

Corporate Accountability in Dual-Use Technology Transfers and Weapons of Mass Destruction (WMD) Proliferation

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Abstract

The role of transnational corporations in the transfer of *dual-use* technology increases the risk of the proliferation of Weapons of Mass Destruction (WMD) globally. This research aims to analyze international legal arrangements and formulate an ideal corporate liability model to be applied in Indonesia. This study uses a normative juridical method with a comparative legal approach to practice in the United States (US) and the European Union. The results of the study show that regulations in Indonesia are still sectoral and inadequate in meeting the standards of UNSCR 1540 (2004). It was concluded that Indonesia needs to establish a hybrid regulatory ecosystem through the new *Strategic Trade Management* (STM) Law. This ideal model requires the implementation of *the Internal Compliance Programme* (ICP) and *Know Your End-User* (KYE) due diligence as a precaution, as well as integrating rapid administrative sanctions and severe penalties as enforcement mechanisms.

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Introduction

Threats to global security have shifted. In the past, the world only focused on countries that secretly sought to develop weapons of mass destruction capabilities such as Iran, Iraq, and North Korea during the period 1991-2002 as the main targets of nuclear smuggling. However, the current era demands an expansion of focus to include the role of non-state actors (*non state actors*). Transnational corporations (*transnational corporations*) are at the forefront of this risk, acting as a provider of essential technologies, goods and services.¹ This threat is increasingly significant considering that the number of global nuclear warheads remains at a very high level. Estimates of data at the beginning of 2025 show that 9 (nine) countries have about 12,331 nuclear warheads, with the United States (US) and Russia owning about 90% of the world's total nuclear weapons. In addition, countries such as China, India, North Korea, Pakistan, and the United Kingdom are expected to increase their nuclear stockpiles. This underscores the

¹ Rizky Roza, "Japan's Dual-Use Technology and the National Security Interests of the United States," *Journal of International Relations* 1, no. 12 (2012): 107–22, <https://doi.org/10.18196/hi.2012.0012.107-122>.

urgency of tighter control of the *Non State Actors* that can facilitate the transfer of weapons of mass destruction technology.²

