the unregulated international transfer of WMD-related assets through various international collaborations and initiatives, including both with partner governments, international organizations, and other capacity-building programmes like the EU P2P. These

efforts have been pivotal in strengthening global strategic trade controls (STC) and related non-proliferation frameworks in every region where the EXBS Program works.

The EU P2P is, since 2023, the flagship initiative of the EU to develop dialogue and partnerships with third countries, with a view to promoting convergence of export controls systems, supporting a global level-playing field and enhancing international security. It has offered assistance to a total of 53 Partner Countries worldwide to strengthen export controls of materials –including enabling technology– related to WMD and their means of delivery, which the EU refers to as “dual-use” items. Its activities, which are tailored to partner countries’ priorities and levels of awareness, include e-learning curricula, thematic webinars, awareness-raising and legal workshops, in-depth trainings (including “train-the-trainers”), case studies, table-top exercises, specific dialogues on advanced technical areas, among others.

While promoting with their respective partners that modern and effective export control systems ensure that legitimate and peaceful trade is not hampered, the implementers of these two programmes develop and offer ample tools and possibilities to nourish national reflections on the search for an adequate balance of international security and trade development. Together with experts from the European Union, the United States and beyond –including Partner Countries sharing their experiences–, their teams support partners in the elaboration or update of their national legislations and control lists, and/or in the implementation and enforcement of national export control systems. Their teams also regularly design, develop and propose new activities to cope with rapid evolutions and new challenges in the prevention of proliferation.

In Europe, for instance, the EXBS and EU P2P programmes collaborated to assist Moldova in recently passing a new strategic trade control law consistent not only with UNSCR 1540, but also with EU requirements.

In Southeast Asia, the EXBS and EU P2P teams conducted the seventh workshop in a series aimed at drafting Vietnam’s WMD law, introducing key chapters on strategic trade controls and counterproliferation finance that are in line with UNSCR 1540. In Indonesia, EXBS and EU P2P teams participated in a workshop hosted by the Indonesian Ministry of Foreign Affairs and the 1540 Committee’s Secretariat –the UN Office of Disarmament Affairs (UNODA)– focusing on increasing national awareness of UNSCR 1540.

In Latin America, the EXBS Program has worked in partnership with the Organization for American States (OAS) throughout 2024 to build and refine STC frameworks in Costa Rica, Mexico and – with the EU P2P programme– Panama.

In North Africa, the EXBS and EU P2P programmes continue to build Morocco’s STC capacity to detect, deter, and prevent the proliferation of WMD and related materials through engagement with government, industry and port officials.

In Sub-Saharan Africa, the EU P2P programme works with several partner countries in the region for enhancing STC on dual-use goods and technologies, in coordination with the EXBS team, UNODA and BAFA.

Qatar passed an STC law in 2024, with other nations like Kenya, Vietnam, the Maldives, Tunisia, and Chile, among others, making important progress towards the establishment of a legal STC framework.

As vital participants in worldwide efforts to implement UNSCR 1540 requirements, the EXBS and EU P2P programmes have demonstrated, respectively and jointly, their capacities to create confidence and bolster partnerships worldwide, while valuing the needs and realities of partner countries in their efforts to address evolving WMD proliferation threats, enhance export controls and strengthen border security in compliance with UNSCR 1540.

LETTERS TO THE EDITOR

Please send any letters to the Editor-in-Chief at UNICRI-1540compass@un.org

Letters should not exceed 750 words



Christina McAllister

CHRISTINA MCALLISTER IS A SENIOR FELLOW AND DIRECTOR OF THE PARTNERSHIPS IN PROLIFERATION PREVENTION PROGRAMME AT THE STIMSON CENTER.

INTEGRATED APPROACHES TO IMPLEMENTING UN RESOLUTION 1540 AND THE UN SUSTAINABLE DEVELOPMENT GOALS

I am pleased to submit a policy memo examining a potential integrated approach to implementing United Nations (UN) Security Council resolution 1540 (2004) (resolution 1540) and the UN Sustainable Development Goals (SDGs). The Stimson Center has a long history of challenging the “zero-sum” view of resolution 1540 implementation, which holds that the resolution’s obligations are an additional burden or even an obstacle as resource-constrained governments seek to achieve higher priority development, health, and safety goals.

Generously funded by the Government of Canada, the policy memo builds on previous work exploring linkages between the SDGs and the obligations of resolution 1540 writ large¹ to focus specifically on complementarities between these instruments with reference to the chemical sector. Chemicals are foundational to modern economies and societies, supporting agricultural productivity, manufacturing processes, medicine, and much more. Global chemical trade, worth \$2.39 trillion in 2022, is projected to expand by 2.6 per cent a year between 2024 and 2031,² underscoring the importance of chemicals to growth and development around the world. Yet some of the same substances that are so critical to everyday life can negatively impact the environment and human health if not managed responsibly, or be misused for a variety of illicit purposes.

1 Cupitt, Richard T., “Sustainability and UNSCR 1540 – Making the Link,” *WorldECR*, Vol. 100, June, 2021.

2 <https://www.americanchemistry.com/chemistry-in-america/news-trends/blog-post/2023/acc-mid-year-situation-outlook-june-2023>; <https://oec.world/en/profile/hs/chemical-products?yearSelector1=2022&yearSelector5=2022&yearSelector2=1995#trade>

Our policy memo argues that approaching the management of hazardous chemicals holistically, through the lens of both sustainable development and international security, can lead to better outcomes as well as more efficient application of scarce resources. For example, SDG 16 calls for reducing the illicit arms trade and the 2023 Global Framework on Chemicals, which strongly supports work towards the SDGs, calls for the prevention of the illegal trade and trafficking of chemicals and waste and the implementation of national legal frameworks. As readers of the last edition of the *1540 Compass* will recall, both of these have a close parallel in resolution 1540's operative paragraph (OP) 3, clauses (c) and (d), which oblige States to implement strong export and border control systems "to detect, deter, prevent and combat, including through international cooperation when necessary, the **illicit trafficking** and **brokering** in such items [nuclear, chemical, or biological weapons and their means of delivery, and related items] in accordance with their national legal authorities and legislation and consistent with international law". Work to strengthen national legal frameworks for export and border controls and to build enforcement capacity, especially in the complex chemical sector, can be mutually reinforcing for development and security goals.

Other findings in our memo are relevant to the theme of this edition of the *1540 Compass*: OP 3 (a) and (b) and their focus on implementing measures to account for and physically secure items and materials. While the SDGs at first glance seem exclusively concerned with chemical safety and the protection of human health and the environment, chemical security has become an increasing focus of chemical sector stakeholder groups responsible for supporting the achievement of the SDGs and has been deliberately integrated into chemical management approaches. It is also notable that both SDG-related guidance and 1540-related obligations emphasize a lifecycle approach to safety and security concerns, respectively.

I look forward to feedback from your readers on the ideas proposed in our memo, particularly on practical steps to support resource constrained States on their journey toward implementing their multiple yet complementary goals for peace, security, and sustainable development.

The Stimson Center's policy memo has been republished in full on page 88.

ALL ABOUT OPERATIVE PARAGRAPH 3 (A) AND (B)

Operative paragraph 3 (a) and (b) of resolution 1540 (2004) calls for domestic controls to secure, account for, and physically protect WMD-related items and materials. In simple terms, this means that every Member State must develop and enforce measures which stop these items and materials from falling into the wrong hands. Clause (a) requires countries to set up and maintain strong systems for keeping track of and safeguarding nuclear, chemical, and biological materials, as well as other sensitive items, at every stage of their life cycle—from production to use. Clause (b) requires countries to establish and sustain robust systems of physical security to protect sensitive facilities, materials, or items from unauthorized access or harm.

Why is this significant?

The significance of these clauses lies in their comprehensive, preventative and universal approach to WMD non-proliferation. This can be summarized into three main elements:



1. Focus on non-State actors

Resolution 1540 focuses on preventing WMD proliferation to non-State actors, including terrorist groups, criminal organizations and private individuals. Many other treaties primarily govern State behaviour and inter-State responsibilities, whereas resolution 1540 specifically targets the threat of WMD access by individuals or groups working outside of government control, addressing a modern security gap.



2. Holistic and preventive scope

Clauses (a) and (b) go beyond simple prohibitions or regulations; they require proactive domestic controls to track, secure, and physically protect WMD-related items at all stages of their lifecycle. This comprehensive approach helps close potential security gaps in WMD management, ensuring that each country takes full responsibility for these materials within its borders.



3. Universality

Unlike many treaties that apply only to signatory States, resolution 1540 is binding on all United Nations Member States, regardless of their participation in other specific non-proliferation treaties. This makes it a universal mandate, reinforcing WMD security standards globally, even in countries that may not be part of other agreements like the Nuclear Non-Proliferation Treaty (NPT), the Chemical Weapons Convention (CWC), or the Biological Weapons Convention (BWC).

What does the resolution call for?

OP 3 (a)	OP 3 (b)
<p>“Develop and maintain appropriate effective measures to account for and secure such items in production, use, storage or transport”</p>	<p>“Develop and maintain appropriate effective physical protection measures”</p>

What might this look like in terms of full and effective implementation?

	What is included in the 1540 Matrix?	For more information
1	Measures to account for production, use, storage and transport	The IAEA provide an array of resources on how to account for nuclear material, such as this handbook .
2	Measures to secure production, use, storage and transport	For some storage best practices for biological materials, see this fact sheet from the US Department of Homeland Security.
3	Physical protection measures	Find out how Kenya physically protects nuclear materials on page 62.
4	Personnel reliability	Find out about ChemLock on page 66 and access their free resources.
5	National regulatory authorities	See Asep Hermawan’s interview on page 30.
6	Licensing of installations/entities/use of materials	Janice Sacedon-Dimayacyac discusses the importance of licensing in her interview on page 22.
7	IAEA Safeguards Agreements and other international legal instruments	See Rene Betancourt and Suzanna Khoshabi’s article on the synergies between the CWC and UNSCR 1540 on page 72.

WHO ARE THE 1540 GROUP OF EXPERTS?

The first experts were appointed to support the 1540 Committee a few months after its establishment, in December. However, the Group of Experts was not formally established until 2011, following resolution 1977. A year later, in 2012, its size was increased from eight to nine experts. Among other duties, the Group of Experts are responsible for sharing their knowledge on the resolution during outreach events, providing expertise to the Committee, preparing the 1540 Matrices and contributing to the Comprehensive Reviews.

The experts are chosen based upon expertise requirements and the need for broad geographic representation. Normally, each of the five permanent members of the Security Council nominate



Brazil

Luiz Carlos De Faria

Luiz Carlos De Faria was officially appointed as a member of the Group of Experts in 2024.



China

Peihan Li

Peihan Li joined the Group of Experts in 2024.



France

David Théard

David Théard has been a member of the Group of Experts since January 2020, and was appointed the Coordinator in December 2022. His term is coming to an end at the end of 2024, meaning a new Coordinator will be appointed by the Committee.



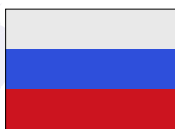
Germany

Irina Albrecht

Irina Albrecht was appointed to the Group of Experts in September 2020.

an expert to join the group. The other experts are selected from a list of candidates nominated by Member States. Appointments are for a maximum term of five years. One expert is selected by the Committee to act as the 'Coordinator'. As specified in S/2011/819, the Coordinator is responsible for "promoting cooperation, accountability and improving communication" between the experts, the Committee, and its working groups.

Since its establishment, the Group of Experts has played a crucial role in advancing the implementation of resolution 1540, leveraging their technical expertise to ensure the Committee fulfils its mandate effectively. Read on to find out more about each of the current experts.



Russian Federation

Alexey Baronin

Alexey Baronin was appointed as a member of the Group of Experts in August 2019, with his term coming to an end this year.



United Kingdom of Great Britain and Northern Ireland

Andrew Horton

Andrew Horton joined the Group of Experts in 2024.



United States of America

Scott Purvis

Scott Purvis was appointed as a member of the Group of Experts in 2024.

ROUND-UP OF THE OPEN BRIEFING



After a three-year hiatus, the 1540 Committee's Open Meeting format returned on 9–10 October in New York. The meeting was moderated by the 1540 Committee Chair, the Permanent Representative of Ecuador, with the support of the 1540 Support Structure (consisting of the 1540 Group of Experts, the Department of Political and Peacebuilding Affairs and the UN Office for Disarmament Affairs (UNODA)). Under the Chair's leadership, the October meeting marked a renewed commitment to enhancing transparency, fostering international collaboration, and advancing the implementation of UN Security Council resolution 1540. The occasion also offered the opportunity to look back on 20 years of 1540 implementation.

The one-and-a-half-day session brought together an array of stakeholders. The Chair of the 1540 Committee, the High Representative for Disarmament Affairs, Member States, and representatives of international, regional, and subregional organizations delivered statements on the first day sharing their experiences, outlining ongoing activities, and extending offers of assistance. In terms of content, representatives focused largely on one or more of the topics summarized in the takeaways section, below.

On the second day, the focus shifted towards outreach and engagement, with the Committee's Group of Experts leading an "Informal and Interactive Dialogue". They presented on several activities called for in the Committee's twenty-first programme of work and tools and resources available on the 1540 Committee's website, before leading a constructive dialogue, during which non-Committee Member States, in particular, were able to ask clarifying questions about the work of the 1540 Committee.

The margins of the Open Briefing were equally dynamic; several side events drew participation from Member States and international and regional organizations. Highlights included a commemorative event marking the 20th anniversary of resolution 1540, hosted by the Permanent Mission of Ecuador to the UN and UNODA.

Another side event, organized by the Inter-American Committee against Terrorism (CICTE) of the Organization of American States (OAS), with support from the European Union, examined the indispensable role of regional organizations in bolstering the implementation of resolution 1540. National participants also underscored the importance of this regional organization and others in enabling 1540 peer reviews and other less formal fora for information sharing.

The Open Briefing underscored the enduring importance of forging robust partnerships, refining mechanisms of support, and adapting to an evolving threat landscape—all while championing inclusivity and innovation. Encouragingly, this gathering may represent the beginning of a more regular schedule of Open Briefings, as called for in operative paragraph 26 of Security Council resolution 2663 (2022). This resolution directs the 1540 Committee “to convene regular open briefings, at least once a year or as needed”, paving the way for continued dialogue and progress. If this year’s engagement is any indication, stakeholders can look forward to enhanced collaboration and transparency in the years to come.

THE OPEN BRIEFING IN NUMBERS



The event took place over **two** days



41 Member States and **10** international and regional organizations delivered statements



Two side events took place alongside the Open Briefing



Seven members of the Group of Experts participated in the Open Briefing

KEY TAKEAWAYS

1

Cooperation is the key to success.

The need for enhanced cooperation between Member States, international and regional organizations, civil society, and the private sector was emphasized as essential for the resolution's full implementation. States, such as France and Germany and the Republic of Korea, all highlighted the importance of leveraging the expertise of civil society and the private sector to enhance the implementation of the resolution. These States also stressed the importance of cooperation with multilateral export control regimes.

2

The Committee's assistance mechanism will benefit from further strengthening.

A number of statements from Member States, including the Russian Federation, called for a refined matchmaking mechanism to support States in meeting their obligations. Indeed, as reported by the United States during its first-day intervention, the Committee has been working effectively on a consensus basis on a procedures document that would allow for more transparent and expeditious processing of assistance requests and related matchmaking.

States that have already benefitted from international assistance facilitated by the Committee nevertheless provided positive feedback on the assistance they have received so far. While Sierra Leone's lessons learned validated that States interested in assistance should provide detailed and specific requests, as set out in the assistance request templates published by the Committee on its website. Find out more about the mechanism [here](#).

3

The creation of technical guidelines is being explored.

In resolution 2663, the Security Council encourages the 1540 Committee to prepare voluntary technical reference guides, as appropriate, as these could provide States with practical advice to support their implementation efforts. During the Open Briefing, States such as Ecuador, France and the United States reiterated the significance of these guides, while calling for their swift completion.

4

Peer review exercises are very valuable.

Several States shared the benefits of peer review exercises, which are often led by regional organizations. In particular, a wide range of Latin American States that had benefitted from UNSCR 1540 peer review exercises organized by CICTE/OAS, such as Chile, Mexico and

These takeaways were prepared based on Member States' statements to the 1540 Committee during the Open Briefing. All the statements are available in full on the [Committee's website](#)

Paraguay, noted their usefulness. While in Asia, Japan highlighted its observatory role in the first peer review focusing on export controls between Singapore and the Philippines and led by ODA. These exercises provide a constructive space for neighbouring countries to exchange experiences and best practices to enhance compliance efforts. Learn more about CICTE/OAS peer review exercises on page 106.

5

The Group of Experts must be fully staffed and equipped with clear internal guidelines.

In their statements, Brazil, Ecuador and Japan all noted that the Group was not yet fully staffed up to the nine-person limit. The European Union, speaking on behalf of its Member States, underlined the importance of having clear internal guidelines for the Group of Experts to optimize efficiency. This intervention was in reference to an Annex to the final negotiating text of resolution 2663.

6

New and emerging technologies offer both risks and benefits.

During their statements, both India and Nepal highlighted the threat posed by new and emerging technologies. However, for many States, including Algeria, China, and Pakistan, striking a balance between security and development, by safeguarding the peaceful uses of these technologies, remains a top priority. Both Australia and Germany highlighted the critical role that export controls play in facilitating the legitimate exchange of these goods for peaceful purposes.

7

Guidelines for Committee participation in outreach events are needed.

The United States expressed concern about resolving disagreements within the Committee, especially regarding the Committee's decision-making process for participation in relevant outreach events —hosted by States and international, regional, and subregional organizations— resulting in a lack of unanimous consensus or a decision delay, preventing Committee participation.

To address this, the United States proposed exploring the development of criteria to streamline internal debates about event participation. While acknowledging that the adoption of such criteria might not resolve all differences of opinion among Members regarding specific events, the U.S. representative suggested that publishing the criteria on the Committee's website could provide clarity for States and regional organizations requesting and submitting them in a timely manner the Committee's presence at their events. This, in turn, might assist them in tailoring their requests for Committee participation, potentially reducing the number of requests that face challenges in securing consensus.

INTERVIEW WITH:

Janice Dimayacyac



Transforming strategic trade management in the Philippines

The Philippines is a leading example of how strategic trade management can profoundly impact both national security and economic development. The adoption of the 2015 Strategic Trade Management Act (STMA) marked a significant milestone in strengthening the country's commitment to non-proliferation and responsible trade practices. This comprehensive regulatory framework aligns with international standards to prevent the misuse of sensitive goods and technologies for military or weapons of mass destruction (WMD) purposes. Notably, the Act has demonstrated its value beyond security, driving impressive economic growth through a consistent increase in export values, reflecting the successful balance between trade facilitation and regulatory oversight.

To gain deeper insight into the key elements of the Philippines' successful strategic trade management, this issue features an interview with Attorney Janice Sacedon-Dimayacyac, the Director of the Strategic Trade Management Office (STMO) at the Philippine Department of Trade and Industry. With her extensive first-hand experience in drafting the Implementing Rules and Regulations for the STMA, Director Sacedon-Dimayacyac has unparalleled expertise in this domain. In this interview, she discusses the critical processes behind creating and refining the STMA framework, offering a unique perspective on how the Philippines benchmarks against international best practices. From fostering inter-agency collaboration to engaging industry stakeholders, Director Sacedon-Dimayacyac highlights the multifaceted efforts required to operationalize a robust strategic trade management system while ensuring its alignment with the country's broader economic goals.

The Philippines has transformed strategic trade management into a cornerstone of national security and economic strategy. Through her insights, Director Sacedon-Dimayacyac provides a compelling look at the best practices and challenges behind building a successful system that is both specific to the Philippines and grounded in international best practices.

DIRECTOR OF THE STRATEGIC TRADE MANAGEMENT OFFICE

The 2015 STMA established a new regulatory framework in the Philippines for managing trade in strategic goods. Could you walk us through the process of drafting the Implementing Rules and Regulations for the STMA? What were the main considerations, and how did you address any unique challenges?

The drafting of the Implementing Rules and Regulations (IRR) for the STMA was a complex and challenging endeavour that spanned almost three years – two years for the development of the draft alone, followed by an additional year required for approval and publication. During the initial stages, one of the significant hurdles we encountered was the need to create a registration and licensing process that was not only comprehensive, but also aligned with international best practices. This meant carefully examining and integrating existing licensing frameworks utilized by various countries that have robustly implemented export control measures.

To ensure we were heading in the right direction, we conducted an extensive benchmarking process with several leading jurisdictions like the United States of America (US), the European Union (EU), the United Kingdom (UK), Japan, the Republic of Korea, Singapore, and Malaysia. We extracted the basic licensing processes in these countries, adapting them to suit our local context.

In this adaptation process, we did not simply copy these frameworks; instead, we sought to enhance them by incorporating steps gained from the experiences of other regulatory agencies within the Philippines. We also engaged with various industry stakeholders to understand their perspectives, needs, and suggestions. Our

primary objective was to develop implementing rules and regulations that not only conformed to international procedures and best practices, but also addressed the unique characteristics and nuances of the existing Philippine regulatory regime.

Developing effective licensing and enforcement systems is critical to the success of any strategic trade framework. Could you describe the approach taken by the STMO in the Philippines to establish its licensing and enforcement mechanisms? What lessons or insights emerged from this process?

Similar to developing the licensing mechanisms I just mentioned, when establishing our enforcement mechanisms, we benchmarked with other countries like the US, EU and the UK. After understanding how these countries enforce their strategic trade management mandates, we aligned this with the penal laws in the Philippines. At present, we are refining our protocols for administrative and criminal enforcement, while completing the proposed changes to the STMA, especially related to the sections on violations and penalties.

The important takeaway from tabletop exercises aimed at evaluating our enforcement mechanisms is the potential need to revise our existing STMA legislation, especially regarding the filing of criminal charges. Presently, our laws require that we engage law enforcement agencies before we can submit complaints for the prosecutors to assess probable cause. However, this differs with the enforcement strategies usually adopted in the Philippines, where regulatory bodies can file complaints directly with prosecutors to avoid bureaucratic delays. Thus, it is vital for countries,

when drafting enforcement mechanisms, to consider the specific nuances that are effective for their own contexts.

Given the complexity of strategic trade management, effective inter-agency collaboration is essential. Could you share how inter-agency protocols have been developed to ensure proper implementation of the STMA across various government departments in the Philippines?

One of the initial challenges we also encountered is the need for an inter-agency mechanism to facilitate implementation of the STMA. To address this, the National Security Council Strategic Trade Management Committee (NSC-STMCom), the central policy-making body composed of 14 cabinet members designated under the STMA to issue strategic trade management related policies, designated four inter-agency Sub-Committees to assist the STMO in effectively implementing the STMA.

In its first resolution, the NSC-STMCom created the following Sub-Committees, each with its own set of protocols and procedures:

- (a) *Sub-Committee on Trade Facilitation: This committee, which consists of our customs authorities and investment promotion agencies or Freeport zones, supports the STMO in dealing with shipments identified at the border as strategic goods being exported without a license.*
- (b) *Sub-Committee on Technical Reachback: This inter-agency committee is comprised of specialized technical agencies from the national government, each bringing their expertise to assist the STMO in carrying out*

the classification of commodities on a case-by-case basis. In addition, they offer valuable support to frontline officers by providing commodity identification assistance when needed.

- (c) *Sub-Committee on Risk Assessment: This committee is made up of the government's intelligence sector. They provide pertinent information when the STMO requires additional vetting of individuals, organizations, and countries of destination.*
- (d) *Sub-Committee on Enforcement: This group is composed of the law enforcement agencies and prosecutors who assist the STMO in investigating and prosecuting criminal offences under the STMA.*

It is vital for countries, when drafting enforcement mechanisms, to consider the specific nuances that are effective for their own contexts.

Implementing strategic trade controls often yields broad economic and security benefits. What are some of the tangible economic and other advantages that the Philippines has observed since the adoption of strategic trade management practices?

From the security perspective, the implementation of STM has been instrumental in preventing the export of items that could be used as parts or components of unmanned aerial vehicles (UAVs) in conflict zones. This has contributed significantly to safeguarding our domestic industries against potential secondary sanctions and prevented the exploitation of our industries by front or shell companies associated with proliferation networks.

From the economic perspective, the implementation of a robust strategic trade management regime has led to a remarkable surge in the export value of strategic goods. Since the introduction of strategic trade management in 2019, export values have demonstrated substantial growth, with figures reaching \$3.6 million in 2020, \$4.5 billion in 2021, \$13.9 billion in 2022, and \$14.4 billion in 2023 (all amounts in USD).¹

The Strategic Trade Management Office actively hosts workshops and trainings centred on strategic trade, including many with a specific focus on industry outreach. Could you highlight one recent event in particular? What were its primary objectives, and what notable outcomes or insights emerged from it?

In collaboration with the United States government, the STMO successfully organized the inaugural Philippine Strategic Trade Management Summit from 9–12 September 2024. This landmark event brought together key representatives from government sectors and the private industry across various global regions, including Africa, the East Asia Pacific, Europe, South America, and certain areas of Central America.

The summit aimed to highlight the critical importance of strategic trade management in promoting global peace, safeguarding supply chains, and facilitating sustainable economic development. A notable moment in the event was marked by a speech from the President of the Philippines, Ferdinand R. Marcos, who underscored the vital role that strategic trade management plays in driving economic growth and bolstering regional security. His participation as a Head of State at the summit exemplified the event’s significance and the Philippines’ commitment to this crucial area.

One of the primary conclusions drawn from the discussions at the summit was the urgent need for the region to develop a standardized framework for strategic trade management implementation. This framework would aim to simplify compliance with regulatory demands for businesses operating within the sector. By adopting harmonized strategic trade management standards, the region could significantly enhance its ability to foster economic growth, while ensuring that it remains competitive within the global marketplace.

¹ The STMA was enacted in 2015. However, absent an Implementing Rules and Regulations, strategic trade management only officially started in 2019. The STMO duly started issuing export authorizations from October 2020 onwards. Figures from 2020 are therefore only for October to December of that year.

Moreover, establishing a cohesive and secure trading platform would position the region as an attractive and unified hub for potential investors. This move not only aims to streamline trade processes, but also seeks to enhance trust among trading partners, ultimately contributing to the region's economic resilience and stability in the face of global challenges.

Communication with stakeholders is critical in strategic trade management. Are there any best practices or effective strategies that the Philippines has developed to communicate strategic trade information to stakeholders, including the private sector and industry?

The STMO has established and maintained a robust partnership with industry stakeholders over many years, actively fostering collaborative relationships that contribute to developing effective policies and regulations. Throughout the drafting process of the Implementing Rules and Regulations (IRR) and during the licensing phase of the STMO, we prioritized engagement with industry representatives. This engagement took the form of public consultations and town hall meetings designed to solicit valuable feedback and insights from stakeholders.

To enhance communication and accessibility, the STMO has developed a comprehensive online presence. We utilize multiple platforms, including the Department of Trade and Industry website, LinkedIn, a dedicated Viber community, and regular email blasts, to disseminate essential information and updates regarding new guidelines related to the implementation of the STMA. Our commitment to transparency is evident in our efforts to clearly articulate our intentions and processes through the issuance of several detailed guidelines aimed

at assisting industry stakeholders in navigating our legal framework.

Furthermore, we recognize the importance of targeted communication and outreach initiatives. To this end, we conduct sector-specific outreach activities to keep stakeholders informed about recent updates and legislative developments. A prime example of this is the recently concluded Creating Helpful Incentives to Produce Semiconductors (CHIPS) Act outreach, which was specifically tailored for our semiconductor industry, as well as third-party logistics providers. These initiatives reflect our dedication to ensuring that all industry players are well-informed and equipped to adapt to new regulations and opportunities as they arise.

Catch-all clauses are vital tools in preventing unauthorized trade in strategic goods. Could you elaborate on the role of catch-all controls in the Philippines' strategic trade framework? How do they support national security and compliance efforts?

Catch-all controls are a critical element of our regulatory framework. They enable us to extend our regulatory authority to unlisted items that may be used for military or WMD-related applications. These controls have been vital in obstructing the shipment of such items to non-State actors, thus improving our national and, to some extent, international security.

For example, our first licensing denial involved a catch-all item intended for a front or shell company. By having catch-all controls in place, we successfully brought this specific item under our regulatory jurisdiction, allowing us to take proactive measures. This action protected our

local manufacturers from unintentionally aiding proliferators and from possibly being exposed to secondary sanctions that other States may impose. The effective implementation of these controls emphasizes their importance in reducing risks related to the unauthorized transfer of these items.

How does the Philippines implement and enforce these controls within its trade management system? Are there specific measures or procedures in place to assess and mitigate potential risks?

To effectively implement robust catch-all controls, our office has proactively issued a series of circulars designed to inform the public about specific items and associated red flags that they should be vigilant about when determining whether their goods should be subjected to strategic trade management. These circulars serve as an essential resource, guiding stakeholders on the nuances of strategic trade management compliance.

We also prioritize staying informed about the latest developments in the manufacturing landscape within the Philippines, particularly concerning items that could potentially be misappropriated for WMD end-use. By continuously monitoring

the news and industry trends, we can identify emerging risks and take appropriate preventative measures. Furthermore, we recognize the value of engaging with industry stakeholders and frontline workers through various awareness-raising forums. These events are critical for fostering dialogue, sharing knowledge, and enhancing the collective understanding of these pressing issues.

To mitigate potential risks associated with sanctions evasion, we actively encourage our industry partners to conduct regular screenings against both the sanctions imposed by the UN Security Council and any relevant unilateral sanctions that individual States may enforce. Our electronic licensing platform, Stratlink, through our entity screening tool is specifically designed to facilitate this process, allowing companies to easily search for and confirm whether their customers are subject to any sanctions.

In addition to these measures, we also provide end-use and end-user business advice to assist companies in conducting thorough vetting of new customers or existing clients who may present red flags. This guidance is essential for fostering best practices within the industry and ensuring that all stakeholders are equipped to navigate the complexities of compliance effectively.

“Catch-all controls are a critical element of our regulatory framework. They enable us to extend our regulatory authority to unlisted items that may be used for military or WMD-related applications.”



A view of a building in Makati City, the area where the Strategic Trade Management Office is located. [enjiniakimiko/Unsplash](#)

INTERVIEW WITH:

Asep Hermawan



What can UNSCR 1540 non-proliferation efforts learn from radiological security?

Asep Hermawan, Director of Inspection of Radiation Facilities and Radioactive Materials at Indonesia's Nuclear Energy Regulatory Agency (BAPETEN), is a key figure in Indonesia's efforts to ensure the secure management of radiological and nuclear (RN) materials. As the country's primary regulatory authority in this domain, BAPETEN safeguards public health, safety, security, and the environment through comprehensive policies, licensing frameworks, and rigorous inspections.

In this interview, Director Hermawan provides valuable insights into how BAPETEN addresses challenges such as the illicit trafficking of radioactive materials, insider threat mitigation, and the secure management of RN materials during production, use, storage, and transport—issues that align directly with operative paragraph 3 (a) and (b) of United Nations Security Council resolution (UNSCR) 1540. While Indonesia does not operate nuclear power plants, its widespread use of radioactive sources in medical, industrial, and research applications necessitates stringent regulatory oversight, offering lessons that extend beyond radiological security.

Preventing the unauthorized access, diversion, or trafficking of radiological materials is not only critical to public health and safety, but also to global non-proliferation goals. While UNSCR 1540 focuses on nuclear materials, this interview highlights cross-sectoral practices that can inform nuclear security measures and contribute to the broader chemical, biological, radiological, and nuclear spectrum.

To start with, could you tell our readers about your responsibilities at BAPETEN?

As the Director of Inspection, my main tasks include developing and implementing technical policies, overseeing system development, and conducting safety and security inspections of radioactive materials and other radiation sources used in medical, research, and industrial facilities. These inspections ensure that radioactive materials are used in accordance with their licenses, preventing radiation hazards to workers, the public, and the environment. In short, inspections verify compliance with national and international regulations by ensuring the safe and secure use of radioactive materials, and feed into a wider RN security culture.

Ensuring the security of RN materials throughout their lifecycle is a complex, yet crucial task. What is the greatest threat in Indonesia in terms of securing, accounting for and physically protecting RN material?

The greatest threats to securing, accounting for, and physically protecting RN materials in Indonesia stem from the risks of theft, sabotage, or illicit trafficking of radioactive sources. While Indonesia does not operate nuclear power plants, it does use radioactive materials for medical, industrial, and research purposes. These practices make RN materials vulnerable if security measures are inadequate. Furthermore, Indonesia’s geographical location and extensive coastlines increase its exposure to smuggling networks.

Could you describe some of the measures BAPETEN has implemented to account for and secure the production, use, storage, and transport of RN materials and related items?

BAPETEN has established a series of measures to enhance the security, control, and accountability of RN materials throughout their lifecycle. These measures aim to prevent theft, misuse, or unauthorized access. Key initiatives include:

1. Comprehensive Licensing and Inspection

- BAPETEN mandates that all institutions producing, using, storing, or transporting RN materials obtain licenses tailored to the radiological risk level, ensuring that higher-risk materials are managed with stricter controls.
- Regular inspections ensure compliance with facilities’ licensing conditions. Regular and announced inspections verify that materials are stored and used according to safety and security protocols, while unannounced inspections help assess the real-time operational security of RN materials.
- Inventory audits, where facilities must account for all RN materials by matching the quantities in BAPETEN’s database with actual physical stock, ensures that all materials are securely stored and accounted for, helping detect any loss, theft or unauthorized movement.
- Transport inspections focus on the adequacy of vehicles, secure packaging methods, route planning and emergency response readiness. Transport personnel must also receive specialized training on RN material security. GPS tracking and continuous communication during transit are also required for high-risk shipments.

2. Physical Security Measures for Facilities

- Facilities must implement controlled access, surveillance, secure storage cabinets, and alarms.
- Facilities handling RN materials are categorized by the risk level of the materials they store or handle, with more stringent security measures for high-risk sites. Additional measures for these sites include real-time monitoring through centralized systems at BAPETEN.

3. Detection and Prevention of Illicit Trafficking

- BAPETEN collaborates with national agencies to deploy radiation portal monitors and portable detectors at key entry points like airports and seaports. These tools help detect unauthorized movements of RN materials.

Licensing and registration are vital for monitoring the secure handling of RN materials. How does licensing and registration contribute to effective oversight, and what is BAPETEN's approach?

Licensing is fundamental to regulatory oversight. It ensures that only verified and compliant entities with legitimate purposes access RN materials. By tracking the lifecycle of these materials, BAPETEN reduces the risk of RN materials falling into the hands of unauthorized or malicious individuals. The licensing framework includes:

- Strict conditions for waste disposal to prevent environmental contamination or unauthorized access to radioactive waste, to ensure RN materials are properly handled at the end of their lifecycle.

Licensing is fundamental to regulatory oversight. It ensures that only verified and compliant entities with legitimate purposes access RN materials.

- Certification of personnel involved in handling RN materials, including operators, radiation safety officers, security officer and radiation workers. These personnel are required to undergo specialized training and, for high-risk roles, background checks. This mitigates insider threats by ensuring only qualified and trustworthy individuals are granted access.

Personnel reliability is essential in the RN sector to prevent insider threats. How serious is the insider threat in Indonesia? Could you provide an overview of insider threat prevention programmes in Indonesia?

Insider threats are a significant security concern in Indonesia. Given the risks associated with unauthorized access, sabotage, theft or diversion

of RN materials, Indonesia has taken proactive measures to address potential insider threats.

Facilities using RN materials are spread throughout Indonesia, with some –especially for industrial purposes, such as industrial radiography– located in remote areas. These facilities and activities pose risks if RN materials are accessed by malicious insiders. As a result, insider threats are a serious consideration for Indonesia’s regulatory and security framework.

To address these risks, Indonesia has implemented comprehensive insider threat prevention programmes:

1. Personnel Reliability Programmes

Individuals who handle or have access to RN materials should undergo thorough background checks including assessments of their criminal history, financial stability and psychological fitness. This initial screening process helps in identifying potential security risks among personnel.

2. Physical and Digital Access Control

Only authorized personnel are granted access to specific areas within radiological facilities. Access levels are closely monitored and different levels of clearance are granted based on job roles and responsibilities, minimizing unnecessary access to sensitive areas. High security areas within nuclear facilities often use the two-person rule, requiring at least two authorized individuals to be present when accessing critical equipment or materials.

3. Security Culture Programmes

BAPETEN promotes a strong security culture within Indonesia, emphasizing the importance of individual responsibility for security. Training programmes include modules on recognizing security risks and understanding the importance of following protocols.

Collaboration with industry is essential for an effective security and non-proliferation strategy. How does BAPETEN engage with industry to strengthen security and non-proliferation measures?

BAPETEN collaborates closely with industry stakeholders to strengthen security measures, recognizing that effective oversight and risk management depend on strong partnerships with entities that handle RN materials. BAPETEN collaborates with industry stakeholders through:

1. Regulatory Guidance and Consultation:

BAPETEN provides guidance to industry stakeholders on nuclear safety, security, and non-proliferation standards through published regulations and guidelines. When developing or revising regulations, BAPETEN often seeks input from industry stakeholders to ensure that new measures are practical and can be effectively implemented. This consultation process not only helps improve regulatory design, but also fosters industry cooperation and alignment with BAPETEN’s objectives.

2. Training Programmes

BAPETEN organizes training with industry to address specific security and non-proliferation challenges. These events focus on sharing

best practices, enhancing security culture and discussing emerging threats and trends to help industry stay up to date on evolving risks and countermeasures.

3. Personnel Reliability Programmes

To prevent insider threats, BAPETEN encourages industry facilities to implement personnel reliability programmes that include background checks, continuous evaluation and access control.

4. Regular Inspections and Audits

BAPETEN conducts inspections of industry facilities to ensure compliance with security and non-proliferation requirements. These inspections verify that industry are adhering to safety protocols, maintaining accurate material accounting and effectively securing RN materials.

Are there any best practices or recommendations that you would suggest for other regulatory agencies aiming to enhance their compliance with UNSCR 1540?

Every agency works in a different context, so recommended actions cannot be generalized. Having said that, to enhance compliance with UNSCR 1540, regulatory agencies can focus on building a strong legal framework, strengthening licensing inspection and enforcement mechanisms, fostering interagency cooperation, promoting training and capacity building, and, finally, cultivating a strong security culture.

Finally, are there any case studies that you can share with our readers linked to the transport/trafficking of RN material?

Yes, we can share an overview of a recent incident so that your readers can learn from our experience. On 11 January 2024, BAPETEN was alerted to the theft of an industrial radiography camera containing Ir-192. The device had been stolen during transport on 28 December 2023. Investigations by an inter-agency team revealed that the driver, with no technical background, had stolen and sold the camera for economic reasons. The stolen camera was recovered within days and BAPETEN imposed sanctions on the parties involved. This incident highlights the need for stringent controls and serves as a lesson for other entities to prevent similar cases.

When developing or revising regulations, BAPETEN often seeks input from industry stakeholders to ensure that new measures are practical and can be effectively implemented.

INTERVIEW WITH:

Redouane Houssaini



Redouane Houssaini on the importance of collaborative efforts: “No single nation can effectively combat WMD proliferation in isolation”

In recent times, the Kingdom of Morocco has emerged as a leading voice in international efforts to combat terrorism and curb the proliferation of weapons of mass destruction (WMDs). As a gateway between Africa and Europe, the Kingdom plays a strategic role in addressing complex security challenges that transcend borders, through its proactive engagement with international frameworks like the Proliferation Security Initiative and its steadfast implementation of UN Security Council resolution 1540.

Over his decades-long career, with experience spanning disarmament, non-proliferation, and multilateral negotiations, Mr Redouane Houssaini has been at the forefront of implementing Morocco’s foreign policy. Recently appointed as Morocco’s Ambassador to Indonesia, Mr Houssaini previously held the post of Director of the United Nations and International Organizations within Morocco’s Ministry of Foreign Affairs, African Cooperation, and Moroccan Expatriates. During his time as Director, he played a central role in chairing the largest Proliferation Security Initiative event ever held in Africa—a landmark achievement that showcased Morocco’s leadership in promoting international cooperation.

From pioneering regional initiatives to forging global partnerships, Morocco has demonstrated a strong commitment to fostering peace and stability. In this interview, Mr Houssaini provides his perspective on the Kingdom’s approach to navigating today’s security landscape, the critical role of African nations in global initiatives, and the enduring importance of diplomacy in building a safer world. His reflections highlight Morocco’s vision of collective action as the foundation for addressing the challenges of a rapidly evolving global landscape.

**DIRECTOR OF THE UNITED NATIONS AND INTERNATIONAL ORGANIZATIONS,
MINISTRY OF FOREIGN AFFAIRS, AFRICAN COOPERATION AND MOROCCAN EXPATRIATES**

First of all, can you share an overview of the terrorism and WMD proliferation landscape in your region? What key security challenges do you see?

In today’s global landscape, terrorism and the threat of WMD proliferation represent two of the most pressing security challenges. The incidence of terrorism in Africa, particularly in the Sahel region, has increased significantly, with substantial implications for global security. In 2022, the Sahel accounted for 43% of worldwide terrorism-related deaths, a sharp increase from 1% in 2007. This notable rise underscores the Sahel’s growing prominence in global terrorism statistics and associated violence.

The threat of terrorism has not remained confined to the Sahel but has spread more broadly in the region, with countries previously unaffected now experiencing attacks. This geographic expansion demonstrates that terrorism is not a static threat, but one that can migrate, affecting the continent as a whole.

Compounding the issue is the growing risk of WMD proliferation in Africa. Traditionally, the focus has been on small arms and light weapons (SALW), but regions within the continent are now facing heightened threats related to WMDs, exacerbated by porous borders and critical transport corridors across Africa. The continent’s capacity deficit –marked by limited resources and ineffective monitoring– further intensifies the problem. This deficiency impairs the ability of States to secure their territories effectively and increases their vulnerability to becoming transit zones or recipients of sensitive equipment and technology.

Addressing these geographic vulnerabilities and capacity deficits is crucial for establishing robust international security mechanisms and preventing the unauthorized movement of materials that could pose severe threats to global stability. As terrorism continues to evolve and spread, it is imperative for the international community to prioritize efforts to counter these emerging threats and safeguard global security.

What is the Moroccan approach to implementing resolution 1540?

Morocco is dedicated to non-proliferation initiatives, which is evident in its meticulous monitoring and reporting on the implementation of resolution 1540. Since 2004, Morocco has consistently submitted national reports, with additional updates showcasing its ongoing efforts to meet international expectations.

In line with the resolution’s requirements, Morocco has established a robust national legislative framework to regulate activities related to chemical, biological, radiological, and nuclear (CBRN) materials. Key institutions –such as the National Commission for the Control of Export and Import of Dual-Use Goods, the National Commission on the Prohibition of Chemical Weapons, and the National Commission responsible for applying sanctions related to terrorism and arms proliferation– play crucial roles in this framework.

Through proactive measures and adherence to international treaties, Morocco not only promotes the universal adoption and implementation of multilateral agreements like resolution 1540, but also reaffirms its commitment to multilateral cooperation, particularly within the framework of the International Atomic Energy Agency. This

comprehensive approach highlights Morocco's success in aligning with resolution 1540's objectives and underscores its leadership in the global fight against WMD proliferation.

As an early adopter on the African continent, why did the Kingdom of Morocco decide to endorse the Proliferation Security Initiative (PSI) in 2008?

Morocco's decision to join the PSI in 2008 and its active involvement in hosting workshops and events reflect a strategic and forward-thinking approach to international security and non-proliferation. In 2008, Morocco recognized the PSI as a crucial mechanism, due to its voluntary nature and flexible framework, which aligns with international mechanisms and provides a pragmatic solution to the global threat of WMD proliferation. This flexibility allows Morocco to address these threats effectively within the parameters of international standards and mechanisms.

At the core of Morocco's rationale is a firm belief in the importance of international cooperation for ensuring security. Morocco views the PSI as an embodiment of this cooperative spirit, facilitating collaborative efforts among nations to intercept and prevent the proliferation of WMDs. By participating in and hosting PSI events, Morocco reinforces its commitment to a collective approach, underscoring that security challenges are best addressed through joint regional and international cooperation.

Earlier this year, the Kingdom of Morocco hosted the largest PSI event ever held on the African continent, which you co-chaired. Can you share more about the event and its main outcomes?

Certainly. The PSI African Political Meeting and Outreach Event co-hosted by Morocco and the United States in Marrakesh from 31 January to 2 February 2024 was a significant example of Morocco's commitment to and its alignment with operative paragraph 9 of UNSCR 1540. This high-profile event brought together senior representatives from 35 countries, including 25 African States and 10 countries from the PSI Operational Experts Group. The Marrakech event provided Morocco with a prominent platform to reiterate its dedication to countering the proliferation of WMDs, their delivery systems, and related materials. It also emphasized the importance of further collaboration within the PSI framework to address these critical issues effectively.

One of the primary objectives of the event was to highlight the significance of South-South cooperation. By showcasing how nations within this framework can leverage their unique strengths and resources, Morocco underscored the value of regional collaboration in tackling common security challenges. This strategic focus aligns with Morocco's broader policy of integrating Africa into its security perspectives, acknowledging that African stability is crucial for both national, regional, and international security.

Through these actions, Morocco positions itself as a leading player in regional security, ready to assist African nations in strengthening their capacities and addressing the challenges posed by WMD proliferation. This proactive stance

aligns with Morocco's vision of a secure and cooperative international community, where collaborative efforts and shared responsibilities are key to achieving lasting peace and security.

During the event, Benin, Equatorial Guinea, Ghana, Togo, and Zambia endorsed the PSI, reflecting a significant increase in regional support. Building on this momentum, three additional countries –Gambia, Guinea-Bissau, and Madagascar– endorsed the initiative through effective follow-up mechanisms, which raised the number of African nations supporting the PSI from six to 14 to date, marking a notable expansion in collective regional commitment. This surge in support underscores Morocco's leadership role and its successful efforts to address a critical gap in global non-proliferation initiatives.

What message would you give to other African nations that are considering whether they should endorse the PSI?

The underrepresentation of African nations among PSI participants has long highlighted a critical gap in global efforts to tackle security challenges. Recognizing the interconnected nature of these threats, it is clear that no single nation can effectively combat WMD proliferation in isolation. The complex web of threats necessitates a collaborative global effort, where diverse perspectives and resources are harnessed to confront multifaceted issues. In this context, the active involvement of African nations becomes imperative, as they are crucial contributors to fulfilling the global commitment to resolution 1540 and enhancing regional security.

Do you have any best practices or major achievements that you could share with our readers with regard to the implementation of resolution 1540 and other international legal instruments?

Morocco's proactive approach offers a set of valuable experiences for other African nations facing similar threats. Its success underscores the importance of establishing a robust legal and regulatory framework at the national level, maintaining solid and close coordination across national, regional, and international levels to intercept WMD threats, and adhering to international instruments designed to combat proliferation. Morocco's model demonstrates how these elements are essential for effective non-proliferation efforts and regional stability.

What are some of the Kingdom of Morocco's priorities in the coming years with regard to UNSCR 1540 and non-proliferation more broadly?

Positioned at the intersection of Africa and Europe, Morocco is acutely aware of its strategic role given its unique geographic position. Fully recognizing the necessity of robust action, Morocco has committed to devising a comprehensive strategy to continue effectively implementing resolution 1540, to address the growing risks of WMD proliferation and reinforce its role as a regional leader in safeguarding security.

In addition to national and international measures taken in compliance with UNSCR 1540, Morocco's vision of international security and the proliferation of WMDs is characterized by a proactive and collaborative approach aimed at reinforcing global stability and preventing the

spread of WMDs. Recognizing the transnational nature of these threats, Morocco has committed to addressing these challenges through active participation in international frameworks designed to enhance collective security. This vision is exemplified by Morocco's decision to endorse the PSI. The success of the Marrakech event and Morocco's ongoing efforts highlight its role as a key player in enhancing international non-proliferation frameworks.

As the country moves forward, its focus will be on sharing its valuable experience with other African nations, particularly in capacity building and the establishment of robust regulatory frameworks. By doing so, Morocco aims to bridge existing gaps in international security and strengthen collective efforts to prevent WMD proliferation.

The road ahead for Morocco involves not only reinforcing its own measures, but also extending its support to neighbouring countries, fostering regional cooperation, and promoting effective non-proliferation practices across the continent. Morocco's dedication to this cause reflects its broader vision of a secure and cooperative international community, where shared expertise and collaborative action are central to achieving lasting peace and stability. By leading by example and engaging in international capacity-building initiatives, Morocco is set to play an important role in shaping a more secure and resilient future for Africa and the world.

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In this context, the active involvement of African nations becomes imperative, as they are crucial contributors to fulfilling the global commitment to resolution 1540 and enhancing regional security.

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INTERVIEW WITH:

Elena Buglova



The heart of effective nuclear security

The International Atomic Energy Agency (IAEA) has been at the forefront of global efforts to ensure the safety and security of nuclear materials since its establishment in 1957. Central to this mission is the Incident and Trafficking Database (ITDB), created in 1995, which fosters international cooperation and information sharing—“the heart of effective nuclear security,” as Dr Elena Buglova aptly puts it. The Database serves as a central repository for incidents involving illicit trafficking and other unauthorized activities related to nuclear and radioactive materials outside regulatory control. By supporting participating States in addressing emerging threats, promoting transparency, and encouraging collective action, the ITDB embodies the IAEA’s collaborative approach to nuclear security.

Dr Buglova, the Director of the IAEA’s Division of Nuclear Security, is leading this vital work. With over 30 years of expertise in nuclear safety and security, Dr Buglova’s career has been defined by her commitment to enhancing preparedness and ensuring effective emergency response. From her early work addressing the consequences of the Chernobyl disaster in Belarus to managing the IAEA’s response to the Fukushima Daiichi accident in 2011, she has consistently demonstrated exceptional leadership in navigating complex challenges.

In this interview, Dr Buglova offers an in-depth exploration of the ITDB’s role in combating nuclear and radiological trafficking, its alignment with international frameworks such as UN Security Council resolution 1540, and the evolving trends shaping the nuclear security landscape. While her reflections reinforce the idea that “international cooperation and information sharing” are at the heart of effective nuclear security, it is also clear that the IAEA is the driving force behind safeguarding the peaceful use of the atom.

DIRECTOR OF THE IAEA’S DIVISION OF NUCLEAR SECURITY

To begin with, for our readers who are not familiar with the ITDB, could you briefly explain its purpose and how it functions?

The Incident and Trafficking Database (ITDB) is the IAEA’s information system on incidents of illicit trafficking and other unauthorized activities involving nuclear and other radioactive materials outside of regulatory control. The ITDB contains authoritative information, voluntarily reported by participating States—presently, there are 145.

The incidents reported to ITDB range from illegal possession, attempted sale, and smuggling to unauthorized disposal of radioactive material, and discovery of lost radioactive sources. On average, over 100 incidents are reported annually, the majority of which involve radioactive sources used in industrial or medical applications.

This information is confidential and highly restricted. Only participating States and relevant international organizations, such as the International Criminal Police Organization (INTERPOL), can access the ITDB. However, every year, the IAEA releases a factsheet with information that summarizes the details of confirmed incidents and represents a cross-section of the aggregated ITDB data that has been made available for the public domain.

Since its establishment in 1995 the ITDB has been an indispensable component of the IAEA’s information management systems supporting the implementation of the IAEA’s Nuclear Security Plans. The IAEA’s Division of Nuclear Security is responsible for managing the ITDB. We review all reported incidents with a view to identify common threats, trends, and patterns, to assist States in determining what actions may need to be taken with respect to particular events or to

help formulate policy towards combating illicit trafficking of such materials; and more broadly to support the IAEA’s nuclear security activities.

The ITDB covers incidents related to both nuclear material and radioactive sources. Why is it important for the database to track both of these categories?

The ITDB scope covers a variety of incidents, including those which are successful, unsuccessful or thwarted. It covers all types of nuclear material as defined by the Statute of the Agency (i.e., uranium, plutonium and thorium), naturally occurring and artificially produced radioisotopes, and radioactively contaminated material, such as scrap metal. Documenting the incidents involving all these types of materials is essential due to the wide range of potential risks they pose. States are also encouraged to voluntarily report incidents involving scams or hoaxes where material is purported to be nuclear or otherwise radioactive.

The widespread use of radioactive sources in industry, medicine and research requires constant vigilance in keeping them secure under regulatory control. The broad scope of the ITDB therefore helps to raise awareness, promote international cooperation and strengthen regulatory measures to protect against potential threats.

Which elements or paragraphs of UNSCR 1540 are most pertinent to the ITDB, and are there other legal instruments that also support its operations?

The global nuclear security framework includes legally binding and non-binding international instruments. The ITDB as a key mechanism supports countries in their efforts to fulfil some

of their obligations for nuclear security, especially in the area of detection and response to cases of nuclear and other radioactive material outside of regulatory control.

The Convention on the Physical Protection of Nuclear Material (CPPNM), together with its Amendment, is one of the main international tools for protecting nuclear material and facilities from criminal or intentional unauthorized acts. It provides a foundation for establishing effective physical protection regimes, forming a basis for cooperation and assistance and harmonizing approaches to combating criminal acts aimed at or involving nuclear material and facilities.

The United Nations' (UN) International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT) details offences relating to the unlawful and intentional possession and use of radioactive material or nuclear/radioactive devices and the unlawful use or damage of facilities, as well as ancillary offences related thereto.