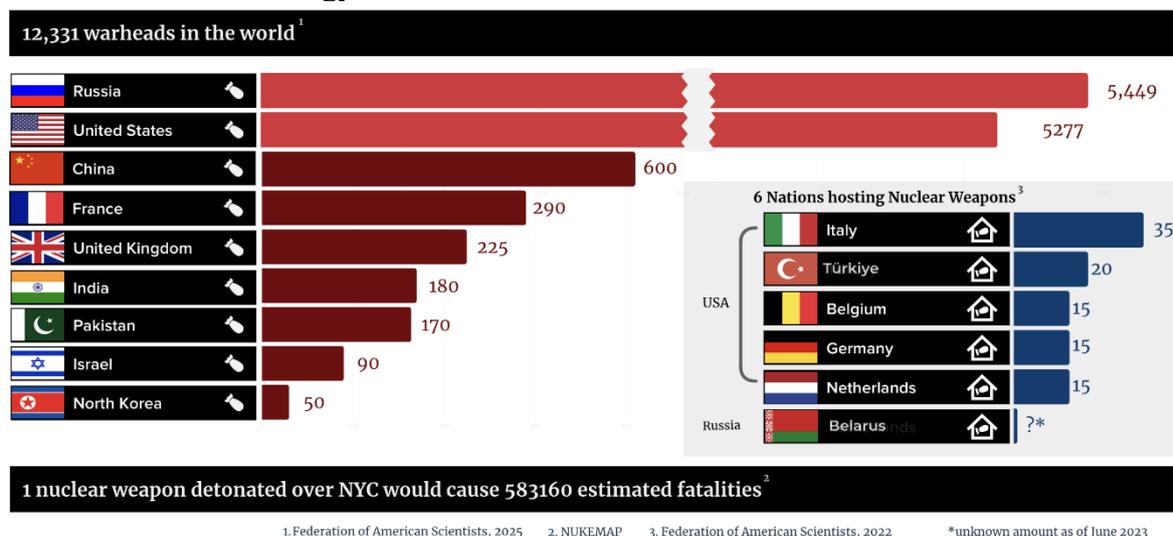


Figure 1. Nuclear-Weapon Countries

Source: The International Campaign to Abolish Nuclear Weapons (ICAN 2025).³

Although there has been a reduction in nuclear weapons stockpiles since the Cold War, this trend is starting to improve. The Stockholm International Peace Research Institute (SIPRI) noted that the dismantling of warheads is slow, while the nuclear weapons modernization program is ongoing.⁴ Almost all nuclear-armed countries are increasing their weapons capabilities and numbers.⁵ The increase in nuclear weapons in the world was strengthened by the passage of UNSCR 1540 (2004). The resolution launches a long-term global effort to combat the proliferation of weapons of mass destruction facilitated by non-state actors. At the international level, most non-proliferation instruments (nuclear non-proliferation treaties, chemical weapons conventions, biological weapons conventions or UNSCR 1540 (2004) place the burden of obligations on each country to prevent the spread of weapons of mass destruction materials and technology, while corporate responsibilities are not explicitly regulated.⁶

As Masters (2009) argues, international regimes “place every obligation in the field of nuclear weapons solely on the state” and ignore the corporations that produce the components *dual-use*.⁷ Although Resolution 1540 affirms the proliferation of weapons of mass destruction as a threat to peace and calls on states to implement safeguards, their implementation remains dependent on each country's domestic mechanisms. As a result, international regulations focus more on state supervision, while regulations that are directly binding on corporations are

² The International Campaign to Abolish Nuclear Weapons (ICAN), “Which Countries Have Nuclear Weapons?,” *ICAN*, June 1, 2025, https://www.icanw.org/nuclear_arsenals.

³ The International Campaign to Abolish Nuclear Weapons (ICAN), “Which Countries Have Nuclear Weapons?”

⁴ Stockholm International Peace Research Institute, “Nuclear Risk Grow as New Arms Race Looms,” *SIPRI*, June 16, 2025, <https://www.sipri.org/media/press-release/2025/nuclear-risks-grow-new-arms-race-looms-new-sipri-yearbook-out-now#:~:text=Since%20the%20end%20of%20the,new%20nuclear%20weapons%20is%20accelerating>.

⁵ Stockholm International Peace Research Institute, “Nuclear Risk Grow as New Arms Race Looms.”

⁶ Joshua Masters, “Nuclear Proliferation: The Role and Regulation of Corporations,” *Nonproliferation Review* 16, no. 3 (2009): 347–61, <https://doi.org/DOI:%252010.1080/10736700903255045>.

⁷ Masters, “Nuclear Proliferation: The Role and Regulation of Corporations.”

inadequate.⁸ Technological advancements of course further increase the diversity of trade products. These products also concern export goods *dual-use* or double-functioning. On the one hand, commercial products are beneficial to society, on the other hand they are used for military and intelligence purposes.⁹

Dual-use products or *dual-use goods* These include high-tech software and hardware, semiconductors, chemicals, bacteria, viruses, and toxins. These products can be used as raw materials for the manufacture of weapons of mass destruction and intelligence equipment.¹⁰ The potential for misuse of such products is very real, recent cases show how the components *Dual-use* diverted to military or nuclear programs. For example, an inmate admitted to being involved in a scheme to export millions of dollars of semiconductors and other sensitive technology from the United States (US) to Russia, for a Russian defense research company that had been sanctioned by the US.¹¹ In addition, the United States (US) Government in 2022 also charged the Latvian company CNC Weld and its related individuals with attempting to export United States (US) made high-precision grinder jigs to Russia without a permit, where the jig grinder is a machine classified as goods *dual-use* for nuclear and defense programs.¹² Another case is that, in November 2024, Shenhua Wen, a Chinese citizen living in the United States (US), conspired to illegally export firearms, ammunition, and military dual-use items to North Korea at the direction of the North Korean Government.¹³

A dispute over dual-functional products also occurred between Japan and South Korea, where Japan restricted exports of hydrogen fluoride, photoresist, and other materials needed by South Korea's high-tech industry to make electronic devices and components. Tokyo argues that Seoul is re-exporting hydrogen fluoride to North Korea and Japan has said the material could be used for North Korea's weapons development program.¹⁴ Another case is Mitutoyo Corporation from Japan which is a precision measurement device manufacturing company proven to have illegally transferred five precision measurement devices which are technology *dual-use* which could be used for the manufacture of uranium enrichment centrifuges to a