UN Security Council resolutions 1373 (2001) and 1540 (2004) are relevant to nuclear security and are legally binding for all UN Member States. For example, UNSC resolution 1540 specifically requires all UN Member States to take measures to prevent non-State actors from developing, obtaining and using nuclear weapons and their means of delivery. Of particular relevance is the need for each State to develop and maintain appropriate effective physical protection measures, effective border controls and law enforcement efforts and effective national export and trans-shipment controls.

It is also important to note that a number of significant legally non-binding instruments adopted under the IAEA's auspices complement

the legally binding instruments. These are the Code of Conduct on the Safety and Security of Radioactive Sources and its supplementary Guidance, and the Nuclear Security Series suite of publications, which provide international consensus guidance on all aspects of nuclear security.

Together, all these instruments comprise a comprehensive international legal framework for nuclear security which requires the establishment of robust national nuclear security regimes for its effective implementation.

How would you assess the current threat landscape regarding nuclear and radioactive incidents and trafficking? What trends or patterns has the ITDB observed over recent years?

Since the database was launched three decades ago, over 4,000 incidents have been reported, approximately eight per cent of which are confirmed as acts related to illicit trafficking or malicious use of nuclear or other radioactive materials. The frequency of such incidents remains low, while cases of attempted scams involving non-nuclear material, falsely claimed to be nuclear or radioactive, have been rising.

Those incidents not related to trafficking or malicious use primarily involve various types of material recovery, such as the discovery of radioactive sources outside regulatory control, the detection of radioactive material disposed of in an unauthorized way, the detection of the inadvertent unauthorized possession or shipment of nuclear or other radioactive material, as well as radioactively contaminated material such as scrap metal.

Between 1993–2023, only four per cent of the reported thefts of nuclear and other radioactive material were subsequently confirmed to have been related to illicit trafficking. The number of incidents reported by participating States to the ITDB in 2023 on illicit trafficking, thefts, losses and other unauthorized activities and events involving nuclear and other radioactive material, continues to follow historical averages.

Based on the ITDB’s data, what are some common vulnerabilities in the control of nuclear and radioactive materials that States should prioritize addressing?

A key point about nuclear security is that responsibility for nuclear security within a State rests entirely with that State. In this regard, it is a State’s decision to determine the priorities, for example, in light of its nuclear related activities, the evolving threat landscape and its international legal obligations and commitments, among other considerations.

An analysis of trends related to the types of materials involved in reported incidents indicates a decline in the reporting of incidents involving nuclear material. Conversely, there is a noticeable increase in reporting for incidents involving other types of radioactive material, and radioactively contaminated materials. This underscores the need to provide appropriate security measures for such materials, as well as to enhance the regulatory arrangements governing their management.

In fact, the ITDB data shows that, since 1993, around 52 per cent of all reported thefts have occurred during authorized transport, and this figure stands at almost 65 per cent in the last decade. This highlights the ongoing importance of strengthening transport security measures.

Recovery rates for radioactive sources outside of regulatory control also vary. Globally, the recovery rate for Category 1–3 radioactive sources is higher, compared to Categories 4 and 5. This can be attributed to the concerted effort made by the authorities to recover such sources.

Overall, further to these insights, strengthening nuclear security requires a multi-faceted approach that includes the effective regulatory oversight of radioactive sources, transport security, increased industry awareness and reporting, as well as international cooperation to combat illicit trafficking, among others.

Could you provide a detailed overview of the assistance or resources that the ITDB offers to participating States?

The ITDB provides participating States with a number of valuable resources. One of its main functions is to assist States with the timely exchange of authoritative information on incidents involving illicit trafficking and other related unauthorized activities involving nuclear and other radioactive material. It enables the IAEA to provide analytical support and threat assessments to participating States, upon request. These assessments can help States understand the risks posed by nuclear and other radioactive material outside of regulatory control and help identify potential gaps in national nuclear security regimes.

The ITDB also serves as a valuable reference for participating States to learn from past incidents and improve current nuclear security practices. In addition, it is a reliable source of basic information to the media concerning incidents such as trafficking, by providing authoritative information about such events, when appropriate.

International cooperation is another important benefit for the States participating in ITDB. For instance, through regional and national workshops, the ITDB facilitates cooperation between participating States, enabling them to share vital information and establish collaboration networks to respond to incidents involving material that is outside of regulatory control. This international network of cooperation strengthens global efforts to combat the illicit trafficking and misuse of nuclear and other radioactive materials.

The IAEA, with the support of the information on incidents reported to ITDB, provides States, upon request, with a systematic and comprehensive framework –the Integrated Nuclear Security Sustainability Plan (INSSP)– for reviewing their nuclear security regimes and identifying areas where they need to be strengthened. The INSSPs also highlight any assistance needed to support the development of an effective and sustainable nuclear security regime.

Upon request, the IAEA also provides assistance to States in their national efforts to implement nuclear security strategies, concepts and measures for major public events. The Agency support includes training for national authorities responsible for the implementation of the security measures and the operation of specialized equipment, as well as the loan of detection equipment.

Are there any examples of best practices that ITDB promotes for securing, accounting for, and physically protecting nuclear and radioactive materials?

International cooperation and information sharing are at the heart of the ITDB, and a critical element

of effective nuclear security. Participating in and reporting to the ITDB is a good practice, because it sets an example on transparency and accountability to facilitate the detection of and response to incidents involving materials outside of regulatory control.

Through the ITDB network of national points of contact, the IAEA is pursuing the promotion of a nuclear security culture that prioritizes the rigorous record keeping of nuclear and other radioactive material. Similarly, participating States are encouraged to introduce systems for regular inventories. It is broadly recognized that accurate and up-to-date national records are essential to ensure that materials are used only for their intended, peaceful purposes.

The same applies to the border controls and law enforcement measures to detect and prevent illicit trafficking. States are encouraged through the ITDB to establish national networks that include frontline officers and regulators to ensure information sharing on intercepted trafficking attempts and to engage in joint operations with neighbouring countries to combat cross-border smuggling networks.

Finally, how can a State become a member of the ITDB? What initial steps are involved?

Interested States can initiate the process by simply contacting, through the official channels, the IAEA Division of Nuclear Security. Detailed guidelines will then be provided, including about the designation of national points of contact who can provide reports on incidents to the ITDB on behalf of their countries, receive ITDB information and reports produced by the IAEA Secretariat and facilitate responses to enquiries on specific incidents.

INTERVIEW WITH:

Maria Rosa Sabbatelli



Showcasing the EU's efforts to strengthen multilateral cooperation

Maria Rosa Sabbatelli, Head of Unit for Global and Transregional Threats and Challenges within the European Commission's Service for Foreign Policy Instruments (FPI), helps to shape the European Union's response to today's most pressing security challenges. From countering the proliferation of chemical, biological, radiological, and nuclear (CBRN) material to addressing terrorism, organized crime, and the protection of critical infrastructure, her work underscores the EU's commitment to fostering global stability through multilateral cooperation.

Central to these efforts are initiatives like the EU CBRN Risk Mitigation Centres of Excellence and the EU Partner-to-Partner (P2P) Export Control Programme, which aim to build capacity, enhance resilience, and strengthen local infrastructure. These initiatives demonstrate how the EU is helping partner countries align with international frameworks, including UN Security Council resolution 1540, while also bolstering their national capacities and knowledge. This approach reflects the EU's emphasis on trust-building and engagement tailored to each partner's needs as a way to counter global threats.

In the context of an increasingly interconnected world and evolving transregional threats, Maria Rosa Sabbatelli discusses the importance of multilateral cooperation and highlights how the EU works hand-in-hand with partner countries to create sustainable, long-term solutions. Her reflections demonstrate the EU's role as a unifying force in safeguarding global peace and security, while also ensuring respect for national sovereignty.

To begin with, could you give our readers a brief introduction to your role and responsibilities as the Head of Unit for Global and Transregional Threats and Challenges within the Service for Foreign Policy Instruments (FPI) of the European Commission?

I lead a team of 21 dedicated and skilled professionals. We are responsible for implementing the thematic multi-annual indicative programme “Peace, Stability and Conflict Prevention” under the Neighbourhood, Development and International Cooperation Instrument – Global Europe (NDICI–GE) framework.

Our programme focuses on addressing threats requiring a global or transregional approach, emphasizing multilateral cooperation and capacity-building. It strengthens Europe’s role as a global leader and standard setter, while complementing national and regional actions.

Key areas of focus include:

- Counterterrorism;
- Mitigating chemical, biological, radiological, and nuclear (CBRN) risks;
- Combating organized crime, illicit trafficking, and smuggling;
- Addressing threats to critical infrastructure; and
- Managing the destabilizing impacts of climate change and environmental factors.

As an operational unit, we actively manage approximately 130 contracts to ensure effective implementation of our initiatives.

This issue of the 1540 Compass is looking at operative paragraph 3 (a) and (b) of resolution 1540, which emphasizes the need for States to establish domestic controls to secure and account for WMD-related materials during production, use, storage and transport, as well as physical protection measures. How do the EU’s initiatives support partner countries in enhancing their domestic measures in these areas?

The EU actively supports partner countries in enhancing domestic controls to secure WMD-related materials during production, use, storage, and transport, as emphasized in resolution 1540. This is achieved through two key instruments:

NDICI–Global Europe

This instrument supports long-term development challenges, contributing to the EU’s international commitments under the 2030 Agenda and its Sustainable Development Goals. Under this framework, initiatives include: the EU CBRN Risk Mitigation Centres of Excellence Initiative – which enhances governance, risk assessments, and capacity-building in partner countries— and export control programmes –which support legal and operational frameworks for controlling dual-use materials and technologies.

The **Centres of Excellence Initiative**, in particular, provides a range of support activities to help partner countries enhance their measures in the area of production, use, storage, transport, and physical protection of WMD-related materials.

These activities include legal gap analysis, technical assistance, hands-on trainings, exchange of best practices, and material support. Examples include support for the management of high-risk chemical facilities, for the national inventory of hazardous chemicals, and for improving the safety and security of biological laboratories, among others.

On the other hand, the **EU P2P Export Control Programme for Dual-use Goods** aims at partnering with third countries to improve trade controls and compliance with non-proliferation obligations, which is more closely aligned with operative paragraph 3 (c) and (d) of the resolution.

Common Foreign and Security Policy (CFSP)

This supports specialized non-proliferation initiatives with partner countries, targeting enforcement and governance improvements.

The EU CBRN Risk Mitigation Centres of Excellence Initiative works with 63 partner countries to address chemical, biological, radiological, and nuclear risks. Could you describe some of the ways the programme builds local expertise and infrastructure to improve CBRN security and risk management?

The EU CBRN Risk Mitigation Centres of Excellence Initiative takes a comprehensive approach to improving CBRN security and risk management in partner countries. It builds local expertise and infrastructure through several measures:

Establishing national structures: Partner countries develop CBRN National Focal Points and inter-agency National Teams, forming a

strong foundation for effective CBRN governance and coordination.

Risk assessment and National Action Plans (NAPs): Support is provided to help countries assess CBRN risks and threats, enabling the identification of vulnerabilities and the drafting of NAPs. These plans prioritize actions for improving governance and fulfilling legal obligations.

Capacity building: Activities include specialized training, provision of equipment, and methodologies to enhance national capabilities.

Promoting cooperation: Efforts encourage interagency collaboration at the national level and foster regional and global partnerships to share best practices.

Addressing biological risks: The initiative funds interventions to mitigate biological threats by strengthening disease surveillance, diagnostics, and response coordination.

Custom projects: Partner countries are supported with tailored capacity-building projects that align with their specific needs and priorities.

By focusing on these areas, the initiative ensures that partner countries develop sustainable solutions for CBRN risk management, while fostering a culture of safety and security.

Both the Centres of Excellence and the 1540 Committee use NAPs to assist countries in implementing their non-proliferation commitments and addressing CBRN risks. How do the different NAPs complement each other? How can they be used in tandem to support more effective implementation of non-proliferation measures?

The NAPs developed under the EU CBRN Risk Mitigation Centres of Excellence Initiative and the 1540 Committee address distinct yet complementary aspects of non-proliferation and risk mitigation.

1540 NAPs: These plans focus primarily on preventing non-State actors’ access to CBRN materials and combating illicit trafficking. They emphasize trade controls, enforcement mechanisms, and compliance with international obligations under regimes like the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Chemical Weapons Convention (CWC), and World Health Organization (WHO) International Health Regulations.

EU CBRN Risk Mitigation Centres of Excellence NAPs: Broader in scope, these plans employ a multi-hazard approach, addressing the full spectrum of risks from any CBRN incidents, while integrating resolution 1540 priorities.

For instance, the Central Asia Regional Action Plan, designed within the framework of the Centres of Excellence Initiative, effectively combines 1540 obligations with comprehensive CBRN risk mitigation strategies, serving as a model for replication in other regions.

The last issue of the 1540 Compass focused on border and export controls, as mandated by paragraph 3 (c) and (d) of resolution 1540. As you mentioned, this is closely linked to the work of the EU P2P Programme. What are some of the ways that the EU’s P2P Programme assists States in this area?

The EU P2P Export Control Programme for Dual-use Goods is the flagship initiative of the EU to

develop dialogue and partnerships with third countries, with a view to promoting convergence of controls, supporting a global level-playing field and enhancing international security.

It has offered assistance to a total of 56 partner countries worldwide to strengthen export controls of materials –including enabling technology– related to nuclear, chemical or biological weapons and their means of delivery, which the European Union refers to as “dual-use” items.

In practical terms, the EU P2P Programme implements roadmaps defined with partner countries to jointly tackle challenges of export controls through the delivery of technical assistance, hands-on trainings and exchanges of best practices. Considering their high added value for the Programme, coordination and joint actions with other initiatives and assistance providers in the implementation of the export control provisions of resolution 1540 are commonly proposed to partner countries.

The various types of activities, which are tailored to partner countries’ priorities and levels of awareness include e-learning curricula, thematic webinars, awareness-raising and legal workshops, in-depth trainings (including “train-the-trainers”), case studies, table-top exercises, specific dialogues on advanced technical areas, etc. The EU P2P Programme also continues to provide tailor-made activities for countries facing specific challenges, notably where crises occur at borders, or to support them in “mapping” their national trade capacities in dual-use goods and technologies, or to assist them in elaborating proliferation finance risk assessments, for instance.

Maintaining comprehensive and up-to-date control lists is a critical aspect of export control regimes. Can you explain how the EU P2P Programme supports partner countries in adopting and managing control lists in line with international standards?

The EU P2P Programme provides a range of support activities to help partner countries develop and manage effective control lists that are in line with international good practices, notably designed in the framework of the multilateral export control regimes.

This support includes assisting partner countries in elaborating or updating their national control lists, which involves creating or modifying lists of controlled items, technologies, and services. The EU P2P Programme also shares European best practices and experiences in consolidating control lists into a single list, such as the “EU list” to be used as the basis for national controls in non-EU countries worldwide. For instance, it regularly organizes webinars involving EU institutions to explain the contents and annual updates of the EU list, and to discuss with partner countries the convergence of the lists.

The Programme also supports partner countries in implementing and enforcing their national export control systems, which includes managing the control lists. This involves helping partner countries to establish procedures for controlling the transactions on controlled items and ensuring that their control lists are effective in preventing the proliferation of nuclear, chemical, or biological weapons.

Finally, the Programme also offers tailor-made activities for partner countries facing specific challenges in managing control lists, notably in

relation to the classification of the items. This tailored support helps partner countries address their unique challenges and maintain effective control lists that meet their specific needs while contributing to an international level-playing field.

The EU P2P Programme and the EU CBRN Centres of Excellence Initiative both involve complex, cross-border challenges. How do you ensure that these initiatives are adaptable to evolving security threats and responsive to each region’s unique needs?

Both the EU P2P Programme and the EU CBRN Centres of Excellence Initiative are designed to address evolving security threats by maintaining flexibility in their approaches and tailoring interventions to regional and national priorities.

Dynamic frameworks: National roadmaps under the EU P2P Programme and Regional Action Plans under the CBRN Centres of Excellence Initiative are continuously updated to reflect new risks, such as emerging technologies, hybrid threats, and changes in geopolitical dynamics.

Regular engagement: The CBRN Centres of Excellence Initiative conducts regular regional roundtables with National Focal Points, providing a platform to discuss evolving threats, share best practices, and ensure alignment with regional and national priorities. This process allows partner countries to propose new projects and refine existing strategies based on current needs.

Multilateral cooperation: Both initiatives collaborate with international organizations, regional bodies, and other assistance providers, ensuring that their actions are complementary and avoid duplication. This fosters a coordinated

response to transregional challenges.

Crisis adaptation: The EU CBRN Centres of Excellence Initiative has demonstrated the ability to adapt during crises, such as the COVID-19 pandemic. It supported partner countries in managing biological risks by strengthening disease surveillance, improving diagnostics, and coordinating emergency responses.

Localized solutions: By empowering partner countries to take ownership of their security through tailored capacity-building projects, both initiatives ensure sustainable and effective responses to evolving threats, while respecting regional and cultural contexts.

This adaptability ensures that the initiatives remain relevant and effective in addressing both current and future challenges, bolstering global security and resilience.

The P2P Programme and the EU CBRN Centres of Excellence Initiative have played a key role in capacity building and collaboration between EU Member States and third countries. Are there any notable success stories that you could share with our readers, where this collaboration has had a positive impact on enhancing security and non-proliferation efforts?

Collaboration between the EU and partner countries has led to notable achievements in security and non-proliferation:

EU P2P Programme:

- Supported 56 partner countries in adopting and implementing export controls for dual-use goods.

- Facilitated the adoption of the EU consolidated control list in 20 countries.
- Promoted private-sector engagement in compliance with export regulations.

EU CBRN Centres of Excellence Initiative:

- Established over 50 National Teams and drafted 28 National Action Plans.
- Invested €230 million in more than 100 projects focusing on legislation, training, and equipment.


Other examples of impact include:

1. Laos submitting its first Confidence-Building Measure report for the Biological Weapons Convention.
2. Thailand improving its WHO Joint External Evaluation score.
3. Uzbekistan integrating mobile bio-laboratories into its public health system.
4. Kazakhstan establishing a Poisons Information Centre.

These initiatives highlight the EU’s commitment to building resilient systems that enhance international security and non-proliferation efforts. They also support non-proliferation efforts through funding towards the peaceful uses of advanced science.



A plenary session at the EU CBRN Centres of Excellence Academy in Turin, November 2024; Credit, Beniamino Garrone.



ENSURING COMPLIANCE WITH UNSCR 1540 THROUGH KENYA'S NUCLEAR REGULATORY FRAMEWORK

Former IAEA Director General Yukiya Amano visits the Kenya Agricultural Research Institute in Nairobi, during his official visit in 2013; Credit, Conleth Brady/IAEA.

ABSTRACT

This article examines Kenya's implementation of UNSCR 1540's operative paragraph 3 (a) and (b) through the Nuclear Regulatory Act of 2019. It analyses how Kenya has developed and maintained effective measures for accounting for, securing, and physically protecting nuclear materials, focusing on the transition from the Radiation Protection Board to the Kenya Nuclear Regulatory Authority (KNRA). The case study demonstrates how developing nations can establish comprehensive regulatory frameworks that align with international non-proliferation obligations while building domestic nuclear capabilities.



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Edward Mayaka serves as Director of Partnerships and Public Awareness at the Kenya Nuclear Regulatory Authority, following his role as Deputy Director of Nuclear Safety and Security. His expertise spans nuclear non-proliferation, safeguards implementation, and radiation safety protocols. Mr Mayaka has strengthened Kenya's nuclear regulatory framework through strategic partnerships and comprehensive safeguards programmes, and he has made scholarly contributions on nuclear non-proliferation published by the IAEA and leading international organizations.

Kenya's journey toward implementing United Nations Security Council resolution 1540 represents a significant milestone in the global effort to prevent the proliferation of nuclear weapons and related materials. Through the enactment of the Nuclear Regulatory Act in 2019, Kenya has established a comprehensive framework that directly addresses the resolution's crucial requirements

for domestic controls and physical protection measures. This legislative achievement not only demonstrates Kenya's commitment to international security, but also provides valuable insights into how developing nations can effectively implement such complex obligations while pursuing peaceful nuclear applications.

The evolution of Kenya's nuclear security framework

represents a significant institutional transformation. The Radiation Protection Board, established under the previous legislative framework, laid the foundational groundwork for nuclear material control and security in Kenya. Building upon this experience, the KNRA emerged as a more robust and comprehensive regulatory body under the Nuclear Regulatory Act of 2019. This transition marked a crucial step in

strengthening Kenya’s capacity to implement UNSCR 1540’s requirements, while adapting to contemporary nuclear security challenges.

The KNRA, drawing from the expertise developed by its predecessor the Radiation Protection Board, has implemented a sophisticated system for nuclear material control and accounting. The new regulatory framework establishes stringent protocols for tracking nuclear materials throughout their entire lifecycle, from acquisition to disposal. This includes detailed inventory management systems, secure storage requirements, and regular verification procedures. The enhanced authority of the KNRA ensures that all nuclear materials remain under strict control, with multiple layers of oversight preventing unauthorized access or diversion.

Physical protection measures form another crucial component of Kenya’s regulatory framework, directly addressing operative paragraph 3 (b) of UNSCR 1540. Under the KNRA’s oversight, the Act mandates comprehensive facility security protocols, including multi-layer access control systems, continuous surveillance in-

frastructure, and emergency response procedures. These measures extend to transportation security, where GPS tracking, armed escorts, and real-time monitoring systems protect nuclear materials in transit. Additionally, the framework includes robust personnel security measures, implementing thorough background screening protocols and continuous monitoring programmes to mitigate insider threats.

The enforcement architecture of the Act, administered by the KNRA, ensures compliance through a sophisticated system of controls and verifications. A comprehensive licensing system governs facilities and personnel handling nuclear materials, while regular inspections and assessments verify adherence to security protocols. The framework also establishes strong border controls, including specialized training for customs officials and the deployment of radiation detection equipment at key entry points. These measures collectively create a robust defence against illicit trafficking, while facilitating legitimate nuclear activities.

Since its implementation in January 2020, the Act has

achieved several significant milestones under the KNRA’s leadership. The establishment of this centralized regulatory authority has streamlined oversight and enforcement, while the implementation of IAEA-compliant safeguards has strengthened international confidence in Kenya’s nuclear security measures. The development of comprehensive verification procedures and the training of specialized nuclear security personnel have further enhanced the framework’s effectiveness.

However, Kenya’s implementation journey has not been without challenges. The KNRA continues to address technical capacity development needs, particularly in adapting to evolving technological threats. Resource constraints continue to affect certain aspects of implementation, while coordination of regional cooperation efforts presents complex logistical and diplomatic challenges. Nevertheless, the Authority’s approach to addressing these challenges demonstrates a commitment to continuous improvement and adaptation.

International cooperation forms a cornerstone of the KNRA’s regulatory approach.

The system facilitates regular reporting to the IAEA, active participation in peer review mechanisms, and comprehensive information sharing with relevant international bodies. This cooperative approach extends to regional border control coordination, creating a more effective barrier against nuclear proliferation while promoting peaceful nuclear development.

Kenya's implementation of UNSCR 1540's requirements through the Nuclear Regulatory Act and the establishment of the KNRA offers valuable lessons for other developing nations. The framework demonstrates how countries

can establish effective nuclear control systems, while maintaining the flexibility needed for peaceful nuclear development. By focusing on practical implementation measures and maintaining high security standards, Kenya has created a model that balances international obligations with national development goals.

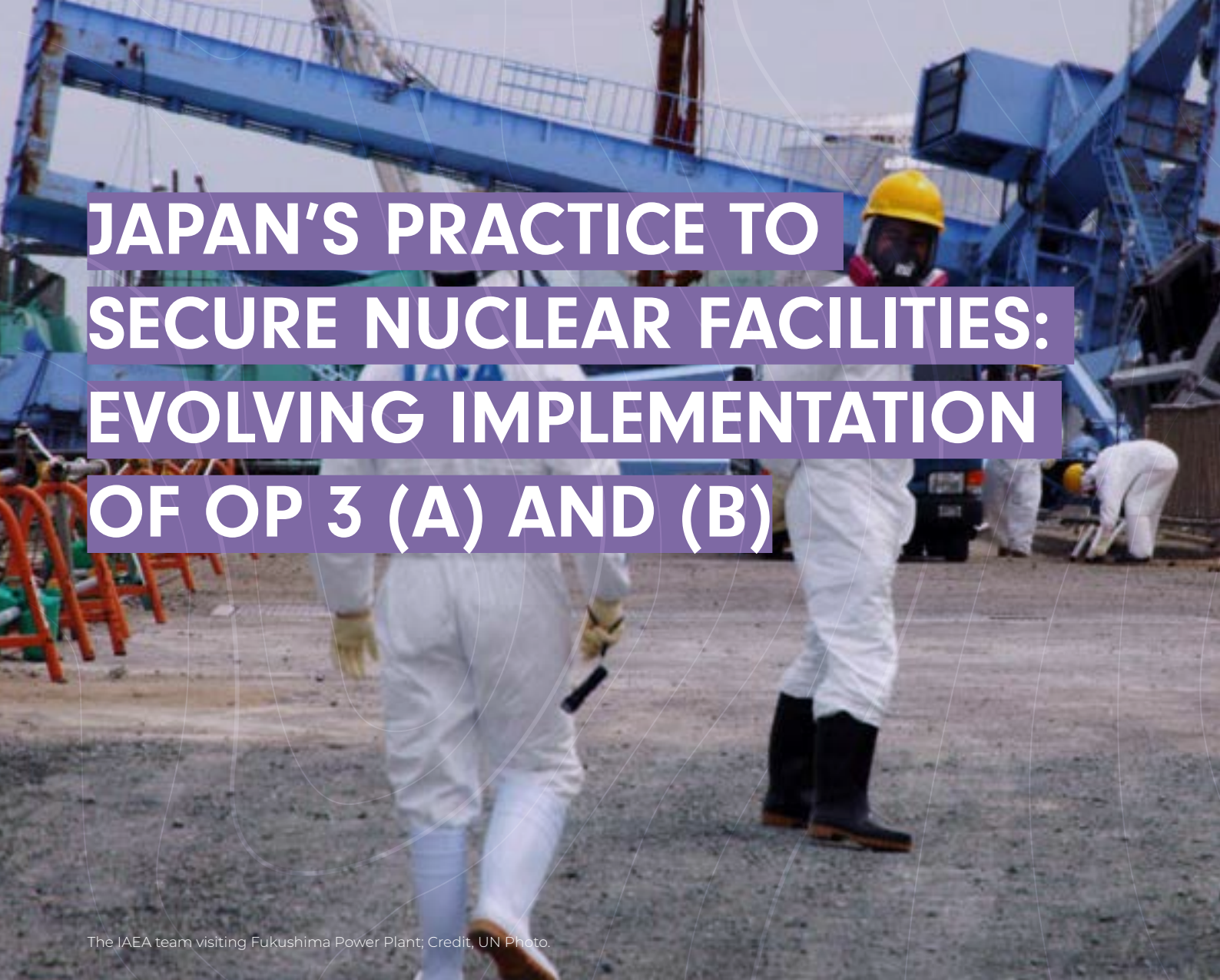
The success of Kenya's regulatory framework underscores the importance of comprehensive planning, stakeholder engagement, and international cooperation in implementing UNSCR 1540's requirements. The transformation from the Radiation Protection Board

to the KNRA exemplifies how developing nations can evolve their regulatory capabilities to meet international obligations effectively. As the global community continues to strengthen nuclear security measures, Kenya's experience provides important insights into effective implementation strategies for developing nations. The ongoing evolution of this framework, including efforts to address current challenges and adapt to emerging threats, will continue to inform international best practices in nuclear security and non-proliferation efforts.



The evolution of Kenya's nuclear security framework represents a significant institutional transformation.





JAPAN'S PRACTICE TO SECURE NUCLEAR FACILITIES: EVOLVING IMPLEMENTATION OF OP 3 (A) AND (B)

The IAEA team visiting Fukushima Power Plant; Credit, UN Photo.

ABSTRACT

Japan has demonstrated strong commitment to UN Security Council resolution 1540, as reflected in its national reports and the 1540 Matrix. As the island nation leverages nuclear energy for peaceful purposes, operative paragraph (OP) 3 (a) and (b) of resolution 1540 is a key area of focus. This paper looks at Japan's evolving approach to non-proliferation, which has been informed by three key events, namely the 9/11 terrorist attacks, the Fukushima nuclear accident, and the development of the 2022 National Security Strategy. As a result of these events, Japan has institutionalized whole-of-government cooperation, among other policies. Overall, the paper provides valuable insights for the full and effective implementation of resolution 1540, especially in the context of evolving proliferation risks.

The views and opinions expressed here are the authors' own and do not necessarily reflect those of any organizations with which the authors are affiliated.



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BACKGROUND

Japan has experienced both the positive and negative aspects of nuclear energy. Although tragedies such as the devastation of Hiroshima and Nagasaki by nuclear weapons in 1945 mark its history, the island nation has worked to harness nuclear energy as a sustain-

able way to meet its energy requirements. As of 2024, Japan is the eighth largest operator of nuclear reactors worldwide¹, which underscores the importance of domestic measures to secure and account for nuclear materials, as well as physical protection measures, as called for by OP 3 (a) and (b) of resolution 1540.

Against this backdrop, Japan is committed to the non-proliferation of weapons of mass destruction (WMD) and related materials. According to its fourth national report² submitted to the 1540 Committee, Japan is party to 15 treaties out of the 16 listed on the 1540 Matrix, and marks an “X” in most of the check-

1 International Atomic Energy Agency (IAEA), “Nuclear Share of Electricity Generation in 2023”, November 2024. <https://pris.iaea.org/pris/worldstatistics/nuclearshareofelectricitygeneration.aspx>

2 Permanent Mission of Japan to the United Nations New York, “Japan’s national report submitted to the 1540 Committee on 2 September 2020”, September 2020. <https://www.un.org/en/sc/1540/documents/JapanReport2Sep2020.pdf>

boxes.³ While this indicates Japan’s commitment to resolution 1540,⁴ it is important to bear in mind that having a legal framework is only a starting point. Concrete steps to achieve the obligations must be adapted to take into account “the evolving nature of risk of proliferation” and “rapid advances in science and technology”.⁵ This article explores the development of Japan’s operational practices in implementing OP 3 (a) and (b) of resolution 1540.

JAPAN’S PRACTICE: EVOLUTION OF A WHOLE- OF-GOVERNMENT APPROACH

Japan’s domestic policy to ensure the implementation of resolution 1540 has been developed mainly in response to the “evolving nature of risk of proliferation”. Three

major incidents in the last few decades, which highlighted the increasing risks to critical infrastructure, have informed Japan’s policy.

(1) The impact of 9/11

Like many other States, Japan has not been immune to acts of terrorism. Most notably, in 1995, the cult group Aum Shinrikyo carried out a sarin gas attack in a Tokyo subway, killing 14 people and injuring more than 6,000. These terrorism threats were typically handled by the police force, with some exceptions, such as decontamination of sarin by the Self-Defence Force.

This situation changed after the 9/11 terrorist attacks in the United States of America in 2001. The incident highlighted that terrorism was a matter of national security and the

prevention of WMD terrorism was of urgent necessity. In response, Japan took various steps to address the risks of proliferation and terrorism. In 2003, a year before resolution 1540 was adopted, Japan enacted a series of laws and established an emergency response framework.⁶ These laws empowered the government to designate and manage an emergency response situation, during which the threat falls short of an armed attack, but catastrophic damage to critical infrastructure, including nuclear facilities, remains possible.⁷ This laid the groundwork for Japan’s whole-of-government approach, led by the political leadership, to address terrorism by non-State actors against critical infrastructure. Additionally, in the wake of rising threats of terrorism, the police force started to

3 The 1540 Committee says “An ‘X’ in a field signifies only that the 1540 Committee considers that a State has taken steps required, and/or has provided specific references to the applicable legal basis or executive behaviour as evidence of such measures. An ‘X’ against any data field does not necessarily signify that a State has met in full its 1540 obligations for that data field.” 1540 Committee, “1540 Matrices”, 1540 Committee Website, accessed in November 2024. <https://www.un.org/en/sc/1540/national-implementation/1540-matrices.shtml>

4 As the 1540 Committee clearly notes, the Matrix does not measure Member States’ compliance with the resolution. 1540 Committee, “1540 Matrices”, 1540 Committee Website, accessed in November 2024. <https://www.un.org/en/sc/1540/national-implementation/1540-matrices.shtml>

5 United Nations Security Council, “Resolution 2663 (2022)”, OP 14, November 2022. <https://documents.un.org/doc/undoc/gen/n22/716/75/pdf/n2271675.pdf>

6 Cabinet Secretariat, “‘Armed Attack Situation Response Law’ enacted in the ordinary Diet session in 2003”, *Civil Protection Portal Site*, accessed November 2024. https://www.kokuminhogo.go.jp/en/measures/response_law.html#:~:text=Three%20Emergency%2DRelated%20Laws%20

7 Cabinet Secretariat, “What Is an Emergency Response Situation?”, *Civil Protection Portal Site*, accessed November 2024. <https://www.kokuminhogo.go.jp/en/about/emergency.html>



deploy anti-firearms squads at nuclear facilities nationwide⁸ and the Coast Guard initiated continuous armed patrols along the coasts of every nuclear facility.⁹

(2) Fukushima nuclear accident in 2011

The tragic accident at the Fukushima Daiichi Nuclear Power Plant in 2011 also led to an evolution in Japan's nuclear security. A magnitude 9 earthquake and subsequent tsunamis caused a total blackout at the power plant and, due to the lack of

cooling water, resulted in the meltdown of the nuclear fuel. While the 9/11 attacks raised awareness of terrorism by non-State actors in general, the Fukushima incident highlighted the risks of terrorism against nuclear facilities, as it demonstrated the potential for grave consequences if their operational systems were disrupted.

In order to strengthen its nuclear security, Japan's response was far-reaching. Institutionally, a new entity called the Nuclear Regulatory Authority was established to monitor and implement

nuclear security measures, including terrorism prevention, in an independent and consistent manner. Additionally, in 2013, Japan published its first National Security Strategy, which outlined the threat landscape and security priorities, emphasizing that international terrorism, in particular attacks on nuclear facilities, was one of the most significant security concerns.¹⁰

Operationally, being aware of terrorism threats to nuclear facilities, the police started regular joint training with the Coast Guard and the Self-De-

8 Asahi Shinbun Digital, 「原発テロ警備を見直し 警察庁、電源設備も対象に」, July 2012. <http://www.asahi.com/special/energy/TKY201207240198.html>

9 Japan Coast Guard, "Japan Coast Guard Annual Report 2004", *Japan Coast Guard Website*, accessed in November 2024. <https://www2023.kaiho.mlit.go.jp/3hz.jp/info/books/report2004/honpen/hp02010200.html>

10 Cabinet Secretariat, "National Security Strategy" (2013). <https://www.cas.go.jp/jp/siryoku/131217anzenhoshou/nss-e.pdf>



Japan has a strong culture of emergency preparedness, holding annual drills; Credit, World Bank.

new strategy has placed great emphasis on comprehensive responses to protect nuclear facilities, not only during an armed attack, but also from various crises that are less intense.¹³

The strategy also called for an enhanced coordination framework among national stakeholders, leading to the establishment of the Security Coordination Council for nuclear facilities in December 2022. Established at both the national and regional level and composed of various government agencies along with the private sector, the members exchange information and coordinate seamlessly, including at nuclear facilities.¹⁴ This resulted in the first-ever three-sided joint exercise conducted by the Self-Defence Force, the police, and the Coast Guard in February 2024, which aimed to protect nuclear facilities from terrorism.¹⁵

fence Force respectively, focusing on nuclear facilities. In 2012, the police and the Self-Defence Force conducted their first on-site joint training at a nuclear power plant.¹¹ The private sector, particularly nuclear operating companies, was also required to take concrete steps to strengthen protection of these materials, such as expanding restriction zones around nuclear facilities and introducing personnel reliability checks to prevent insider threats.¹²

(3) The 2022 National Security Strategy

Japan's policy to secure and physically protect nuclear facilities evolved once again during the development of its 2022 National Security Strategy, particularly when considering the risk that nuclear facilities could be occupied. Japan published its second National Security Strategy in December 2022, which addresses a wide range of security concerns, including contingencies to critical infrastructure. Specifically, the

11 National Police Agency, 「令和5年版 警備情勢を顧みて」, March 2024. <https://www.npa.go.jp/bureau/security/publications/syouten/294/R5syouten-2.pdf>

12 Headquarters for Countermeasures against International Organized Crime and International Terrorism, 「原子力発電所等に対するテロの未然防止対策の強化について」, November 2011. <https://www.google.com/url?q=https://www.kantei.go.jp/jp/singi/sosikihanzai/111114honbun.pdf&sa=D&source=docs&ust=1732077641246471&usg=AOvVaw3lgsRwTA1b5XKjnJlslkj>

13 Cabinet Secretariat, "National Security Strategy", December 2022. <https://www.cas.go.jp/jp/siryou/221216anzenhoshou/nss-e.pdf>

14 The member ministries and agencies are: Chief Cabinet Office; National Police Agency; Ministry of Education, Culture, Sports, Science, and Technology; Agency for Natural Resources and Energy; Coast Guard; Nuclear Regulation Authority; and Ministry of Defense. Japan Nuclear Regulation Authority, 「原子力発電所等警備連絡会議の設置等について」, December 2022. <https://www.nra.go.jp/data/000420467.pdf>

15 Asahi Shinbun Digital, 「玄海原発でのテロ想定訓練 県警・陸自に加えて海保が初めて参加」, February 2024. <https://www.asahi.com/articles/ASS2M6V92S2MTTHB001.html>

CONCLUSION

Japan's evolving approach marks a significant advancement in strengthening its national non-proliferation framework, particularly through institutionalizing whole-of-government cooperation. This strategy emerged in response to rising concerns over non-State actors, especially in the wake of the 9/11 attacks in the United States of America. The Fukushima nuclear accident underscored the need to address operational disruptions in critical infrastructure by enhancing collaboration with the private sector. More recently, considering novel risks, such as the occupation of nuclear facilities, highlighted the importance of coordinating efforts across multiple government agencies and the private sector to address nuclear facility-related contingencies in a comprehensive manner.


These practices have enabled orchestrated responses to the various risks facing nuclear facilities and provide valuable insights for the full and effective implementation of resolution 1540, especially in the context of evolving proliferation risks.

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The private sector, particularly nuclear operating companies, was also required to take concrete steps to strengthen protection of these materials, such as expanding restriction zones around nuclear facilities and introducing personnel reliability checks to prevent insider threats.

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SUPPORTING RESOLUTION 1540 WITH CISA CHEMICAL SECURITY'S CHEMLOCK PROGRAMME



In the US, 96% of all manufactured goods utilize chemicals. Keeping them secure is crucial for public safety; Credit, FlyD.

ABSTRACT

United Nations Member States working to prevent non-State actors from gaining weapons of mass destruction and fulfil their obligations under resolution 1540 have a variety of legal and regulatory means at their disposal. Unlike nuclear materials, potentially weaponizable chemicals move freely in commerce and are held by privately-owned companies. In implementing controls, States Parties must balance their security obligations with impacts to economy and commerce. In the US, this is executed through a combination of regulatory and voluntary means, including the United States' Cybersecurity and Infrastructure Security Agency's ChemLock programme. Specially designed to be adaptable to a variety of industrial settings—from small to large businesses, and covering a variety of chemical concerns, including explosive precursors, toxics, and other dangerous chemicals—the programme complements regulatory programmes while building private sector capacity. This paper introduces the impetus for the programme's creation, the risks it is intended to protect against, and measures recommended by the programme.



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INTRODUCTION

Weapons of mass destruction and weaponized industrial chemicals are an enduring threat to the global community. Under resolution 1540, each State carries responsibility for reducing the threat of weapons of mass destruction. The United States' Cybersecurity and Infrastructure Security Agency (CISA) bolsters the US approach to implementation of resolution 1540 through its domestic ChemLock programme.

In the United States, more than 96 per cent of all manufactured goods utilize chemicals, and more than 89 million people live or work within two miles of a high-risk chemical facility. CISA estimates that there are 100,000 facilities in the United States that possess dangerous chemicals. Essential to the economy, these chemicals are entrusted to private companies and require the assistance of governmental agencies to mitigate the risk of the chemicals being weaponized.

In 2021, CISA launched ChemLock, a voluntary programme that provides free resources, tools, and guidance for a variety of industrial models —including small businesses and businesses with limited means—, reducing the barrier of entry for companies with dangerous chemicals by expanding the range of chemical facilities with access to chemical security expertise. By covering a broad range of facility types, ChemLock strengthens

the United States’ chemical security culture and augments existing chemical security mandates and regulations.

THE CHEMLOCK PROGRAMME

CISA developed the ChemLock programme to be a free, voluntary chemical security programme for chemical facilities to gain access to security expertise. ChemLock was developed from best practices and extensive knowledge from other chemical security voluntary and regulatory programmes. The goal of ChemLock is to provide the chemical, agricultural, pharmaceutical, mining, and other industries that possess dangerous chemicals with tools, resources, training, and chemical security expertise that will help them understand their risk and enhance their chemical security posture.

PUBLIC-PRIVATE PARTNERSHIP

In the United States, chemical security is seen as a responsibility shared between government and industry. ChemLock provides the support that the chemical industry needs to voluntarily mitigate threats and

reduce the risk of an incident. When developing ChemLock services, CISA directly leveraged the partnerships built during the implementation of regulatory programmes to ensure that the ChemLock programme serves industry needs. ChemLock’s services and trainings were developed in part through feedback from industry, helping the services and resources ChemLock offers to be a true reflection of the chemical security needs of the chemical community.

SCALABLE AND CUSTOMIZABLE SERVICES

ChemLock resources were developed with both industry needs and chemical security enhancements in mind. Designed to be scalable and customizable, a business can tailor the services and recommendations provided by the ChemLock programme to fit the needs of their company. This often includes low budget solutions and layering several lower-cost security measures to mitigate a risk. The expertise provided will be tailored to the chemical holdings the company has, including the physical and cyber measures already in place. For example, a chemical security expert may suggest different security

measures to prevent the theft of a chemical than to prevent the intentional release of a toxic chemical into the air. By engaging and coordinating directly with industry stakeholders, the ChemLock programme both strengthens the facility’s current security and promotes an enhanced chemical security culture.

THE FIVE OBJECTIVES OF CHEMLOCK

At its core, the ChemLock programme directs facilities to answer five security questions. These address security gaps and consider the unique needs of the facility:

- » Can a facility **detect** an attack or suspicious activity?
- » Can a facility **delay** their adversary?
- » Is a facility able to **respond** in a timely manner?
- » Is a facility protecting their **cyber** assets?
- » Does a facility have the appropriate **policies, plans, and procedures** in place to implement a security plan?

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Currently, more than 200 on-site assessments and assistance services of varying levels have been provided.

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The ChemLock programme offers a series of services, resources, and tools, including direct contact with chemical security experts, training for personnel, and downloadable resources and tools for a variety of threat scenarios. These free resources reduce the burden of implementing chemical security for companies, and support businesses that may lack the expertise and funds for proper implementation of security.

ON-SITE ASSESSMENTS AND ASSISTANCE

The ChemLock programme leverages CISA’s chemical security expertise through its On-Site Assessments and Assistance (OAA) service, where facilities invite chemical security experts to evaluate existing security measures, identify gaps in security, and provide security options to address these gaps. By providing tailored recommendations for enhanced

security measures, the experts address the unique situations a facility encounters, including the specific hazard of the chemical, surrounding vicinity security concerns, and budget considerations.

The On-Site Assessment or Assistance service has three different levels of focus:

- » **Security Awareness Consultation:** Identifies potentially dangerous chemicals and accompanying security risks.
- » **Security Posture Assessment:** Assesses current security posture and identifies additional security measures.
- » **Security Planning Visit:** Develops or updates a facility’s security plan to address actionable, cost-effective security measures.

A company receives security recommendations depending on the type of chemical and area of concern for a number of security measures, including the production, use, and storage of their chemicals. For example, if the security concern for the chemical holding is theft, the chemical security expert will tailor their recommendations to what a business currently has in place and suggest additional or enhanced security measures to mitigate the theft of their chemicals. Currently, more than 220 on-site assessments and assistance services of varying levels have been provided; over 50 facilities have completed all three levels.

CHEMLOCK RESOURCES: GUIDANCE DOCUMENTS, TEMPLATES, FACT SHEETS

The ChemLock programme not only provides facilities with direct access to chemical security experts, but it also offers a variety of free



Security cameras are an important means of safeguarding chemical materials; Credit, Florian Olivo.

resources, including chemical security guidance documents, fact sheets for individual security considerations, and customizable, downloadable templates. For example, the “ChemLock: Chemical Security on a Budget” fact sheet provides examples of cost-effective security measures that companies can utilize to secure their chemicals, especially for

companies that are looking for security measures within their budget. Another downloadable resource for mitigating the risk of insider threat is the “ChemLock: Personnel Background Checks Policy Template”. This ready-to-use template provides companies with guidance for vetting personnel and completing background checks on current

and prospective employees. A company can download the template and advance to the developmental stage for the implementation phase of their policy; ChemLock reduces the time and energy a company devotes to these security matters with free, downloadable resources.

CHEMLOCK EXERCISES

ChemLock also supports chemical incident preparedness by helping a facility test their chemical security posture. Currently, CISA has 18 ready-made scenarios for a range of possible chemical threats and incidents, including civil unrest, cyberattacks, insider threat, theft, and various unmanned aircraft systems (UAS) threats, among others. Each exercise package includes a scenario-specific situation manual, planner handbook, facilitator handbook, and accompanying forms and templates to help facilities conduct their own exercises. Acknowledging the importance of a coordinated response between industry and local law enforcement and first responders, these exercises help a company prepare for a threat and strengthen their response to a potential incident.

CHEMLOCK TRAINING

Finally, the ChemLock programme provides training courses, which have been attended by more than 1,000 individuals thus far. Offered quarterly online and by request, these trainings provide facilities with a comprehensive approach for securing their chemicals and planning their chemical security posture. Since education is vital to a strengthened chemical security culture, these trainings arm companies with specialized expertise for securing their chemicals, walking them through the creation of a site security plan—a plan that considers all aspects of chemical security, including cyber and physical protection measures for their respective chemicals and the threat associated with their chemicals.

The first course, “ChemLock: Introduction to Chemical Security”, provides guidance on identifying, assessing, evaluating, and mitigating chemical security risks, as well as identifying key components and best practices of chemical security awareness and planning to help initiate discussions within their chemical security personnel.



ChemLock’s second course, “ChemLock: Secure Your Chemicals Security Planning”, outlines how to create a tailored, scalable security plan that meets the unique circumstances of each facility.

FUTURE DIRECTION OF CHEMLOCK

CISA continues to grow its ChemLock services to meet the needs of partners and address the ever-evolving threat landscape. Since proactive approaches are essential to mitigating risk and keeping

pace with threats, CISA plans on developing further guidance documents and resources on emerging technologies and threats, as well as updating resources and tools to reflect current practices.

While the ChemLock programme is only available to United States based companies, please visit [cisa.gov/chemlock](https://www.cisa.gov/chemlock) to learn more about the programme or email ChemLock@cisa.dhs.gov if interested in developing national chemical security programmes.



STRENGTHENING CHEMICAL SECURITY LEGISLATION: THE INTERPLAY BETWEEN UNSCR 1540 AND THE CWC

Participants at the 26th Annual Meeting of National Authorities. The establishment of a National Authority is a key obligation of the CWC; Credit, OPCW.

ABSTRACT

As chemical industry and trade continue to expand, an increasing number of countries are recognizing the need to enhance their chemical security measures to prevent misuse. This article explores the shaping of chemical security frameworks through the complementary roles of the United Nations Security Council resolution (UNSCR) 1540 and the Chemical Weapons Convention (CWC).¹ While differing in scope, both instruments share a common aim to prevent the proliferation of chemical weapons and their potential use by non-State actors.

¹ *Chemical Weapons Convention (CWC)*. Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction. Signed at Paris, 13 January 1993; entered into force 29 April 1997. Available at: <https://www.opcw.org/chemical-weapons-convention>



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UNSCR 1540 AND WMD PROLIFERATION

UNSCR 1540 mandates the adoption of measures to prevent non-State actors, including terrorists, from acquiring weapons of mass destruction (WMD), including chemical, biological and nuclear materials. To this end, the resolution requires countries to establish national legal frameworks criminalizing WMD proliferation, with a particular focus on non-State

actors. It also bolsters the global non-proliferation regime by supporting the implementation of international agreements, such as the CWC, and promoting capacity-building through international cooperation.

UNSCR 1540 places a strong emphasis on the control of chemical agents and their precursors throughout their lifecycles –including production, use, storage, and transport– and calls for

secure management and accountability to prevent diversion for illicit purposes. To achieve this, it promotes monitoring mechanisms and physical protection measures to safeguard such materials, amongst other measures.

The above measures are considered crucial due to their preventive nature, particularly in the context of WMD terrorism. For example, their effective implementation could significantly enhance pre-



Physical protection measures, such as fencing, help safeguard sensitive materials; Credit, Erik Mclean.

paredness against the potentially devastating consequences of chemical terrorism.² By focusing on WMD-related materials, the resolution aims to create a comprehensive framework that mitigates the risks associated with these materials and ultimately strengthens global security.

Enforcing these provisions requires States to implement robust and specific measures. However, UNSCR 1540 does not define which specific chemical, biological and nuclear materials should be secured, nor does it specify

the standards that countries must follow. This is particularly relevant considering how UNSCR 1540 defines ‘related materials’: *“materials, equipment and technology covered by relevant multilateral treaties and arrangements, or included on national control lists, which could be used for the design, development, production or use of nuclear, chemical and biological weapons and their means of delivery.”*³ This leaves room for interpretation and variable enforcement across Member States, potentially impacting the resolution’s effectiveness.

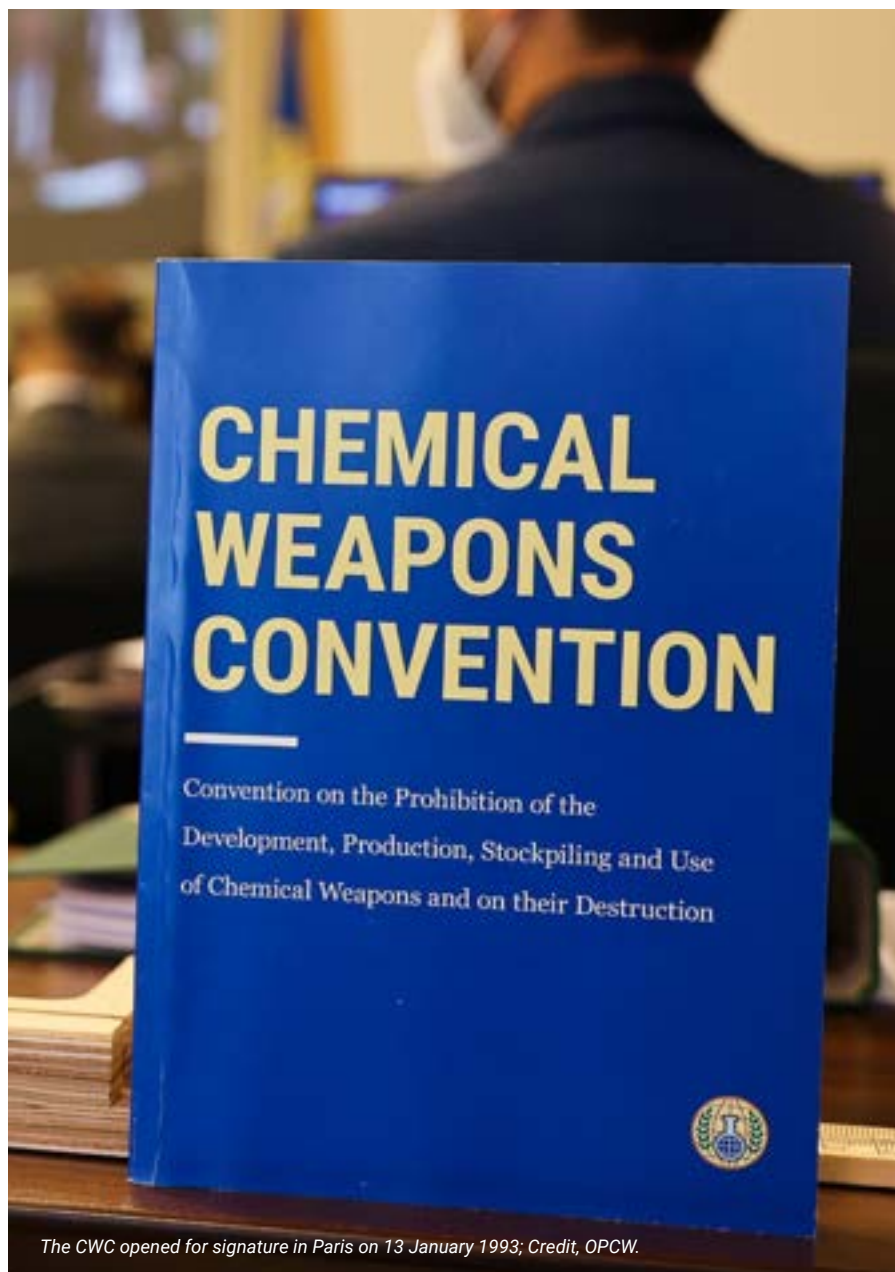
SYNERGIES BETWEEN UNSCR 1540 AND THE CWC⁴

The CWC not only outlines an absolute ban on chemical weapons, but also establishes stringent controls over scheduled chemicals. It establishes obligations for the accounting and monitoring of specific toxic chemicals and their precursors, particularly those classified as Schedule 1, 2, and 3 chemicals, aligning with the broader security requirements outlined in UNSCR 1540.

2 ASADA, Masahiko: “Security Council Resolution 1540 to Combat WMD Terrorism: Effectiveness and Legitimacy in International Legislation”; *Journal of Conflict & Security Law*. Oxford University Press (2009).

3 See UNSC Resolution 1540 (2004).

4 For further discussion, see BETANCOURT, Rene: “UN Security Council Resolution 1540 and the Chemical Weapons Convention: Challenges, Complementarities and Synergies”; *1540 Compass*. April 2024.



The CWC opened for signature in Paris on 13 January 1993; Credit, OPCW.

implement national legislation and domestic controls for chemical security under UNSCR 1540, the absence of established guidance leaves countries to navigate their responsibilities independently. This lack of broadly applicable chemical security guidance has led to a fragmented and inconsistent approach to protecting hazardous chemicals, their precursors, and related facilities worldwide.

CHEMICAL SECURITY: A BROADER DEFINITION

Chemical security encompasses measures designed to prevent the intentional release of toxic chemicals and to mitigate the impacts of such events should they occur. More broadly, chemical security includes policies designed to prevent the acquisition of toxic chemicals or their precursors for the purpose of weaponization.⁵

The mandate and role of the OPCW, as the implementing body of the CWC, are fundamental in ensuring chemical security. Several key provisions of the CWC outline

In the wider realm of chemical materials, the Organisation for the Prohibition of Chemical Weapons (OPCW) works on chemical safety and security and tasks National Authorities established under the CWC with their oversight. The

CWC's verification processes further support States' compliance with UNSCR 1540 and the strengthening of national and international chemical security measures. While all UN Member States are required to adopt and

⁵ Note by the Technical Secretariat: The Contribution of the OPCW to Chemical Safety and Chemical Security (30 September 2018), S/1129/2013.

the framework for the OPCW's role,⁶ which has been further developed through various decisions of its policy-making organs and reaffirmed during Review Conferences.⁷

The above-referenced chemical security measures are complemented by the broader framework established by UNSCR 1540. Despite the obligations UNSCR 1540 establishes, some States, especially those with limited resources, may not possess adequate capacity to meet enhanced chemical security requirements. Nevertheless, some argue that efforts to combat illicit trafficking and proliferation can lead to 'dual-benefit opportunities,' potentially fostering economic development.⁸ Similarly, the OPCW has recognized synergies between implementing the CWC and achieving the Sustainable Development Goals (SDGs),

emphasizing that chemical security can contribute to broader developmental objectives.⁹

CLARIFYING THE DEFINITION OF CHEMICAL WEAPONS

An essential aspect of ensuring effective chemical security is a clear understanding of what constitutes a chemical weapon under the CWC. A common misconception is that the CWC's definition applies exclusively to scheduled chemicals. The CWC adopts a much broader definition, defining chemical weapons as encompassing three categories, either together or separately: (1) any toxic chemical and its precursors, except where intended for purposes not prohibited under the Convention, as long as the types and quantities are consistent with such purposes;

(2) munitions and devices specifically designed to cause death or harm through the toxic properties of those chemicals; and (3) any equipment specifically designed for use directly in connection with such munitions and devices.¹⁰

By recognizing that chemical weapons encompass a wide range of toxic chemicals, as well as munitions and devices specifically designed to cause death or harm through the use of those toxic chemicals, the CWC ensures that all potential threats are addressed, regardless of the specific materials involved. This broad definition is essential for developing robust chemical security measures as it ensures that efforts are not limited to a narrow set of chemicals, but rather address any toxic or precursor chemical that could be used for purposes prohibited by

6 CWC's Articles I, VI, VII, X, XI, and the Verification Annex, collectively establish the OPCW's mandate in chemical security. Art. VI governs activities not prohibited under the CWC, such as the peaceful use of chemicals, and requires States Parties to submit declarations for certain scheduled chemicals that are reviewed by the OPCW, which conducts on-site inspections to verify compliance. The article also requires controls on international transfers of scheduled chemicals to prevent their diversion. Art. VII reinforces chemical security by requiring States Parties to adopt national legislation to enforce CWC obligations, ensuring compliance within domestic jurisdictions. Art. X promotes the development of emergency response capabilities, ensuring preparedness against chemical threats and incidents.

7 The 2nd Review Conference raised concerns about chemical facility vulnerabilities and urged States Parties to share security experiences [OPCW, RC-2/4, 2008]. The 3rd Review Conference noted progress and encouraged the OPCW to facilitate voluntary consultations, cooperation, and best practices. While emphasizing States Parties' primary responsibility for chemical security, it highlighted the Secretariat's role in capacity-building and coordination, especially for facilities and transport [OPCW, RC-3/3, 2013].

8 FINLAY, Brian; BERGENAS, Johan and MUFTI, Esha: "Beyond Boundaries in Southeast Asia: Dual-Benefit Capacity Building to Bridge the Security, /Development Divide"; The Stimson Center and the Stanley Foundation (2012). Available at: <https://stanleycenter.org/publications/beyond-boundaries-in-southeast-asia-dual-benefit-capacity-building-to-bridge-the-security-development-divide/>

9 OPCW, "OPCW to Further Enhance Contributions to United Nations' Sustainable Development Goals," 26 October 2018, <https://www.opcw.org/media-centre/news/2018/10/opcw-further-enhance-contributions-united-nations-sustainable-development>.

10 See CWC, Article II, Paragraph 1.

the Convention. As a result, States are better equipped to prevent the illicit acquisition and misuse of chemicals, reinforcing global efforts to secure chemical materials, facilities, and equipment and helping to close potential loopholes in regulation and enforcement.

CHEMICALS OF SECURITY CONCERN (COSC)

In addition to the CWC's Schedules, there is ongoing attention to chemicals that are 'of security concern'.¹¹ Although not necessarily included in the CWC Schedules, these chemicals are still regarded as dangerous due to their potential for diversion into chemical weapons programmes. CoSC can be classified into several broad categories: scheduled chemicals under the CWC, dual-use chemicals, explosive precursors and chemicals capable of synthesizing toxic agents or explosives, highly toxic industrial chemicals, non-CWC scheduled toxic chemicals, and radiological and biological adjuncts that may enhance the destructive effects of other substances, including pesticides and herbicides.

The CWC continues to play a crucial role in regulating these substances, in line with the Convention's broad definition of chemical weapons, as explained above. The CWC's inclusive approach ensures that even non-scheduled chemicals are subject to regulatory oversight, reinforcing the need for comprehensive chemical security measures. This framework strengthens global efforts to identify and control chemicals with the potential for weaponization, regardless of their Schedule status, to prevent illicit use and malicious activities. Effective regulatory and security measures for CoSC are essential to mitigate the risk of their diversion into chemical weapons programmes.

CHALLENGES TO IMPLEMENTING CHEMICAL SECURITY

Despite the frameworks in place, the adoption of chemical security legislation is fraught with challenges that can hinder effective implementation and compliance. Scholars have identified myriad challenges;¹² key issues include:

- » Lack of political will and competing priorities;
- » Lack of awareness/ understanding of chemical security concepts;
- » Resource constraints for implementing, and enforcing relevant frameworks;
- » Diverse/unharmonized regulatory frameworks and legislative gaps;
- » Lack of compliance monitoring and enforcement mechanisms;
- » Lack of interagency coordination;
- » Industry resistance;
- » Reluctance to share information and promote transparency;
- » Rapid technological developments and the emergence of new chemicals.

11 See for instance, Australia's "National Code of practice for chemicals of security concern", available at <https://www.nationalsecurity.gov.au/chemical-security-subsite/Files/code-of-practice-chemical-security.pdf>

12 GAHLAUT, Seema: "United Nations Security Council Resolution 1540 Implementation: More of the Same or Brave New World?" *Strategic Trade Review*, Volume 5, Issue 7, Winter 2019 pp. 53–66.



Background checks for personnel, supply chain verification, and security personnel deployment further enhance security.



Addressing these complex challenges requires coordinated efforts among governments, industries, and international organizations. Key steps include raising awareness, building capacity, and fostering collaboration for a comprehensive approach to chemical security. Enhancing stakeholder dialogue and promoting transparency can further build trust and reinforce regulatory frameworks.

SHAPING THE FUTURE OF CHEMICAL SECURITY LEGISLATION: EMERGING STANDARDS AND OPCW ASSISTANCE

Emerging standards and effective practices for chemical security have been identified, with recognized practices including: compre-

hensive training for stakeholders responsible for managing chemicals, maintaining accurate inventories of materials and licenses, and establishing a list of controlled chemicals, technologies, and equipment. Additionally, awareness-raising efforts, physical security measures, and access controls are critical for safeguarding facilities. Inspector authority systems ensure compliance through regular monitoring, while registration and licensing systems track authorized handlers of controlled substances. Background checks for personnel, supply chain verification, and security personnel deployment further enhance security. Proliferation-resistant chemistry practices, along with clearly defined criminal offenses and penalties such

as imprisonment and fines, help deter violations. Other measures include the authority for searches, incident and threat reporting systems, and risk-based security approaches tailored to specific materials.¹³

Collectively, these emerging practices form a multi-layered framework that addresses both the prevention of chemical weapons proliferation and secure management of chemical materials.

Acknowledging the need for ongoing efforts, States Parties have communicated to the Technical Secretariat their need for further capacity building to develop national chemical security measures. In response, the Secretariat has pursued a range of targeted assistance and training

¹³ See for instance, CUPITT, Richard T., and Mary C. Vecellio. "Missing: Legal Frameworks for Chemical Security", *Strategic Studies Quarterly* 14, no. 1 (Winter 2020): 16-118.

activities in recent years, including a series of online and in-person training courses on legislative and regulatory issues on chemical security across different regional groups from 2020 to 2021. Building upon this initiative, the Secretariat convened States Parties that are in the process of developing chemical security legislation to share best practices and national experiences during a series of three regional meetings, for Africa, Asia and Latin America and the Caribbean between 2022 and 2024. These workshops yielded a range of approaches, methodologies and recommendations, which the Secretariat is subsequently reviewing with a view to compiling a publicly available resource that is envisaged to be accessible to a range of national contexts and resource settings.

CONCLUSION

The interplay between the CWC and UNSCR 1540 underscores a comprehensive and multi-layered approach to chemical security, combining binding obligations with broader regulatory frameworks. Addressing chemical security challenges effectively requires States to understand the risks posed by toxic chemicals and their potential for misuse. By harmonizing national legislation and fostering international cooperation, governments can enhance their capacity to prevent the proliferation of chemical weapons and secure hazardous materials against potential threats.

Action can be taken on two fronts: first, enhancing cooperation between National Authorities and Points of Contact (PoC) under UNSCR 1540

to align national legislation with international obligations; second, strengthening partnerships among the OPCW, the UN Office for Disarmament Affairs, UN Interregional Crime and Justice Research Institute, UN Office on Drugs and Crime, Inter-American Committee Against Terrorism and other relevant entities to facilitate best practices and capacity-building initiatives. This collaborative effort is essential for establishing robust frameworks to prevent the intentional release of toxic chemicals and mitigating their impacts.

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Addressing these complex challenges requires coordinated efforts among governments, industries, and international organizations.

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SECURING GLOBAL SAFETY: THE ROLE OF RESOLUTION 1540 IN COUNTERING WMD ACQUISITION BY NON-STATE ACTORS

In compliance with UNSCR 1540, Indonesia has taken significant steps to prevent the proliferation of WMDs by non-State actors; Credit, Bisma Mahendra.

ABSTRACT

In compliance with United Nations Security Council resolution 1540 (2004) (UNSCR 1540), Indonesia has taken significant steps to prevent the proliferation of weapons of mass destruction (WMDs) by non-State actors, especially regarding chemical non-proliferation. This article examines Indonesia's efforts in chemical security through the lens of operative paragraph 3 (a) and (b) of UNSCR 1540, which mandates domestic controls to account for, secure, and physically protect WMD-related materials. By analysing Indonesia's legal framework, chemical security initiatives, and international collaborations, the article highlights the country's progress in safeguarding sensitive chemical materials and the challenges continues to face.



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INTRODUCTION

As the world's largest archipelagic nation, Indonesia's vast and complex geographic expanse presents significant defence challenges. Consisting of over 17,000 islands, Indonesia encompasses a population of roughly 275 million people. Strategically located between the continents of Asia and Australia, and bordered by the Indian and Pacific Oceans,

Indonesia spans approximately 5.18 million km², consisting of 1,905 million km² of land and 3,257 million km² of water, with a travel distance of approximately 5,117 kilometres from point to point, which takes around 7 hours and 11 minutes by air. The nation's strategic location and complex maritime boundaries require robust defence measures to safeguard against potential threats, including the risk of chemical terrorism.

It is with regard to the threat of chemical terrorism that international legal instruments such as the Chemical Weapons Convention (CWC) and United Nations Security Council resolution 1540 (2004) (UNSCR 1540) are of importance. Operative paragraph 3 (a) of UNSCR 1540 requires States to establish and maintain effective systems for accounting for and safeguarding sensitive materials, such as chemicals, throughout their

Indonesia's territory consists of over 3,000 million km² of water; Credit, Snap Saga.



lifecycle. Operative paragraph 3 (b) complements this by mandating robust physical security measures to protect such materials from unauthorized access. This article evaluates Indonesia's initiatives within this framework, focusing on its legal, operational, and collaborative measures.

THE EVOLVING NATURE OF THE TERRORIST THREAT IN INDONESIA

Indonesia has faced a number of challenges related to terrorism over the years, with incidents peaking in the early 2000s. This period saw high-profile attacks, including the Bali Bombings I and II, the Ritz-Carlton and JW Marriott bombings, as well as bombings at the Philippine and Australian embassies. Since then, the patterns and networks associated with

terrorism in Indonesia have evolved, shifting from traditional forms of terrorism to more modern, complex methods, such as "phantom cell" structures, leaderless resistance, and lone-wolf attacks. This transition reflects an adaptation in tactics and organization, posing new challenges for counterterrorism efforts in the country.

In terms of chemical-related terrorism in Indonesia, several terrorism suspects associated with the *Bharun Naim* terrorist network were prosecuted under Law No. 15 of 2003 for conspiracy and possession of firearms, ammunition, and explosives intended for terrorist activities. The notable case involved the arrest of eight individuals in Solo and Cilacap, Central Java, on 22 September 2012, following the discovery of ni-

troglycerin bombs. A police search revealed several active explosives, including liquid nitroglycerin bombs, four pipe bombs, 11 detonators, bomb casing pipes, and industrial chemicals like urea and sulphur. The ease of accessing bomb-making "cookbooks" online was highlighted during the investigation as a risk factor.

LEGAL FRAMEWORK SUPPORTING CHEMICAL SECURITY

Indonesia has established a comprehensive legal framework to counter terrorism and prevent the misuse of chemical substances as WMDs, in alignment with its international commitments, including the CWC and UNSCR 1540. Indonesia's commitment to prohibiting WMDs is evidenced by its enactment of

Law No. 6 of 1998 on the Ratification of the Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and Their Destruction, which was formally adopted on 30 September 1998.

Further strengthening the implementation of the CWC and UNSCR 1540, Law No. 9 of 2008 regulates the use of chemicals and explicitly prohibits their

use as chemical weapons. This law serves as a critical legal reference, mandating the control, prohibition, monitoring, and penalization of any misuse of chemicals. Key provisions include restrictions on highly toxic and lethal chemicals used solely for chemical warfare, as well as on dual-use precursors that have legitimate commercial applications but could also be used in weapon production. The legislation also

mandates the establishment of a CWC National Authority to act as Indonesia's coordinator and liaison with international organizations and other States parties. This National Authority is empowered to develop national policies for CWC implementation and facilitate compliance with international standards on chemical weapons prohibition.

Since 2002, Indonesia has adopted a civilian-led, rule-of-law-based approach to counter-terrorism. This approach includes key legislative measures such as the Law on Combating Criminal Acts of Terrorism (Law No. 15/2003), the Law on Prevention and Eradication of Terrorist Financing (Law No. 9/2013), and the Emergency Law of 1951, as well as relevant provisions of Indonesia's Criminal Code. The amendment of the counter-terrorism law (Law No. 15/2003) was first proposed in 2016 and later revised under Law No. 5/2018 to include stronger provisions against foreign terrorist fighters, criminalizing extraterritorial fighting, preparatory actions, and material support for terrorism. Law No. 5 of 2018, which governs counter-terrorism in Indonesia, has proven effective in reducing recorded terrorist incidents,



A view of Jakarta, the capital city of Indonesia; Credit, Gints Gaillis.

achieving zero reported cases by December 2023. This success is attributed to the law's provision granting law enforcement enhanced authority to intervene and detain individuals when credible indicators of terrorist activity are present, enabling a proactive approach to early detection and prevention.

The primary government agencies responsible for implementing Law No. 5/2018 on counter-terrorism, as well as relevant treaties and international agreements, including the National Agency for Counter Terrorism (BNPT), the Indonesian National Police (POLRI), and the Indonesian National Armed Forces (TNI). The BNPT, which operates under and reports directly to the President, is tasked with developing and establishing national policies, strategies, and programmes in the area of counter-terrorism. BNPT's functions encompass policy coordination, strategy development, and the implementation of national programmes focused on preparedness, counter-radicalization, and de-radicalization efforts.

In line with its commitment to counter terrorism, Indonesia has enacted special legisla-

tion, including, most recently, Law No. 1/2022. Additionally, Indonesia has established legal measures to counter groups that threaten national unity, notably banning *Hizb ut-Tahrir Indonesia* (HTI), a non-violent group advocating for a caliphate.

CHEMICAL SECURITY CONCERNS IN INDONESIA

The misuse of chemical weapons is a critical concern, especially as acts of terrorism continue to rise at both regional and international levels. In Indonesia, certain cases of chemical misuse have been linked to weak oversight and inadequate monitoring of chemical purchases at the distributor level. Perpetrators often buy chemicals in small quantities, making these transactions difficult to detect.

Furthermore, the dual-use nature of many chemicals complicates detection; for instance, chlorine, commonly sold as a disinfectant or pool cleaner, can serve as a precursor for chlorine bombs in the hands of terrorists. Similarly, acetone, widely used in the pharmaceutical and cosmetics industries, can be misused to produce triacetone triperoxide (TATP) explosives.

In addition, insufficient security in small and medium enterprises (SMEs) compounds the issue. Many SMEs lack the resources or awareness to implement comprehensive chemical security measures. This sector might not be as rigorously monitored as larger industries, creating potential vulnerabilities.

In a comprehensive life cycle chemical management system, each stage from raw material procurement, storage, transportation, and distribution to usage, waste management, recycling, and return to storage, carries inherent risks. Operative paragraph 3 (a) and (b) of UNSCR 1540 directly addresses these risks by requiring comprehensive systems to account for and physically secure these materials.

Implementing chemical security measures required by the resolution provides critical protection for lives and infrastructure, mitigates environmental impacts, and safeguards intellectual property. Key focus areas for chemical sector security and resilience include natural hazard preparedness, cybersecurity, supply chain security and resilience, criminal activity

and terrorism prevention, and cross-cutting issues that affect multiple areas. Through chemical security practices, organizations can conduct thorough risk assessments, identifying potential security vulnerabilities, evaluating their likelihood and impact, and prioritizing mitigation strategies. Reducing vulnerabilities is a central objective, achieved through physical, operational, and technological measures such as perimeter security and access control systems. Additionally, contingency planning forms an essential part of risk assessment and mitigation efforts, further strengthening chemical security.

THE WAY FORWARD FOR CHEMICAL SECURITY IN INDONESIA

To advance chemical security implementation in Indonesia, several key steps are needed. First, issuing a comprehensive 'Chemicals Law' will provide a foundation for all national regulations related to chemicals, covering essential aspects such as hazard classification, hazard communication, risk assessment, risk management, and risk communication. Enhancing the capacity of experts and human resources in chemical life cycle management across key stakeholders, including government, industry, and academic insti-

tutions is also crucial. Additionally, technology transfer will help improve chemical management capabilities, particularly for developing countries, supported by regulatory cooperation and harmonization efforts. Establishing or strengthening a national authority dedicated to chemical management will be vital for building a centralized chemical database, establishing best practices, and enhancing laboratory infrastructure. Furthermore, collaboration among the countries in the East Asia and Pacific region, involving relevant stakeholders is required.

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In a comprehensive life cycle chemical management system, each stage from raw material procurement, storage, transportation, and distribution to usage, waste management, recycling, and return to storage, carries inherent risks.

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The patterns and networks associated with terrorism in Indonesia have evolved, shifting from traditional forms of terrorism to more modern, complex methods, such as “phantom cell” structures, leaderless resistance, and lone-wolf attacks.

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INTERNATIONAL SUPPORT COLLABORATION FOR INDONESIA

Since 2022, the United Nations Interregional Crime and Justice Research Institute (UNICRI), in collaboration with the United Nations Office on Drugs and Crime (UNODC), and with support from Indonesia’s BNPT, has carried out a series of activities aimed at strengthening Indonesia’s approach to chemical terrorism prevention. These activities are organized within the framework of the project entitled “Building a safer South-East Asia by preventing and responding to the use of chemical weapons by terrorists and other non-State actors in Indonesia”. Formally introduced and launched on 3 November 2022 in Jakarta, Indonesia, the project’s objective is to significantly enhance the capability of Indonesian authorities to prevent, detect, and respond to the acquisi-

tion, development, and threat or use of chemical weapons by non-State actors, in particular for terrorist purposes. This collaboration reflects Indonesia’s commitment to the goals of UNSCR 1540.

The project is designed to respond to the threats posed by non-State actors and terrorist organizations who continue to strive to produce or obtain chemical weapons capable of generating mass casualties. These weapons are particularly attractive to these groups and to ideologically inspired individuals around the world for multiple reasons, including the low costs and effort-to-impact ratio of a chemical weapon attack, the potential to generate widespread fear among populations, and the likelihood that such an attack would receive significant media coverage. The risk that individuals or terrorist organizations might use such weapons will remain high as long as the

knowledge about the weapons and their precursors remains easily available on the Internet and trade controls over the precursors remain weak.

CONCLUSION

Indonesia’s proactive measures demonstrate its commitment to fulfilling the mandates of UNSCR 1540. Through robust legal frameworks, targeted chemical security initiatives, and active international collaboration, the nation addresses the dual imperatives of accounting for and physically securing WMD-related materials. However, continued efforts are needed to bridge gaps in chemical security, particularly in smaller enterprises, and to enhance regional cooperation.



A view of Jakarta, the capital city of Indonesia; Credit, Ivy Aralia Nizar.

LEVERAGING UN SUSTAINABLE DEVELOPMENT GOALS AND UN SECURITY COUNCIL RESOLUTION 1540 SYNERGIES: THE CASE FOR RESPONSIBLE CHEMICAL MANAGEMENT



Secretary General addresses the opening of the 2023 SDG Summit; Credit, UN Photo/Cia Pak.

ABSTRACT

The United Nations Sustainable Development Goals (SDGs) and Security Council resolution 1540 (2004) offer distinct yet complementary frameworks for advancing global safety, security, and sustainable development. While the SDGs aim to eradicate poverty, protect the planet, and ensure prosperity for all, UNSCR 1540 focuses on preventing the proliferation of weapons of mass destruction (WMD) by non-State actors. Despite their differences, exploring synergies between these two instruments can enhance their implementation, offering practical benefits for UN Member States, particularly in the sound management of hazardous chemicals. This paper examines how SDG targets related to chemical safety align with UNSCR 1540 obligations, illustrating how integrated efforts can optimize resource use, strengthen capacity-building, and foster innovation. The findings underscore the potential for enhanced compliance with UNSCR 1540 through SDG-linked incentives, emphasizing the need for further research into broader cross-domain linkages.

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NOTE FROM THE EDITOR

This policy memo, originally published online by the Stimson Center on 3 July 2023, highlights the critical intersection of global security and sustainable development by exploring synergies between UNSCR 1540 (2004) and the UN Sustainable Development Goals, with special reference to the chemical sector. As we mark 20 years since the adoption of resolution 1540 this year and approach 10 years since the adoption of the 2030 Agenda for Sustainable Development next year, this memo is particularly timely. With just five years remaining to achieve the Agenda's goals, and with significant gaps in both UNSCR 1540 implementation and SDG progress, we are pleased to republish this memo to encourage dialogue on how the international community can enhance implementation and optimize resources by aligning UNSCR 1540 obligations with SDG targets.

For more context, readers can refer to the Letter-to-the-Editor from the Stimson Center on page 12 of this issue.

There are 17 Sustainable Development Goals to be completed by 2030; Credit, UN Photo/Cia Pak.



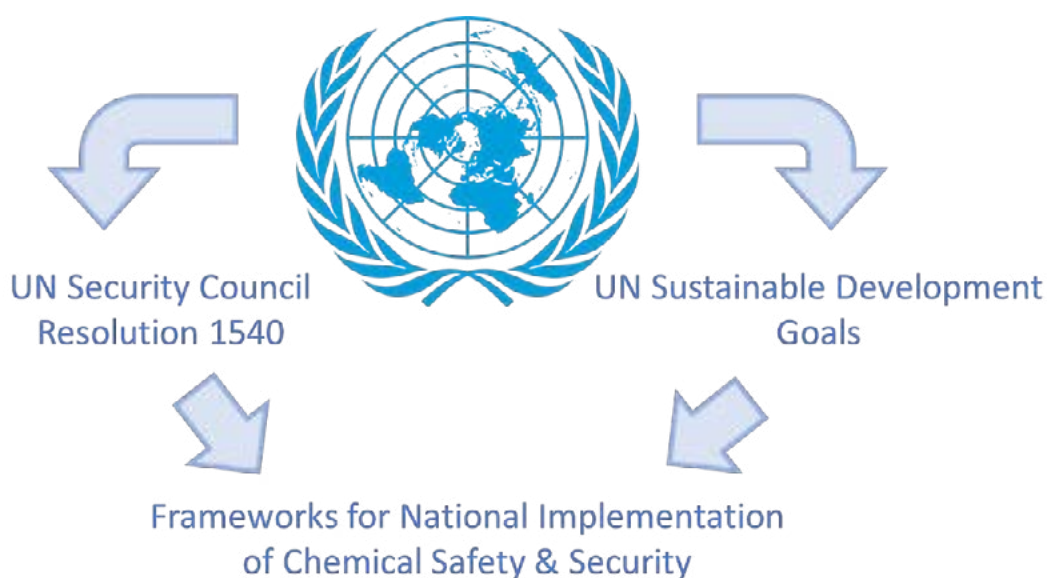
INTRODUCTION

In 2015, the United Nations adopted 17 universal Sustainable Development Goals (SDGs) with the objectives to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. The SDGs have guided UN Member States in their effort to achieve safety, security, and development, especially in emerging economies and countries with limited resources. With much attention on the specific goals themselves, linkages between the SDGs and other United Nations legal instruments have so far received little recognition. However, identifying synergies between SDGs and compliance with, for example, United Nations Security Council (UNSC) resolutions

can yield a novel approach to working towards international peace and security. As many countries focus national resources on developing and expanding trade and economic interests, dual pursuit of instruments to accomplish greater safety and sustainability while also strengthening international security can reveal synchronicities and mutual benefits. This could allow UN Member States to streamline efforts and resources while addressing both concerns simultaneously.

UN Security Council resolution 1540 (2004) serves as the principal framework for UN Member States to implement measures countering non-State actor weapons of mass destruction (WMD) proliferation or use. Over the two decades

since its adoption by the UN Security Council, countries have had varying degrees of success in implementing the specific measures called for in the resolution. Exploring linkages between the UN SDGs and UNSCR 1540 may assist Member States in working towards the achievement of specific goals through compliance with the resolution, while also raising awareness of potential synergies between the pursuit of the SDGs and the implementation of resolution 1540. Doing so harnesses the power of UNSCR 1540 implementation to yield additional positive effects –such as equality, innovation, and safety, among others– and enhances a country’s motivation for, and prioritization of, compliance. In addition, linking the SDGs to UNSCR 1540 can facilitate



effective capacity-building and broaden the incentives for compliance with the resolution beyond the focus on WMD non-proliferation.

To demonstrate the utility and potential benefits of establishing linkages between UNSCR 1540 and SDGs, this paper builds on the approach put forth by Richard T. Cupitt in his brief, “Sustainability and UNSCR 1540: Making the Link.”¹ The authors will use the example of chemical-related SDGs and resolution 1540 obligations to demonstrate that sound management of chemicals contributes both to SDG goals as well as compliance with UNSCR 1540. As this brief will demonstrate, the approach taken here can

be applied to other cross-cutting domains in the nuclear, biological, or means of delivery arenas.

The paper will link the two UN instruments and demonstrate the benefits of identifying overlaps and synergies by first providing a brief background on UNSCR 1540 obligations and chemical-related SDGs. As global production and trade in chemicals expands, the role of both the SDGs and resolution 1540 in ensuring safe and secure management of the most hazardous chemicals will only grow in relevance and importance. This brief will shed light on specific SDGs that link to UNSCR 1540 obligations, and vice versa, and provide recommendations to leverage

the synergies between these instruments. It will conclude with insights and lessons learned as well as recommendations on how to apply synergies in different ways for a secure, peaceful, equal, and prosperous world.

UNITED NATIONS SECURITY COUNCIL RESOLUTION 1540 AND MANAGEMENT OF CHEMICALS OF PROLIFERATION CONCERN

UNSCR 1540 (2004), adopted pursuant to the United Nations Charter as a Chapter VII resolution, obligates all UN Member States to adopt domestic legal frameworks and enforcement measures

¹ Richard T. Cupitt, “Sustainability and UNSCR 1540: Making the Link,” *World ECR*, (June 2021).



to prevent WMDs or their components from contributing to WMD proliferation, especially by non-State actors. These frameworks must prevent the proliferation of nuclear, chemical or biological weapons and their means of delivery, including by establishing appropriate controls over related materials.² Some UNSCR 1540 obligations support or parallel States Parties' obligations under other threat-specific treaties, such as the Biological Weapons Convention, the Nuclear Non-proliferation Treaty and the Chemical Weapons Convention (CWC).³

To prevent the proliferation of chemical weapons and chemical-related dual-use goods and technologies, States must focus their efforts on controlling not just known chemical warfare agents but also the broad array of dual-use chemicals that, while having legitimate industrial, commercial, or other beneficial applications, also have potential utility in the production of chemical weapons and their precursors. Some of these chemicals are defined in the three CWC Schedules and in other national and international control lists.⁴ Since many of these chemicals have legitimate civilian uses, their production and trade

cannot be prohibited outright. They should therefore be carefully managed through trade controls, physical protection, and other measures as identified by UNSCR 1540 to ensure they are not misused for non-peaceful purposes.

The UN 1540 Committee and its Group of Experts, which UNSCR 1540 established under the UN Security Council and whose obligations and mandate are delineated by resolution 1540 and subsequent resolutions, reports to the UN Security Council on the status of the resolution's implementation. As part of its work, the Group of Experts prepares a matrix for each UN Member State

2 United Nations Security Council Resolution 1540 (2004), 28 April 2004, Adopted during the 4956th meeting of the Security Council, available from [https://undocs.org/Home/Mobile?FinalSymbol=S%2FRES%2F1540\(2004\)&Language=E&DeviceType=Desktop&LangRequested=False](https://undocs.org/Home/Mobile?FinalSymbol=S%2FRES%2F1540(2004)&Language=E&DeviceType=Desktop&LangRequested=False).

3 *Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on their Destruction*, Geneva, 3 September 1992, United Nations Treaty Series, 26 3 XXVI 495, available from <https://treaties.un.org/Pages/CTCTreaties.aspx?id=26&sub-id=A&clang=en>.

4 For example, international lists include the Australia Group Chemical Weapons Precursors List, Wassenaar Arrangement Munitions List 7 and 8, World Customs Organization Strategic Trade Control Enforcement Implementation Guide Annex V, UN Sanctions against North Korea lists (S/2006/853, 7 November 2006; S/2016/308, 4 April 2016; S/2017/728, 22 August 2017).

that is approved by the 1540 Committee. The Committee uses the matrices as their primary method to organize information regarding implementation of the resolution.⁵ The matrices also break down, in more detailed form, requirements of the resolution as follows:

- » Adherence to legally binding international agreements (e.g., the CWC, Geneva Protocol of 1925)⁶;
- » Enactment of national legislation prohibiting manufacture, acquisition, possession, development, transport, transfer, or use of WMD (including chemical weapons) or their means of delivery, or any attempt to engage in, participate as an accomplice in, assist in, or finance such activities;
- » Enactment of measures to account for and secure production, use,

storage, and transport of materials related to WMD and their means of delivery;

- » Physical protection measures and personnel reliability programmes;
- » Border control and law enforcement to detect, deter, prevent and combat illicit trafficking;
- » Border control detection measures and control of brokering services;
- » Export control legislation and regulations along with licensing provisions and the use of control lists of materials, equipment and technology;
- » End-user, transit, trans-shipment, and re-export controls and catch-all clauses⁷; and
- » Control over financing of and

services (including transportation) related to exports/trans-shipments that could contribute to the proliferation of WMD and their components and delivery systems.

While the requirements above apply to all WMD-related materials, not just to dual-use chemicals, the 1540 Committee also calls upon States to demonstrate specifically for chemical non-proliferation that they have, *inter alia*:

- » A National Authority in place for the implementation of the CWC;
- » Legal measures to require licensing and registration of installations, facilities, persons, entities, use, and handling of related materials;
- » Domestic control over old or abandoned chemical weapons.⁸

⁵ <https://www.un.org/en/sc/1540/national-implementation/1540-matrices.shtml>.

⁶ *Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare*, Geneva, 17 June 1925, League of Nations Treaty Series, Vol 94 p. 65, available from <https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280167ca8&clang=en>.

⁷ These controls provide a legal and/or regulatory basis to require government permission to export unlisted items when there is reason to believe such items are intended for a WMD/missile end-use or end-user.

⁸ Approved 1540 Committee Matrix, United Nations Security Council 1540 Committee, available from <https://www.un.org/en/sc/1540/national-implementation/1540-matrices/matrix-template.shtml>.

SUSTAINABLE DEVELOPMENT GOALS AND CHEMICAL MANAGEMENT

According to the 2019 Global Sustainable Development Report, the Independent Group of Scientists appointed by the United Nations Secretary-General predicted that the global chemical sector would double in size between 2015 and 2030 and introduce a substantial quantity of new chemical products to the global market.⁹ The International Conference on Chemicals Management has also estimated that, as of 2020, developing countries would produce and use more than 30% of global chemicals.¹⁰ While the interest of many United Nations Member States in the sustainable development of the chemical industry may be focused more on economic incentives, as global chemical production and trade grows, so too do the environmental and public health risks. Thus,

it is not surprising that several of the 17 UN SDGs are directly related to the management of chemicals, and particularly the safe production, transportation, and storage of substances potentially hazardous to the environment and public health. Goals 3, 6, 12, and 16, in particular, include targets and indicators that are directly or indirectly related to the broader concern of chemical safety or safeguarding of the environment and public from harmful chemicals, through accidents or misuse.

Before detailing these chemical-related targets and indicators, it should be noted that chemicals of proliferation concern constitute a clear subset of the broader class of hazardous chemicals with which the SDGs are concerned. Chemical weapons themselves, which are by design and by definition the most toxic chemical substances on earth, fall squarely within the purview

of SDG 16, as outlined below. And, old chemical weapons dumped at sea or abandoned on land clearly pose a hazard to the environment and to human safety.¹¹ But many precursor chemicals, though not as acutely toxic, are nevertheless also hazardous to humans or the environment, or both, as can be understood by reviewing the Australia Group Common Control List Handbook, one publicly available resource on chemicals subject to non-proliferation export controls that also includes hazard information.¹² For 89 specific precursor chemicals subject to Member State export controls for non-proliferation purposes, the Handbook provides —where known or applicable— the associated UN Hazard Placard as well as its hazard pictogram under the Globally Harmonized System (GHS) of Classification and Labelling of Chemicals. Whereas the UN Hazard Placards are associated with chemicals in transport, the

9 United Nations, *Global Sustainable Development Report 2019: The Future is Now – Science for Achieving Sustainable Development, Sustainable Management of Chemicals Throughout their Life Cycle*, New York, 2019, United Nations Department of Economic and Social Affairs, p 100, available from <https://www.sdgindex.org/reports/sustainable-development-report-2019/>.

10 International Conference on Chemicals Management, *Stepping up the Approach to make our future chemical-safe, clean, and healthy*, 23 January 2017, accessible from <https://www.saicm.org/Resources/SAICM%20Stories/Achemicalsafefuture/tabid/5518/language/en-US/Default.aspx>.

11 Kaszeta, Dan. *Toxic: A History of Nerve Agents from Nazi Germany to Putin's Russia*, Oxford University Press, New York, 2021, provides examples of governments abandoning chemical weapons at sea, for example the United Kingdom's Operation Sandcastle (p 87) or Operation CHASE in the United States (pp 133-5). See also "Japan Court Scraps Chinese Chemical Victims Ruling," Reuters, July 18, 2007, accessed June 16, 2023, <https://www.reuters.com/article/idUST150824>.

12 Australia Group, "Common Control List Handbook Volume I: Chemical Weapons-Related Common Control Lists," Revision 6, (2021) pp 17-140. <https://www.dfat.gov.au/sites/default/files/australia-group-common-control-list-handbook-volume-i.pdf>.



The Security Council meets on non-proliferation of WMD; Credit, UN Photo.

GHS hazard pictograms are applicable to chemical use and disposal as well as transportation.¹³ Because many of these 89 chemicals also have important commercial and industrial applications, they should be of concern to governments and other stakeholders seeking to make progress on the SDGs.

For example, the Australia Group's first listed chemical, thiodiglycol, a precursor for chemical weapon blister agents, as well as an element in the production of water-based inks, textile dyes, plastics, and coatings, is

marked with the pictograms for UN Hazard Class 9 (Miscellaneous Dangerous Substances and Articles, Including Environmentally Hazardous Substances) and for GHS hazards including skin sensitization, skin irritation, eye irritation, acute toxicity, specific organ toxicity – single exposure, and hazardous to the ozone layer.¹⁴

All but 30 chemicals in the Australia Group Handbook are associated with either a UN Hazard Placard, a GHS pictogram or both. Of those 30 chemicals, two are listed as lacking a UN Hazard Placard

and a GHS pictogram because they are “not applicable.”¹⁵ The other 28 chemicals are all precursors for nerve agents, one of the most highly toxic classes of chemical weapons. The Handbook notes that little is known about these precursors, or that they have limited or no availability or commercial application. Their UN Hazard Placards and GHS pictograms are listed as “unknown”.

In support of UN SDG 3 to ‘ensure healthy lives and promote well-being for all’, target 3.9 aims to ‘substantially reduce’ risks to human

¹³ *Ibid*, pp 9 and 13.

¹⁴ *Ibid*, p. 17.

¹⁵ The Handbook (p82 and p93) lists those chemicals as Triethanolamine (TEA), a blister agent precursor that is widely traded due to numerous industrial applications, and Triethanolamine Hydrochloride, also a blister agent precursor with uncertain use as a reagent for biological applications and limited availability.

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Unlike UNSCR 1540, the SDGs do not constitute an obligation on UN Member States to manage chemicals in a certain way.

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health as a result of exposure to hazardous chemicals.¹⁶ One of the indicators listed for target 3.9, for example, is the ‘mortality rate attributed to unintentional poisoning’, such as due to chemical contamination of the environment. Similarly, SDG 6, to ‘ensure availability and sustainable management of water and sanitation for all’ includes target 6.3, which is aimed at reducing the risk of environmental damage and the negative effects on human health due to hazardous chemicals.¹⁷ In a similar vein, UN SDG 12 urges Member States to promote ‘sustainable consumption and production’ in the manufacture, transport, use, and disposal of industrial goods, including through the

enforcement of ‘environmentally sound management of chemicals and all wastes throughout their life cycle... and significantly reduce... their adverse impacts on human health and the environment’ (target 12.4).¹⁸ Unlike SDGs 3 and 6, which apply more generally to broader chemical hazards to the environment and human health, SDG 12 specifically addresses the chemical industry’s manufacturing and supply chains, urging Member States to introduce measures to govern the production, transportation, and storage of hazardous chemicals and to safeguard against potential risks to the environment and public. Finally, targets for SDG 16, which calls upon Member

States to promote peace and justice through the fostering of strong national institutions supported by international cooperation¹⁹ include several that can very clearly be read to include chemical weapons and precursor material. These targets include the obligation to reduce the illicit arms trade, combat organized crime (16.4) and strengthen national institutions through international cooperation to prevent violence and terrorism (16.a).

Unlike UNSCR 1540, the SDGs do not constitute an obligation on UN Member States to manage chemicals in a certain way. However, voluntary international policy frameworks on chemical management have

16 United Nations Department of Economic and Social Affairs, UN Sustainable Development Goal 3: Ensure healthy lives and promote well-being for all at all ages, Target 3.9, accessible from <https://sdgs.un.org/goals/goal3>.

17 United Nations Department of Economic and Social Affairs, UN Sustainable Development Goal 6: Ensure availability and sustainable management of water and sanitation for all, Target 6.3, accessible from <https://sdgs.un.org/goals/goal6>.

18 United Nations Department of Economic and Social Affairs, UN Sustainable Development Goal 12: Ensure sustainable consumption and production patterns, Target 12.4, accessible from <https://sdgs.un.org/goals/goal12>.

19 United Nations Department of Economic and Social Affairs, Development Goal 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels, accessible from <https://sdgs.un.org/goals/goal16>.

developed over recent decades and today expressly reference support for the achievement of the SDGs. For example, the Strategic Approach to International Chemical Management (SAICM), a multi-stakeholder and multi-sectoral non-binding policy framework, was established in 2006 to minimize the adverse effects of chemicals on human health and the environment and was succeeded in September 2023 by the Global Framework on Chemicals – For a Planet Free of Harm from Chemicals and Waste (GFC). Like SAICM, the GFC is closely associated with the SDGs.

Related to these efforts, the International Council of Chemical Associations (ICCA) promotes the Responsible Care® framework, a voluntary initiative to improve chemicals management among its members. The Responsible Care® framework includes a Global Charter that commits its members to:²⁰

- » A corporate leadership culture that proactively supports safe chemicals management through the global

Responsible Care initiative;

- » Safeguarding people and the environment by continuously improving environmental, health and safety performance; the security of facilities, processes and technologies; and by driving continuous improvement in chemical product safety and stewardship throughout the supply chain;
- » Strengthening chemicals management systems by participating in the development and implementation of lifecycle-oriented, sound-science and risk-based chemical safety legislation and best practices;
- » Influencing business partners to promote the safe management of chemicals within their own operations;
- » Engaging stakeholders, understanding

and responding to their concerns and expectations for safer operations and products and communicating openly on their performance and products; and

- » Contributing to sustainability through improved performance, expanded economic opportunities and the development of innovative technologies and other solutions to meet societal challenges.

ICCA reports that Responsible Care® is currently implemented in nearly 70 economies and that CEOs from more than 580 global chemical manufacturing companies, representing 96 percent of the world's largest chemical companies, have signed the Responsible Care Global Charter.²¹ While voluntary for ICCA membership, Responsible Care® is mandatory for industry members of some national associations, including the American Chemistry Council (ACC). In

²⁰ International Council of Chemical Associations (ICCA), Responsible Care Global Charter, 29 May 2014, accessible from <https://icca-chem.org/resources/responsible-care-global-charter/>.

²¹ International Council of Chemical Associations (ICCA), Responsible Care, 2023, accessible from <https://icca-chem.org/focus/responsible-care/>.

addition to making CEO-level pledges, ACC members and Responsible Care Partner companies track and report related metrics, undergo third party audit and certification on the Responsible Care Management System® and implement 'Product Safety, Process Safety, and Security' codes.²²

RESPONSIBLE MANAGEMENT OF CHEMICALS: LINKS BETWEEN UNSCR 1540 AND SDGS

As scholars have noted, finding synergies between development and security needs and obligations allow States to leverage scarce resources to address both more efficiently.²³ While the obligation to implement UNSCR 1540 and enforce greater chemical security may be perceived as an additional burden by some States, particularly those with limited resources, Finlay et al

highlight the potential for 'dual-benefit opportunities'. They argue that efforts to curb illicit trafficking and proliferation may also have a direct, beneficial impact on economic development and social stability.²⁴ Similarly, the Organisation for the Prohibition of Chemical Weapons (OPCW), the implementing body of the Chemical Weapons Convention, has recognized the potential for "synergies [to] be found between the OPCW's work to implement the [CWC] and the SDGs".²⁵ In a meeting of chemical industry professionals, civil society experts, and national authorities, the OPCW sponsored a discourse on how Article XI of the Convention supports economic and technological growth in the global chemical industry, drawing linkages between the implementation of the CWC and SDGs for dual benefit to 'chemical safety, security and sustainability'.²⁶ Thus, despite surface

level disparity of aims, there are considerable synergies between the SDGs' chemical safety and sound chemical management objectives and the goals of UNSCR 1540's chemical security obligations. These synergies are related to common concerns with illicit trafficking, security of materials within national borders, and capacity building and technical cooperation.

ILLICIT TRAFFICKING

As noted above, SDG 16's targets of reducing the illicit arms trade, combating organized crime (16.4), and strengthening national institutions through international cooperation to prevent violence and terrorism (16.a), clearly encompass chemical weapons and precursors and are therefore directly related to UNSCR 1540's overarching obligation on UN Member States to prevent the proliferation of all WMDs and to control

22 American Chemistry Council, *Responsible Care: Driving Safety & Industry Performance*, 2023, accessible from <https://www.americanchemistry.com/chemistry-in-america/responsible-care-driving-safety-industry-performance>.

23 Brian Finlay, Johan Bergen, and Esha Mufti, *Beyond Boundaries in Southeast Asia: Dual-Benefit Capacity Building to Bridge the Security/Development Divide*, The Stimson Center and the Stanley Foundation, 2012, p.8, accessible from <https://stanleycenter.org/publications/beyond-boundaries-in-southeast-asia-dual-benefit-capacity-building-to-bridge-the-security-development-divide/>.

24 *Ibid*, pp 21-22.

25 OPCW, "OPCW to Further Enhance Contributions to United Nations' Sustainable Development Goals," 26 October 2018, <https://www.opcw.org/media-centre/news/2018/10/opcw-further-enhance-contributions-united-nations-sustainable-development>.

26 Article XI: Economic and Technological Development states that "The provisions of this Convention shall be implemented in a manner which avoids hampering the economic or technological development of States Parties," including international cooperation on chemical production, trade, scientific and technological research, and other activities not prohibited under the Convention." See <https://www.opcw.org/chemical-weapons-convention/articles/article-xi-economic-and-technological-development>.

related materials. The GFC also targets illegal trade and trafficking in chemicals and waste. This objective relates to UNSCR 1540 obligations on all States to implement border and trade controls to ensure only legitimate use of chemicals of proliferation concern.

These complementarities provide a clear opportunity for national and international non-proliferation and responsible chemical management stakeholders to coordinate and integrate efforts to address related UNSCR 1540 obligations and GFC targets.

SECURITY OF MATERIALS

At first glance, the SDGs' concern with chemicals seems exclusively focused on safety: protection of human health and the environment. Chemical security has become an increasing focus of chemical sector stakeholder groups responsible for supporting the achievement of the SDGs and

has been closely integrated into chemical management approaches. With increasing attention to security issues since, for example, the events of September 11, 2001, practitioners operating within various international non-proliferation regimes have found it helpful to draw conceptual distinctions between safety, the traditional focus of nuclear, biological, and chemical scientists, and security. One delegate at the 2003 Biological and Toxin Weapons Convention (BWC) meetings summed up the difference in a concise formulation: 'Biosafety protects people from germs, biosecurity protects germs from people.' As expanded upon by the 2008 BWC Implementation Support Unit background paper in which the quote appears, safety in this context is defined as the protection of humans from the adverse effects of dangerous or toxic material and security as the 'physical protection' of the material from humans with intentions to misuse it for nefarious and destructive

purposes.²⁷ This distinction is also useful in the context of international regimes to control nuclear and radioactive material, where the International Atomic Energy Agency has issued several guidance documents on security in the past decade to supplement existing safety guidance. It applies equally to the chemical industry, where safety has a long regulatory history and security has more recently risen to equal prominence.

Despite the distinction between the concepts of safety and security, it is notable that the chemical industry offers numerous examples of holistic approaches to addressing them in integrated guidance frameworks. The National Academies of Science's *Chemical Laboratory Safety and Security: A Guide to Prudent Chemical Management* offers one example of such an approach.²⁸ The OPCW's *Report on Needs and Best Practices on Chemical Safety*

27 United Nations Office for Disarmament Affairs, Biological and Toxin Weapons Convention Implementation Support Unit, "Biosafety and Biosecurity," (Geneva: United Nations, 2008), accessible from <https://digitallibrary.un.org/record/636795?ln=en>.

28 *Chemical Laboratory Safety and Security: A Guide to Prudent Chemical Management* (Washington DC: National Academies of Sciences, Engineering, and Medicine, 2016), accessible from <https://nap.nationalacademies.org/catalog/21918/chemical-laboratory-safety-and-security-a-guide-to-developing-standard>.

and Security Management offers another.²⁹ Most notable for the purposes of this brief, however, is the integration of security best practices into the chemical industry's Responsible Care® framework given its close association with the achievement of the SDGs. The case of the American Chemistry Council is particularly instructive, as it added a security code under its own Responsible Care® Initiative in 2002, even before the passage of UNSCR 1540 with its focus on the security of dual-use materials. While the overlapping sets of chemicals constituting the focus of the SDGs versus UNSCR 1540 are different, the security practices applied to both may be similar.

There is potential for Member States to implement legislation and implementation measures that not only address chemical safety in relation to the UN's SDGs, but also chemical security to fulfil resolution 1540 obligations.

Where possible, the integration of the principles and practices of chemical safety and security should be no less a priority for governments seeking to maximize limited resources to address development goals and security obligations.

It is possible that security measures implemented by Member States to improve the regulation of chemical manufacturing, transport, and waste management under resolution 1540 could also substantially reduce the risk of chemical disasters. Increased physical security, monitoring, and stronger controls on chemical transport, for example, could reduce the risk of environmental accidents, reduce the risk of chemical weapons proliferation, as well as the risks that hazardous chemicals pose to both human health and the environment if mishandled or improperly disposed of.

It is also notable that both SDG-related guidance and 1540-related obligations

emphasize a lifecycle approach to safety and security concerns, respectively. The World Health Organization (WHO) broadly defines chemical safety as 'all activities involving chemicals in such a way as to ensure the safety of human health and the environment' including during manufacturing, transport, use, and waste disposal. The 2019 Global Sustainable Development Report highlights the need for 'sound management [of chemicals] at all levels' to ensure that the global expansion of chemical manufacturing and trade does not pose greater risks to human health and the environment.³⁰ The report also encourages the transition of the chemical sector towards greater sustainability, especially accounting for the 'whole life cycle of chemicals' including manufacturing, transport, and waste management.³¹ Likewise, the 1540 Committee's Matrices, which provide a template to organize information on individual Member States' progress towards national

²⁹ The systems required to adequately prevent, detect, or respond to a chemical accident or chemical security incident are often found to overlap. As such, an integrated approach to chemical safety and security risk management may support more effective implementation of risk reduction measures, provide better detection and risk communication, can be used to support a culture of safety and security within the chemical sector, and allow for the more effective implementation of limited resources.' OPCW, *Report on Needs and Best Practices on Chemical Safety and Security*, (The Hague: OPCW, 2016) p. 5, accessible from https://www.opcw.org/sites/default/files/documents/ICA/ICB/OPCW_Report_on_Needs_and_Best_Practices_on_Chemical_Safety_and_Security_ManagementV3-2_1.2.pdf.

³⁰ United Nations, *Global Sustainable Development Report 2019: The Future is Now – Science for Achieving Sustainable Development, Sustainable Management of Chemicals Throughout their Life Cycle*, New York, 2019, United Nations Department of Economic and Social Affairs, p.100, available from <https://www.sdgindex.org/reports/sustainable-development-report-2019/>.

³¹ *Ibid.*



Responsible chemical management is crucial given their widespread usage across the world; Credit, OPCW.

implementation of the resolution,³² include a variety of data points, including whether national measures have been established to secure, control, or otherwise physically protect materials related to chemical weapons during production, use, storage and transport.³³

While the 1540 Matrices are used to better understand the measures taken by each Member State to implement the resolution, rather than to enforce adoption, the template itself reflects the importance of domestic mechanisms to ensure the security of dual-use

chemicals throughout their industrial lifecycle, from manufacture and consumption to storage and transport.

CAPACITY BUILDING AND TECHNICAL COOPERATION

A third key area of implementation synergy between the SDGs and UNSCR 1540 concerns capacity building and technical cooperation. At the most fundamental level, both instruments recognize the need for capacity building and technical cooperation to

achieve full implementation. SDG 17 calls on States to ‘strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development,’³⁴ while UNSCR 1540 operative paragraph 7 ‘recognizes that some States may require assistance in implementing the provisions of this resolution within their territories and invites States in a position to do so to offer assistance as appropriate in response to specific requests to the States lacking the legal and regulatory infrastructure,

32 Approved 1540 Committee Matrix, United Nations Security Council 1540 Committee, available from <https://www.un.org/en/sc/1540/national-implementation/1540-matrices/matrix-template.shtml>.

33 *Ibid*, p.5.

34 United Nations Department of Economic and Social Affairs, Development Goal 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development, accessible from <https://sdgs.un.org/goals/goal17>.

implementation experience and/or resources for fulfilling the above provisions.³⁵

Beyond this similarity, however, the SAICM Global Plan of Action provides multiple examples of capacity building and technical co-operation activities needed to fully realize the SDGs. SAICM's vision of responsible chemical management for the protection of human health and environment could be adapted to help meet a State's 1540 obligations. These include the examples provided previously, such as:

- » No. 204, 'Develop national strategies for prevention, detection and control of illegal traffic, including the strengthening of laws, judicial mechanisms and the capacity of customs administrations and other national authorities to control and prevent illegal shipments of toxic and hazardous chemicals';

- » No. 234, to 'provide the necessary technical training and financial resources for national Governments to detect and prevent illegal traffic in toxic and dangerous goods and hazardous wastes'; and,
- » No. 261, to 'train customs officials to detect illegal transboundary movements of waste'.

Each of these could be expanded to ensure that the training and capacity building is applicable to dual-use, chemical-weapon-precursor chemicals, as well as to other toxic and hazardous chemicals and wastes. Likewise, and especially in developing countries with limited capacity for training, numerous 1540- or CWC-related export control trainings on offer from the OPCW and US Export Control and Related Border Security (EXBS) programme would be applicable broadly to preventing illicit trade in other hazardous chemicals and wastes.

In addition, the SDGs and SAICM's Global Plan of Action call in multiple instances for leveraging multilateral agreements, treaties, and conventions. One of the metrics used to measure Member States' efforts to achieve SDG 12, on the environmentally sound management of chemicals and all wastes throughout their life cycle, is the number of States which are party to 'international multilateral environmental agreements on hazardous waste, and other chemicals...' (indicator 12.4.1).³⁶ This focus on multilateral cooperation potentially presents Member States with an opportunity to combine their efforts in seeking collaborative partnerships to address both chemical safety and security concerns. Issues such as chemical transport safety, chemical export controls, and end-use verification for dual-use chemicals are just some of the chemical safety and security concerns related to both the UN SDGs and UNSCR 1540. These could provide the basis for productive engagement between Member States, while strengthening multilateral part-

35 United Nations Security Council Resolution 1540 (2004), 28 April 2004, adopted during the 4956th meeting of the Security Council, p. 7, accessible from [https://undocs.org/Home/Mobile?FinalSymbol=S%2FRES%2F1540\(2004\)&Language=E&DeviceType=Desktop&LangRequested=False](https://undocs.org/Home/Mobile?FinalSymbol=S%2FRES%2F1540(2004)&Language=E&DeviceType=Desktop&LangRequested=False).

36 United Nations Department of Economic and Social Affairs, Development Goal 12: Ensure sustainable consumption and production patterns, accessible from <https://sdgs.un.org/goals/goal12>.

nerships to combat the proliferation of chemicals of concern. As noted previously, recommended activity 267 could be interpreted beyond the Rotterdam and Basel conventions to include the CWC and UNSCR 1540.

Other SDGs pertaining to capacity building and technical assistance can be more broadly applicable to UNSCR 1540 requirements as well. For example, SDG 4.b calls for substantially expanding globally the number of scholarships available to developing countries, in particular, to less developed countries, small island developing States, and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries. Conceptualizing such programmes broadly can ensure that stakeholders receive training in support of both the SDGs and UNSCR 1540. Illustra-

tive of such an approach is the European Union's CBRN Centres of Excellence Initiative, which gives scholarships to students to learn about non-proliferation, and the US EXBS Programme that runs a strategic trade management academy providing vocational and technical training. As another example, the OPCW offers a capacity building Chemical Safety and Security Management Programme for chemistry practitioners, policy makers, National Authorities, and chemical industry associations applicable to both sustainable development goals and to meeting UNSCR 1540 obligations.³⁷

WHAT GOES AROUND COMES AROUND

The aforementioned examples of commonalities between the objectives of both the UN SDGs and UNSCR 1540 demonstrate how sound chemical management could simultaneously achieve related SDG targets and fulfil 1540 chemical security and chemical dual-use strategic

trade-related obligations.

One needs to guard against the imposition of control measures that may infringe on a States' right to access material for peaceful application. It is thus important that a country's adoption of stronger trade controls should go hand-in-hand with assurances to trading partners that responsible transfers of dual use and advanced technology will be facilitated.³⁸

Case studies and anecdotal evidence support this. India, for example, won significant economic rewards, in the form of increased access to dual-use technology, for implementing robust export controls.³⁹ More recently, a 2020 seminar organized by the Pacific Forum on strategic trade controls (STC) in Southeast Asia highlighted their economic value. 'Aside from the non-proliferation and internal security angles, ASEAN Member States must also continue to raise awareness of the positive-sum benefits of STC for local economies to fast

³⁷ <https://www.opcw.org/resources/capacity-building/international-cooperation-programmes/chemical-safety-and-security>

³⁸ Scott Jones, Johannes Karreth, United States Department of State, Bureau of International Security and Nonproliferation, "Assessing the Economic Impact of Adopting Strategic Trade Controls," December 2010, pp. 10–16, accessible from https://media.nti.org/pdfs/off_us_dept_21.pdf.

³⁹ Fuhrman, Matthew, "Making 1540 Work: Achieving Universal Compliance with Nonproliferation Export Control Standards," *World Affairs*, Winter 2007, Vol. 169, No. 3 (Winter 2007), pp. 146-148.

track adoption. Foreign Direct Investment (FDI) remains a key driver for the economic development in Southeast Asia, thus, bridging the gap between national security and economic prosperity is paramount for STC to succeed.⁴⁰ While these examples are not specific to the chemical sector, the principles would apply to it in the same way. Just as countries can leverage their sound chemical management work supporting the SDGs to also boost implementation of their obligations under the 1540 resolution, 1540 implementation efforts with respect to chemical security and export controls may provide the foundation to attract responsible investment and job growth in the chemical sector. Such 1540-enabled investment would clearly support SDG 8 on Decent Work and Economic Growth, as well as SDG 9 aiming to boost Industry, Innovation and Infrastructure.

CONCLUSIONS AND NEXT STEPS

Since the adoption of UNSCR 1540, the international community has sought to identify incentives, beyond

simply the legal obligation to comply with international law, for appropriate and effective implementation of the resolution. After twenty years since the UN Security Council passed the resolution, the necessity of identifying such incentives and keeping the momentum of effective implementation remains critical.

In this context, identifying synergies between the SDGs and UNSCR 1540 offers a novel approach to strengthening implementation. As this brief has demonstrated, through the example of sound management of chemicals, work towards achieving the SDGs can directly fulfil UNSCR 1540 chemical-related obligations or can be leveraged indirectly to do so. This approach has the power, especially when viewed through the lens of all UNSCR 1540 obligations in the nuclear, chemical, biological and means of delivery domains, to help Member States recognize the benefits that 1540 compliance can yield to bettering the lives of their citizens and in safeguarding the environment in which we live.

Looking ahead at the steps UN Member States could take to effectively integrate their efforts to implement both UNSCR 1540 and the SDGs in the chemical sector, the following are broad recommendations for national policymakers:

- » Streamline the use of national resources to ensure safe management of hazardous chemicals and chemical waste by integrating measures to secure chemicals of proliferation concern from illicit trafficking.
- » Synergize efforts to strengthen industry's chemical management and introduce safety legislation by including measures to increase the security of hazardous chemicals throughout the industrial lifecycle (manufacture, transport, storage, waste disposal).
- » Socialize and educate national chemical industries

40 Pacific Forum, "2020 Seminar on Strategic Trade Controls in Southeast Asia: Key Findings," 28 July 2020 - 29 July 2020 & 6 August 2020 - 7 August 2020, accessible from <https://pacforum.org/events/2020-seminar-on-strategic-trade-controls-in-southeast-asia>.

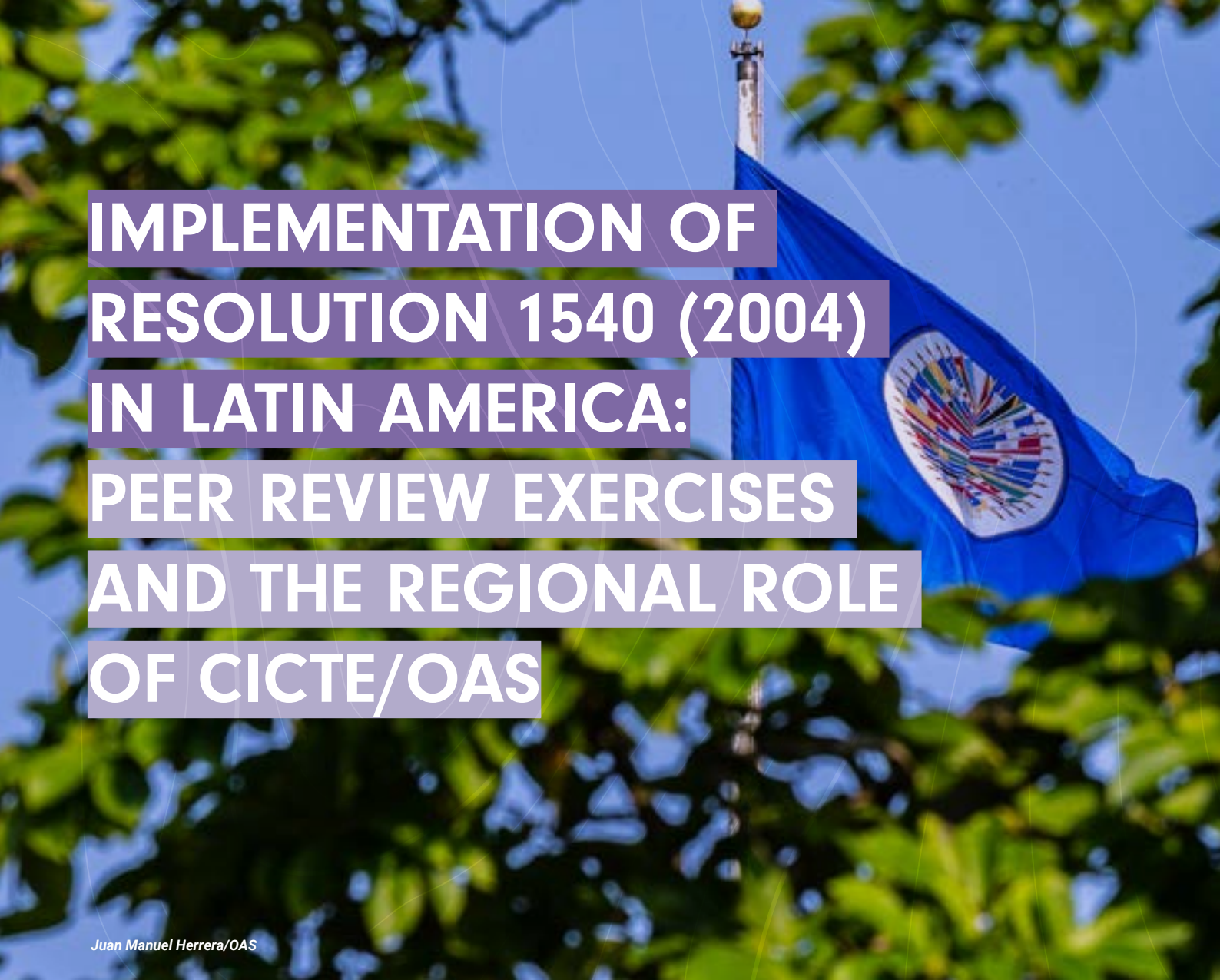
on SAICM and the ICCA's Responsible Care® framework, as well as industry's obligation under the CWC to declare the manufacture, consumption, and international trade of controlled chemicals.

- » Engage in capacity building and technical cooperation with other Member States to safeguard hazardous chemicals in transport and address not only environmental protection, but also border controls and trans-shipment security.
- » Utilize international partnerships through global initiatives such as SAICM to raise awareness of UNSCR 1540 and the CWC, and leverage non-proliferation focused efforts such as industry outreach via the Wiesbaden process to strengthen SDG-UNSCR 1540 links.

Effectively working toward such integration may require other shifts in approach as well, such as intentionally bringing together development and security stakeholder groups—groups that may not otherwise communicate frequently. For example, engaging civil society, such as research organizations, academia, and professional associations that are involved in SDG work, in UNSCR 1540 can augment the landscape of stakeholders committed to UNSCR 1540 implementation. Engaging these groups has the potential to generate ideas and new frameworks for facing the challenges of implementing UNSCR 1540 in a fast-changing world.

In addition, further research is needed into the implementation of chemical safety measures and chemical security mechanisms to identify specific areas of overlap, as well as areas of conflict that need to be intentionally managed. While this brief established this important link through the example of chemical-related UNSCR 1540 obligations, it is only the first

step in paving the way towards a more comprehensive analysis of all specific obligations in each WMD domain and their linkages to the UN SDGs. Performing this comprehensive analysis, as well as using effective communication tools to raise awareness of these synergies, could potentially help fast track compliance with the resolution especially in low-resourced countries.



IMPLEMENTATION OF RESOLUTION 1540 (2004) IN LATIN AMERICA: PEER REVIEW EXERCISES AND THE REGIONAL ROLE OF CICTE/OAS

Juan Manuel Herrera/OAS

ABSTRACT

In many ways, United Nations Security Council resolution 1540 (2004) (UNSCR 1540) relies on cooperation for the implementation of its operational paragraphs. Therefore, it is essential that regional organizations commit to fostering dialogue on best practices among States that, despite their differences, share many common regional concerns. Strengthening the role of regional organizations has proven to be an effective way to contribute to global efforts from the grassroots, helping to prevent and counter threats such as terrorism and the proliferation of weapons of mass destruction. As part of a broader analysis of the importance of regional organizations' contribution to supporting countries in this area, the role of the Inter-American Committee against Terrorism (CICTE) of the Organization of American States (OAS) will be discussed. Specifically, this paper will examine the Organization's recent projects linked to the organization, development and implementation of peer review exercises (*peer review*). These initiatives aim to facilitate dialogue and the exchange of best practices in the national implementation of UNSCR 1540 obligations, including notably those under operative paragraph 3 of the resolution.

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UNSC RESOLUTION 1540 AND ITS CHALLENGES

When the United Nations Security Council (UNSC) unanimously adopted resolution 1540 (2004) under Chapter VII of the UN Charter,¹ it was clear that its content was unusual. Its generic nature, when compared to previous UNSC resolutions,² would

require original mechanisms to implement its broad provisions. Since the text did not indicate *how* States should comply with them, the implementation of its provisions was deemed to be a technically complex and costly undertaking. This view is supported by

some commenters who have taken stock of the outcomes of resolution 1540 over the last 20 years. They note that while implementation levels of the resolution have steadily increased since its adoption, implementation has been uneven across regions,

1 United Nations Security Council Resolution 1540/2004, S/RES/1540 (2004) (28 April 2004) [available at: [https://undocs.org/es/S/RES/1540\(2004\)](https://undocs.org/es/S/RES/1540(2004))].

2 Lavalle, R. (2004) "A Novel, If Awkward, Exercise in International Law- Making: Security Council Resolution 1540 (2004)", *Netherlands International Law Review* 51 (3); pp. 411–437; Asada, M. (2008) "Security Council Resolution 1540 to Combat WMD Terrorism: Effectiveness and Legitimacy in International Legislation", *Journal of Conflict & Security Law* 13 (3); pp. 303–332.



An on-site visit in Santiago, Chile; Credit, OAS.

experts at similar professional level, with similar credentials and responsibilities) from different countries would work together to review and improve the national implementation of certain provisions of the BWC by a State party to the Convention. Although peer review was not a new instrument in international policy and organizations, its use in the framework of the BWC proved its usefulness, despite some criticism.⁵

with considerable differences between developed and developing countries.³

Another major challenge noted by these observers is that the 1540 Committee's current assistance request mechanism –while valuable– has not been particularly successful in matching requests for assistance with appropriate providers. This has led, in practice, to most assistance being delivered outside the formal mechanism of the Committee. Yet, here there are drawbacks: the support

provided tends to be more in line with donor priorities than with the needs that States have identified in their requests for assistance submitted to the 1540 Committee.

THE RELEVANCE OF THE PEER REVIEW CONCEPT

France introduced the concept of peer review exercises in the form of a working paper submitted during the 7th Biological Weapons Convention (BWC) Review Conference.⁴ The central idea was simple: peers (i.e.,

In the context of UNSCR 1540, peer review exercises have proved to be relevant as a mechanism for the exchange of experiences and mutual assistance, as indicated in operative paragraph 10 of Security Council resolution 1977 (2011).⁶ While, in regional terms, the European Union has been a strong advocate of the concept of peer review and has supported the extension of the concept to further explore its relevance.

The success of these exchanges has been very sig-

3 Hess, A. A. C., & Marcus, G. R. (2019) "UN Security Council Resolution 1540 and the importance of regional coordinators", in *The Nonproliferation Review*, 1-10 [DOI: 10.1080/10736700.2019.1568763].

4 BWC/CONF. VII/WP.28

5 Espona, M.J. (2024). *Voluntary Transparency Initiatives: The Case of Peer Review Exercises in the Context of the BWC*, Geneva: UNIDIR [available at: <https://doi.org/10.37559/WMD/24/CBW/02>].

6 United Nations Security Council Resolution 1977/2011, S/RES/1977 (2011) (20 April 2011) [available at: [https://undocs.org/es/S/RES/1977%20\(2011\)](https://undocs.org/es/S/RES/1977%20(2011))].

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Through peer review exercises, it is possible to identify best practices, opportunities to improve existing mechanisms, and points of agreement between the representatives of the different national delegations.

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nificant in the case of Latin America, which, in the context of UNSCR 1540, is the region that has conducted the largest number of peer review exercises to date. In Latin America, the exchange of information between national authorities, technical experts and laboratory personnel has, in recent years, been a key factor in advancing the legislation, regulation and controls required by resolution 1540 (2004). In this regard, peer review is one of the most

effective means of consolidating this exchange of best practices. This type of interaction allows confidence-building among countries, providing them with a space to identify the main weaknesses and challenges to include within the framework of their respective National Action Plans.

The Inter-American Committee against Terrorism (CICTE) of the Organization of American States (OAS) has been responsible for facilitating these

peer review meetings through different funded programmes in support of the implementation of UNSCR 1540. Some of the main outcomes, especially regarding the implementation of domestic measures to comply with the obligations of the resolution, are summarized here.

THE ROLE OF REGIONAL ORGANIZATIONS IN FACILITATING THE IMPLEMENTATION OF UNSCR 1540

UNSCR 1540 follow-up resolutions have recognized the role of regional and subregional organizations in meeting the assistance needs of States. For example, resolution 1977 (2011) urged regional and subregional organizations to designate a contact point or coordinator for the implementation of the resolution (operative paragraph 14). For its part, the 2016 Comprehensive Review Final Report went further in its recommendations,



A laboratory visit during the peer review in Asunción; Credit, OAS.



A plenary session during the Santiago peer review; Credit, OAS.

encouraging greater cooperation and information sharing between the 1540 Committee and regional organizations.⁷ In resolution 2325 (2016), the call for the nomination of contact points and coordinators on the regional level was once again reiterated.⁸

This regional approach has been supported by many UN Member States, as well as past chairs of the 1540 Committee, who have frequently recognized that these organizations have a specific knowledge of their

Member States' needs and priorities, have developed extensive networks in each of the countries, and are in a better position to foster cooperation and information-sharing among the nations which they are geographically close to.⁹ In addition, regional and subregional organizations may have greater freedom to engage within their regions than the 1540 Committee or its Group of Experts, including with civil society organizations and other relevant international organizations.¹⁰

The example of Latin America highlights both the benefits and challenges of an active forum that promotes regional assistance to address the threats identified in UNSCR 1540. The development of strong export control systems, the creation of a sound legal and regulatory framework, the identification of export licensing procedures, as well as compliance, research and disclosure to the private sector, are among the main difficulties faced by the countries of the region. In particular, obligations

7 Report of the Security Council Committee established pursuant to Resolution 1540 (2004), S/2016/1038 (2 December 2016) [available at: <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N16/419/95/PDF/N1641995.pdf?OpenElement>].

8 United Nations Security Council resolution 2325/2016, S/RES/2016 (2325) (15 December 2016) [available at: <https://documents.un.org/doc/undoc/gen/n16/442/57/pdf/n1644257.pdf>].

9 Regional and subregional organizations are "in a better position than global institutions to assess the effectiveness of actions taken by their members and to take initiatives that contribute to filling gaps" (as stated by Scheinman, L. [2008] "Introduction", in Scheinman, L. [ed.] *Implementing Resolution 1540: The Role of Regional Organizations*, Geneva: UNIDIR, p. 5).

10 See Hess, & Marcus, *supra* note 3, who suggest the need to support a more relevant role for regional organizations to boost higher levels of commitment and implementation among different states who have some common background. This is encouraged by a closer knowledge of local expertise in both the public and the private sectors. On the example of peer reviews organized by OSCE, see also Volenikova, A. & Israilov, T. (2024) "Implementing UNSCR 1540: The OSCE's Role in Facilitating Peer Review Meetings", *1540 Compass*, Issue 01 (20 Years Special Edition), April 2024, pp. 92-99.



A group photo from the peer review in Mexico; Credit, OAS.

under operative paragraph 3 have been difficult to implement and have required consistent effort by national authorities.

The OAS has played a pivotal role in supporting the implementation of UNSCR 1540 in Latin America since 2005.¹¹ In 2010, OAS Member States tasked CICTE with launching a specific programme to help implement the resolution. As a result, strategic alliances were agreed with the United Nations Office for Disarmament Affairs (UNODA), the 1540 Committee and its Group of Experts, as well as other international organizations. CICTE/OAS has

since supported Member States' efforts to implement UNSCR 1540 through:

- » Providing legislative and technical assistance, including help with analysing legislative frameworks to identify gaps, drafting laws and regulations, and developing National Action Plans.
- » Building capacities and promoting awareness, by organizing national and regional training courses and workshops for public officials and private sector stakeholders.

In 2017, CICTE further strengthened its commitment to the implementation of UNSCR 1540 through the appointment of a full-time 1540 Regional Coordinator.¹²

The implementation of peer review exercises has proven to be one of the most efficient ways to promote and facilitate regional and bilateral cooperation among Latin American States. In fact, among the many activities recently carried out by CICTE, various peer review exercises have been coordinated: Chile and Colombia in 2017, Paraguay and Uruguay in 2019, Dominican Republic and Panama in 2019 (with a

11 Herz, M. "Resolution 1540 in Latin America and the role of the Organization of American States", in Scheinman, L. [ed.] *Implementing Resolution 1540: The Role of Regional Organizations*, Geneva: UNIDIR pp. 9–41.

12 See <https://www.oas.org/ext/en/security/unscr1540>.



Participants at the peer review held in Mexico; Credit, OAS.

follow-up carried out in 2022), Mexico, Brazil and Chile in 2023, as well as Ecuador and Paraguay.¹³ In the case of the last two exercises, the UNSCR 1540 peer review was carried out at the same time as voluntary transparency initiatives in support of BWC verification efforts.

In all cases, CICTE/OAS has promoted the direct involvement of national entities in charge of the implementation of UNSCR 1540, with the aim of improving national capacities in this area. These exercises constitute a unique mechanism, based on the needs of the States, which provide a key opportunity for direct discussion and exchange of best practices

with relevant experts. Since peer review exercises do not have a pre-established model, States that choose to conduct them are free to determine the activities and the scope of the exercise. Generally, they include a space for the exchange of information on the current legislation and regulations in each country, as well as their respective National Action Plans (if any), and a visit to relevant facilities (customs and/or biological laboratories) for the purpose of acquiring practical knowledge of the control measures being implemented. In this regard, countries that have agreed to take part in these exercises have been willing to tackle specific aspects related to operative paragraph

3 (a) and (b). In particular, countries expressed their need to exchange information about the physical protection of dual-use materials and technology under their control.

Facilitating dialogue between representatives of States with similar non-proliferation challenges is of paramount importance when trying to identify potential inter-country peers that could participate in a mutual review process. Coordinating with like-minded countries allows experts to make better use of their own knowledge and experience, while increasing the level of bilateral cooperation in the field of non-proliferation. One of the positive aspects of these exchanges has been the estab-

¹³ The latest peer reviews organized by CICTE were performed under a European Union-funded project, "In support of strengthening biological safety and security in Latin American in line with the implementation of United Nations Security Council resolution 1540 (2004) on non-proliferation of weapons of mass destruction and their means of delivery" (CFSP/2019/24/BIOSAFSEC LA OAS)". A summary can be read at: <https://www.gpwmd.com/strengthening-biosafety-and-biosecurity-in-the-americas>

ishment of contact networks to keep information channels open after each peer review exercise is concluded.

In the absence of formal mechanisms for collecting and/or repositioning these experiences, these peer review exercises have resulted in the preparation, at the end of each exercise, of reports, which are usually presented to the 1540 Committee and, where appropriate, to the Implementation Support Unit (ISU) of the BWC. This helps to disseminate the nature and content of each initiative and to present its most salient results, which may encourage other States to participate in new peer review activities in the future.

SOME CONCLUSIONS

Regional organizations generate institutional spaces where different States that have similar concerns and challenges can come together and exchange experienc-

es. In the specific area of the non-proliferation of weapons of mass destruction to non-State actors, CICTE/OAS has taken a series of actions aimed at facilitating better compliance with the obligations included in the operative paragraphs of UNSCR 1540. Through peer review exercises, it is possible to identify best practices, opportunities to improve existing mechanisms, and points of agreement between the representatives of the different national delegations. As a result of these bilateral or trilateral activities, CICTE/OAS has managed to identify several national challenges, ranging from the need to incorporate international standards into national frameworks and achieve greater institutionalization in these issues; to the design of strategies to articulate risk analysis of export control; to the training of specialized personnel and the facilitation of information exchange between public officials and the private sector.

Future regional exercises of this kind, between countries that have already participated, as well as those that have yet to, are expected to assess progress towards these objectives while identifying and addressing new challenges that Latin American nations anticipate as they continue their efforts to prevent and counter the proliferation of WMDs. Twenty years after the adoption of UNSCR 1540, it is imperative to develop and promote institutional pathways to help States continue to meet their essential international security commitments. Paying attention to local needs allows for much more tailored assistance in this endeavour.


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Regional organizations generate institutional spaces where different States that have similar concerns and challenges can come together and exchange experiences.

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UNOCT'S SUPPORT ON COUNTERING WEAPONS OF MASS DESTRUCTION (WMD) TERRORISM AND PROMOTION OF UN SECURITY COUNCIL RESOLUTION 1540 (2004): FROM REQUEST OF ASSISTANCE TO IMPLEMENTATION

Participant using PRD monitors, Dushanbe, 10 October 2024; Credit, UNOCT.

ABSTRACT

This article examines the collaborative efforts between Tajikistan, the United Nations Office of Counter-Terrorism (UNOCT), the European Union, and international partners to strengthen Tajikistan's ability to prevent and respond to radiological and nuclear (R/N) terrorism at its borders with Afghanistan.

Following Tajikistan's formal request for assistance through the United Nations Security Council resolution (UNSCR) 1540 (2004) mechanism in 2022, this initiative resulted in the provision of detection equipment and specialized training for border guards, thus enhancing Tajikistan's operational readiness, in line with global counter-terrorism standards and as called for in the Eighth Review of the UN Global Counter-Terrorism Strategy. The equipment and training were delivered by UNOCT through the European Union-United Nations Global Terrorism Threats Facility (the Facility) and the United Nations Counter-Terrorism Centre's (UNCT) Global Programme on Countering Terrorist Use of Weapons through its project on "Promoting the Universalization and Effective Implementation of the International Convention for the Suppression of Acts of Nuclear Terrorism" (ICSANT).

The views expressed in this article are those of the authors and do not necessarily represent those of the United Nations Office of Counter Terrorism.

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BACKGROUND

The border between Tajikistan and Afghanistan remains a hotspot for security challenges, including the illegal trafficking of R/N material. In 2021, the Tajik authorities reported to the International Atomic Energy Agency that during a special operation, 133 pieces of nuclear material¹ were seized from its citizens, who had allegedly planned to sell

the materials either within the country or to Afghanistan.

To prevent illicit trafficking of R/N material and meet international obligations, including UNSCR 1540 (2004), Tajikistan relies on advanced detection technology operated by its border guards.

In August 2022, UNOCT received an official request for assistance from Tajikistan,

through the Security Council Committee established pursuant to resolution 1540 (1540 Committee). Following subsequent exchanges and the successful collaboration between the Chemical, Biological, Radiological, and Nuclear (CBRN) Safety and Security Agency of the Republic of Tajikistan and the UNOCT/UNCCT Global Programme on Countering Terrorist Use of Weapons, Tajikistan officially

¹ Uranium dioxide tablets weighing 607 grams.



Tajikistan, Map No. 3765 Rev. 11 UNITED NATIONS October 2009.

requested support from the European Union-United Nations Global Terrorism Threats Facility (the Facility) in August 2023.

Both the Facility and the Countering Terrorist Use of Weapons Programme partnered to tailor a demand-driven technical assistance package based on the official request by Tajikistan.

THE ROLE OF UNOCT IN COUNTERING THE TERRORIST USE OF WEAPONS

UNOCT/UNCCT Countering Terrorist Use of Weapons Programme is playing a leading role in global efforts to combat terrorist threats involving both convention-

al and non-conventional weapons. Initially focused on weapons of mass destruction (WMD) and CBRN terrorism, the Programme has expanded over the years to include explosives and improvised explosive devices (IEDs), small arms and light weapons (SALW), and unmanned aircraft systems (UAS) in response to the evolving threat landscape. This wide focus aligns with UNOCT’s mandate to provide leadership, strengthen coordination, build capacity, and offer critical assistance to Member States, as well as to enhance visibility, advocacy, and resource mobilization in global counter-terrorism strategy.

The Programme’s success can be attributed to its comprehensive and multi-faceted approach, which includes

threat assessment, prevention, response, and international coordination. It addresses the full spectrum of terrorist acquisition and use of weapons through a diverse portfolio of projects and maintains a dynamic training and capacity-building component, notably specialized training courses tailored to the beneficiary’s needs. These are complemented by national and regional workshops and table-top exercises designed to enhance Member States’ prevention and response capabilities, in close collaboration with international partners. A key component of the Programme’s operations is its function as an official assistance provider under the UNSCR 1540 (2004) assistance request mechanism. In this role, the programme assists Member States in their efforts to prevent the proliferation of CBRN weapons and their delivery systems, and to establish efficient national controls.

The EU-UN Global Terrorism Threats Facility was established in April 2022 in co-operation with, and funded by, the European Union to enable the United Nations to provide rapid and flexible technical assistance to Member States facing an urgent or evolving



Under-Secretary General for Counter-Terrorism, Vladimir Voronkov in his opening remarks during the high-level side event on Reinforcing the Global Nuclear Security Architecture: Universalization of the International Convention for the Suppression of Acts of Nuclear Terrorism, 3 August 2022, ECOSOC Chamber, UN Secretariat, New York; Credit, UNOCT.

Co-operation in Europe (OSCE), and the European Union to boost counter-terrorism efforts in the region. Tajikistan has continuously engaged with international partners to strengthen its capacities and efforts to prevent and counter terrorism. For instance, in 2021 UNOCT organized a national advocacy event with parliamentarians to raise awareness on ICSANT, which greatly contributed to the ratification of the Convention by the country in 2022, further committing to enhancing nuclear security in the region and globally.

TAILORED ASSISTANCE

In response to the official request for support from Tajikistan, UNOCT/UNCCT conducted a consultation mission in Dushanbe, in October 2023, to explore possible technical and capacity-building assistance. The re-opening of five border crossing points with Afghanistan was identified as a significant challenge, requiring equipment and training to prevent the smuggling of R/N materials potentially exploitable by terrorist groups.

terrorist threat or situation, including through advisory services, training and the provision of light and non-lethal equipment. Implemented by UNOCT, the Facility supports Member States to increase their capacities to detect, prevent, counter, respond to and investigate terrorist threats while ensuring respect for international law, in line with the UN Global Counter-Terrorism Strategy and requirements from relevant Security Council resolutions.

UNOCT/UNCCT and the United Nations Office on Drugs and Crime (UNODC) jointly implement, with funding from the European Union, a project to promote the universalization and effective implementation of ICSANT.² The project aims to enhance nuclear security

at the national, regional, and international level through adherence to the Convention, which calls on States Parties to take necessary measures to prevent and counter acts of nuclear terrorism and related crimes.

TAJIKISTAN'S EFFORTS TO FIGHT AGAINST R/N TERRORISM

Tajikistan has long been committed to securing its borders from terrorist threats. In 2010, the country pioneered and developed a National Border Management Strategy and accompanying Action Plan. In 2018, it took another step forward by launching the Dushanbe Process, a multilateral initiative in collaboration with the United Nations, the Organization for Security and

² ICSANT was adopted by the United Nations General Assembly in 2005 and entered into force in 2007. It currently has 125 States Parties.



Training on radiological and nuclear threat, Dushanbe, 09 October 2024, Credit, UNOCT.

On this basis, and in line with relevant recommendations from the Security Council Counter-Terrorism Committee Executive Directorate (CTED) to strengthen the capacities of the border guards of the Republic of Tajikistan, UNOCT/UNCCT and the EU-UN Facility collaborated to design a tailored intervention to improve Tajikistan’s ability to detect, prevent, and respond to R/N threats.

This collaboration resulted in the delivery, in October 2024, of R/N detection equipment and tailored capacity-building training in support of Tajikistan, thanks to the financial support of the European Union. UNOCT/UNCCT provided 30 personal radiation detectors (PRDs)³

for the Border Troops and a four-wheel drive for the CBRN Safety and Security Agency to conduct secondary investigations of suspicious radiation.

A two-day training was organized for 28 border guards stationed along the border between Tajikistan and Afghanistan, focusing on the use, maintenance, and storage of the PRD to ensure sustained functionality and effective use over time. The training covered R/N security, nuclear terrorism threats, and best practices for responding to suspicious radiation incidents with an emphasis on the effective and practical implementation of ICSANT. The training also included human rights and gender considerations,

ensuring that participants are equipped to carry out their duties in a manner that is both effective and respectful of fundamental rights.

This training was also part of the larger project, jointly implemented by UNOCT/UNCCT and UNODC, aimed to promote the universalization and effective implementation of ICSANT.

When designing the assistance package for Tajikistan, UNOCT consulted with international partners, including through the framework of the Border Monitoring Working Group (BMWG), which serves as a forum to promote cooperation between its participants⁴ in the field of nuclear security, to ensure coordinated support.

3 Polimaster PM1703 GNA-IIBT.

4 Canada, European Commission, Finland, International Atomic Energy Agency, INTERPOL, the Netherlands, United Nations Interregional Crime and Justice Research Institute (UNICRI), UNOCT, UNODC, United Kingdom, United States of America, World Customs Organisation.



CONCLUSION

The recent delivery of specialized equipment and training to Tajikistan exemplifies how active international cooperation, through multistakeholder mechanisms and coordinated support can significantly enhance Member States' capacities to prevent and counter R/N terrorism.

This initiative heightened the operational readiness of Tajikistan's border personnel, improving their ability to respond to R/N threats and

contributing to both national and regional security. It also underscores Tajikistan's commitment to fulfilling its international obligations under UNSCR 1540 (2004) and ICSANT. By engaging with international partners, Tajikistan is not only enhancing its own nuclear security infrastructure but also advancing collective global efforts to counter nuclear terrorism. The EU-UN Global Terrorism Threats Facility has been instrumental in this process, providing flexible and coordinated technical assistance.

In addition, by strengthening national capacities and promoting the effective implementation of key international frameworks, such as UNSCR 1540 (2004) and ICSANT, UNOCT's Programme on Countering Terrorist Use of Weapons continues working to reduce the threat of terrorist acquisition and use of weapons.

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The establishment of this centralized regulatory authority has streamlined oversight and enforcement, while the implementation of IAEA-compliant safeguards has strengthened international confidence in Kenya's nuclear security measures.

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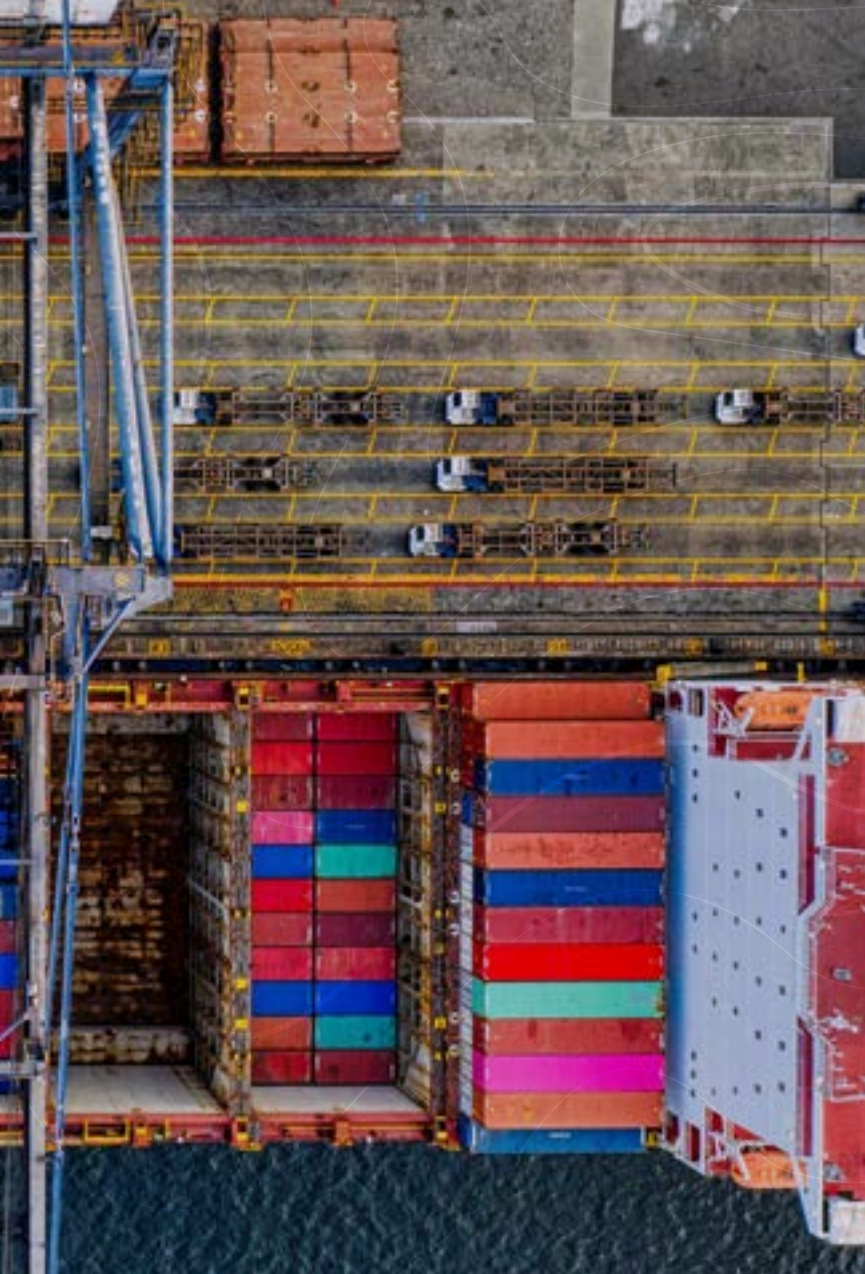


ENHANCING STRATEGIC TRADE CONTROL THROUGH CUSTOMS ENFORCEMENT: WCO'S APPROACH

The WCO's Security Programme helps to bolster international security, while enabling trade facilitation. Credit, Tom Fisk.

ABSTRACT

This article outlines the critical aspects of the World Customs Organization's (WCO) Strategic Trade Control Enforcement (STCE) Programme, which provides a comprehensive framework for supporting global non-proliferation efforts. Aligned with United Nations Security Council resolution (UNSCR) 1540 (2004), the Programme emphasizes a multi-layered approach, involving policy-level engagement, targeted training for frontline officers, and operational exercises. By equipping customs officers to strengthen their strategic trade controls enforcement capacity, the Programme helps to bolster international security, while enabling trade facilitation.



THE AUTHOR
**World Customs
Organization Security
Programme**



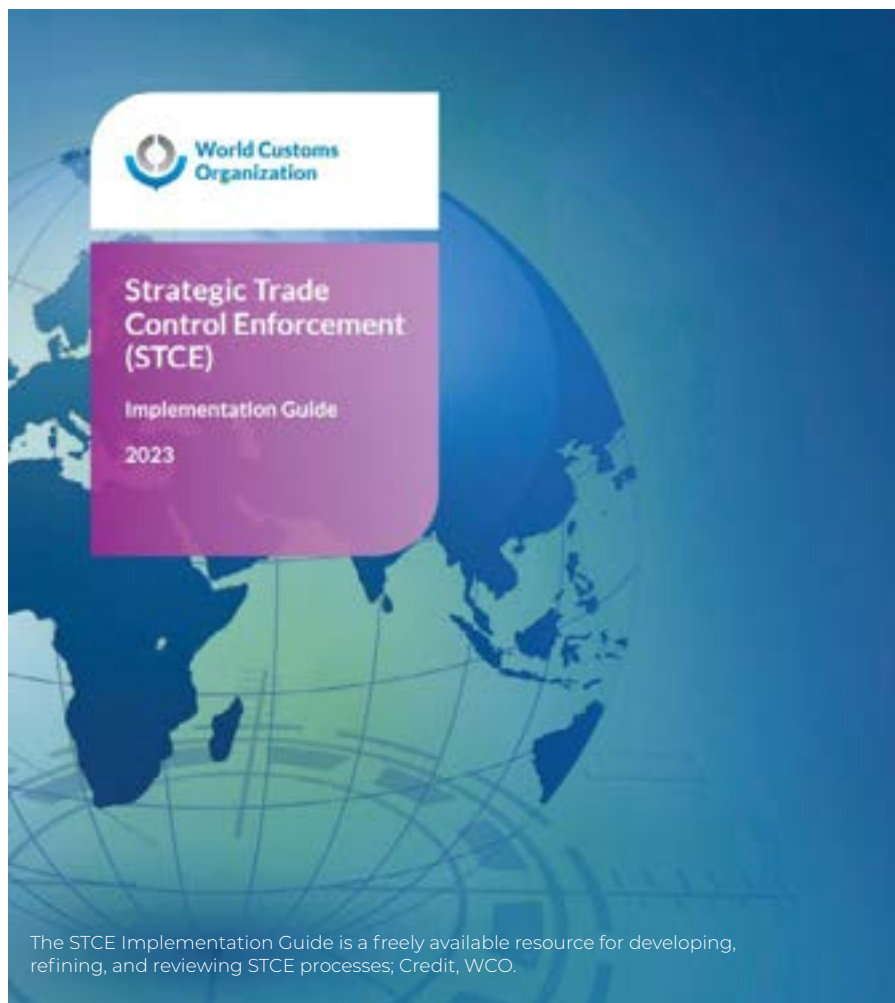
The Security Programme is the WCO's response mechanism to aid countries with their border security-related challenges. The Programme consists of five thematic areas and a holistic technical assistance and capacity building initiative.

INTRODUCTION

STCE has emerged as a crucial element in international efforts to prevent the proliferation of weapons of mass destruction (WMD) and their delivery systems. Customs administrations worldwide are the first line of defence at the border, tasked with safeguarding global supply chains by ensuring export control compliance. In this capacity, they are entrusted with the critical task of preventing the

unauthorized transboundary movement of strategic goods, such as specialized equipment, electronics, and dual-use goods that have both civilian and military application. By enhancing strategic trade controls, they actively contribute to the mitigation of risks associated with both the transfer of ready-to-use weapons and the materials required for their manufacture across the globe.

The challenge for customs administrations, however, lies in the subtlety of distinction between everyday commercial products and dual-use goods that could be weaponized. Many suppliers may inadvertently violate trade restrictions due to a lack of awareness or be misled by procurement agents with illicit intentions. At the same time, complicit actors may attempt to evade regulations by smuggling, mis-declaration, or exploiting legal



loopholes. Therefore, customs need to be able to apply rigorous risk-based controls, based on all source intelligence, to maintain a secure international trade environment. Effective STCE ensures that the movement of strategic goods, representing only a small fraction of global trade, is rigorously monitored without adversely impacting the facilitation of legitimate trade.

The WCO, through its STCE Programme, has been instrumental in strengthening the capacity of its Member

customs administrations in addressing these challenges. This Programme became the vehicle to empower Members to meet their non-proliferation obligations in line with UNSCR 1540 (2004), focusing on the prevention of the illicit transfer of chemical, biological, radiological, nuclear and explosive (CBRNE) materials.

A number of key elements have contributed to its effectiveness, namely, the WCO's legitimacy as a Member-driven intergovernmental organization, its adaptability to

various national contexts, and its ability to integrate high-level policy dialogue and training for frontline officers, as well as coordinate international operational activities. The STCE Programme has positioned the WCO as a vital actor in the global framework for preventing the proliferation of WMDs and safeguarding international security.

Another key factor of the WCO's success lies in its multi-faceted approach to capacity building. It involves not only enhancing the technical skills and operational capabilities of customs officers, but also engaging senior policymakers to ensure sustainable and high-level national support for STCE implementation on the ground.

The STCE Programme offers a structured suite of capacity-building initiatives tailored to various levels of expertise and operational needs. These activities are designed to empower customs officials to effectively embed security functions into a whole spectrum of other responsibilities at borders, while advancing their ability to identify and control strategic goods. Specifically, the Programme offers Members:



The STCE Programme has fully accredited 84 trainers worldwide, with an additional 94 trainers in the pre-accreditation stage.



- » High-level orientation workshops, aimed at raising awareness of the security function of customs vis-à-vis its traditional revenue collection role, and at determining the STCE maturity level of the customs administrations;
- » National STCE trainings events, focusing on enhancing the skills of operational customs officials in the area of identification of goods with strategic potential and ways to control them; and
- » Train-the-Trainer (T3) events, aimed at developing and expanding the pool of accredited national experts who support the WCO in delivering training events across the globe.

The STCE Programme has fully accredited 84 trainers worldwide, with an additional 94 trainers in the pre-accreditation stage.

In addition, The STCE Programme has demonstrated robust capacity to organize and execute large-scale targeted operations, effectively mobilizing customs administrations worldwide to address critical security challenges. By coordinating global and regional operations such as the Cosmo series, the Programme not only reinforces the technical skills of participating customs officials, but also establishes a framework for sustained interagency collaboration and intelligence sharing. This approach enables the STCE Programme to support customs administrations in enforcing strategic controls and deterring the illicit flow of potentially dangerous goods across borders.

THE STCE IMPLEMENTATION GUIDE AS THE GLOBAL STANDARD

One of the core functions of the STCE Programme is to provide tools to standardize and guide enforcement practices across customs administrations. One of the Programme's essential tools is the freely accessible STCE Implementation Guide. Initially published in 2019 as part of the STCE Project, and later updated in 2023, the Guide is a comprehensive resource for developing, refining, and reviewing STCE processes. It serves as a non-binding framework adaptable to each administration's needs, whether these relate to initiating or enhancing their strategic trade control systems. This Guide assists customs authorities in aligning their procedures with best practices, while ensuring a cohesive and effective approach in combating the

illicit trade in strategic goods.

The STCE Implementation Guide is divided into two main sections, offering tailored insights for both senior customs managers and operational officers. For senior managers, the Guide emphasizes the critical role of customs in security, the importance of strategic trade controls, and the need for efficient procedures to enforce these controls. At the same time, operational officers become acquainted with practical techniques to implement these measures effectively, with the Guide covering the essential functions of the STCE process, such as risk management, detection and identification of strategic commodities, legal and regulatory frameworks, and interagency cooperation.

In addition to the operational guidance, the STCE Implementation Guide plays a critical role in capacity building and knowledge sharing. It provides customs administrations with tools for assessing their existing capabilities and identifying areas for improvement, which can then be targeted through training and resource allocation. By fostering a common under-

standing and unified methods, the Guide not only strengthens individual national capacities, but also enhances the overall coherence and responsiveness of the global customs community in addressing strategic trade risks, thereby making a substantial contribution to international security.

UNLOCKING THE VALUE OF OPEN-SOURCE INTELLIGENCE (OSINT) IN CUSTOMS ENFORCEMENT

As part of ongoing efforts to provide critical tools and insights to customs administrations worldwide, in September 2024, the WCO published a new Study Report on [“Unlocking the Value of Open-Source Intelligence \(OSINT\) in Customs Enforcement”](#). This comprehensive Study Report enables senior management to better understand the importance of OSINT and its potential to strengthen enforcement functions.

The Strategic Trade Controls example case allows readers to delve deeper into the OSINT techniques that can be incorporated into the export controls domain, ranging from risk analysis and threat detection to investigation. The Study Report also provides rec-

ommendations on the ways of leveraging OSINT to enhance inter-agency and international operational capabilities.

CONCLUSION

The evolving nature of global security threats demands that customs administrations remain agile and vigilant in their crucial role of ensuring security while facilitating legitimate trade. By equipping customs officers with expertise in strategic trade controls and essential tools for their work, the WCO ensures its Members are able to safeguard global supply chains against the proliferation of WMDs and other strategic materials. These efforts reinforce the WCO’s commitment to global security and trade integrity, demonstrating that collaborative, adaptive, and intelligence-driven approaches are key to future success.



The WCO ensures its Members are able to safeguard global supply chains against the proliferation of WMDs; Credit, Pat Whelen.



NOTIFICATIONS

BAFA and UNODA hold first-ever UNSCR 1540 (2004) Regional Outreach to Industry Conference (Wiesbaden Process) for Central Asia

In 2012, the German Federal Office for Economic Affairs and Export Control (BAFA) and the United Nations Office for Disarmament Affairs (UNODA) inaugurated the “Wiesbaden Process”, an informal dialogue forum for government regulators and industry actors to enhance public-private sector cooperation on the implementation of export controls related to UNSCR 1540 (2004).

In 2016, the annual international conference held –as the name implies– in the city of Wiesbaden was supplemented by a regional conference series, meant to reflect regional variances in the design and implementation of export controls and other security measures related to the counter-proliferation of weapons of mass destruction (WMDs).

From 31 July to 1 August 2024, Kazakhstan hosted the first-ever Regional Outreach to Industry Conference specifically for Central Asia and Neighbouring Countries under the Wiesbaden Process, featuring over 30 representatives from governments, intergovernmental organisations, regulators and industry from Armenia, Kazakhstan, Kyrgyzstan, Mongolia, Pakistan, Tajikistan and Uzbekistan.





Second Erlangen Conference held in Nuremburg on 20–21 November 2024 to Deepen Dialogue between Regulators and Academia on Counter-Proliferation

In 2023, the German Federal Government and UNODA launched the “Erlangen Initiative”, which complements the Wiesbaden Process by establishing a forum for dialogue with researchers on the role of academia in fulfilling the non-proliferation obligations stipulated in UNSCR 1540 (2004).

Universities and research centres play an instrumental role in the counter-proliferation of WMDs given their predisposition to intangible transfers of technology (ITT) that stem from international academic exchange. It is therefore vital to make researchers aware of their compliance obligations, especially when engaged in cross-border collaboration of a dual-use (i.e., potentially military or CBRN) nature.

Researchers must be equipped with means to detect, prevent and report attempts by illicit end-users to acquire and proliferate technology applicable for WMDs. An improved understanding of resolution 1540 (2004) and its obligations will also foster improved self-regulation within academic institutions, for example, by establishing codes of ethics and conduct on academic research and necessary precautions.

From 20 to 21 November 2024, the Second Global Erlangen Conference was convened in Nuremberg, Germany to address these issues. The event was attended by over 80 participants from almost 30 countries. The discussions included ways and means to optimize outreach efforts to academia and to build basic consensus on compliance obligations for researchers.

UPCOMING

EVENTS

2025

January

22/
24

Arusha, Tanzania

IFBA Global Voices Conference: Celebrating Diversity in Biosafety & Biosecurity

Organizers: The International Federation of Biosafety Associations and the Tanzania Biological Safety Association

This three-day event aims to strengthen the international biosafety and biosecurity community by fostering inclusivity and dialogue.

February

10/
13

Ottawa, Canada

Global Partnership Against the Spread of Weapons and Materials of Mass Destruction Working Group

Organizer: Global Affairs Canada

Marking the start of the 2025 Canadian presidency, the Global Partnership will host its first working group of the year in Ottawa.

March

03/
07

New York, USA

Third Meeting of States Parties to the Treaty on the Prohibition of Nuclear Weapons

Organizer: United Nations Office for Disarmament Affairs

H.E. Ambassador Akan Rakhmetullin (Kazakhstan) will preside over this third Meeting of States Parties to be held in New York.

April

07/
10

Munich, Germany

Medical Biodefense Conference

Organizer: Institut Für Mikrobiologie Der Bundeswehr

This conference provides a forum for advancing medical biodefense, addressing cutting-edge topics like biosafety, synthetic biology, AI-driven genomics, and rapid response strategies.