⁸ Joshua Tjeransen, "How Weapons of Mass Destruction Are Supported Through Proliferation Financing," *King's College London*, July 12, 2022, <https://www.kcl.ac.uk/how-weapons-of-mass-destruction-are-supported-through-proliferation-financing#:~:text=the%20United%20Nations%20Charter,resolutions%20which%20require%20states%20to>

⁹ Hendriyo Widi, "Perang Produk Ekspor 'Berwajah Ganda,'" *Kompas.Id*, Agustus 2019, https://www.kompas.id/artikel/perang-produk-ekspor-berwajah-ganda?open_from=Baca_Nanti_Page.

¹⁰ Widi, "Perang Produk Ekspor 'Berwajah Ganda.'"

¹¹ U.S Department of Justice, "Businessman Pleads Guilty to Export and Tax Charges in Connection with Shipments of Sensitive Technology to Russia," *U.S Department of Justice*, February 6, 2025, <https://www.justice.gov/archives/opa/pr/businessman-pleads-guilty-export-and-tax-charges-connection-shipments-sensitive-technology#:~:text=Ilya%20Khan%2C%2066%2C%20a%20national,he%20earned%20from%20the%20sc>

¹² United States Attorney's Office - District of Connecticut, "European Nationals and Entities Indicted on Charges of Violating U.S. Laws for Their Attempt to Export a Dual-use High Precision Jig Grinder to Russia," *United States Attorney's Office - District of Connecticut*, October 2022, <https://www.justice.gov/usao-ct/pr/european-nationals-and-entities-indicted-charges-violating-us-laws-their-attempt-export#:~:text=grinder%20that%20was%20manufactured%20in,foreign%20policy>.

¹³ Jessica Kim and Sarah Burkhard, *Case Study on Conspiracy to Smuggle U.S. - Origin Military Equipment and Dual-Use Technology to North Korea* (Washington D.C: Institute for Science and International Security, 2025), 1–6, https://isis-online.org/uploads/isis-reports/documents/Case-Study-Draft-USA-vs-Shenhua-Wen_July-30_Final.pdf.

¹⁴ Widi, "Perang Produk Ekspor 'Berwajah Ganda.'"

subsidiary in Malaysia between 2001 and 2005 who then sold it to the A.Q. Khan network for use in Libya's nuclear weapons program.¹⁵

The above problems certainly confirm the urgency of corporate accountability. Corporate accountability is not only about administrative compliance, but also contains aspects of international security risk prevention. Weak supervision or export violations by companies can accelerate the proliferation of weapons of mass destruction, making law enforcement and regulation a key element in preventing the misuse of technology *dual-use*. Academic studies that discuss the relationship between corporate responsibility and the issue of the proliferation of weapons of mass destruction are still very limited, especially in the Indonesian context and there is also no in-depth research that explicitly examines policy and legal comparisons between Indonesia and the international community in terms of corporate responsibility for technology transfer *dual-use* in order to support the proliferation of weapons of mass destruction, while in the US, for example, corporations that violate the Export Control Act are subject to large fines and their executives can be punished.¹⁶ This research will discuss how international legal arrangements govern corporate responsibility for technology transfer *dual-use* that have the potential to be used for the proliferation of weapons of mass destruction, what is the ideal form of corporate law accountability to be applied in Indonesia to prevent the misuse of technology transfer *dual-use* in support of the proliferation of weapons of mass destruction.

Method

This study uses a normative juridical method¹⁷ Because its main focus is on the analysis of positive legal norms, both national and international, that govern corporate accountability in the context of technology transfer *Dual-Stuttgar*. This method is relevant because the issues studied are not only theoretical, but also concern non-state actors, in this case corporations that have the potential to violate international law through trade or export of high-content technology.

The collection of legal data is directed through library research on primary and secondary legal materials. Primary legal materials include international instruments such as *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT), *Chemical Weapons Convention* (CWC), as well as UNSCR 1540 (2004) which requires states to control non-state actors. At the national level, the inventory is carried out on laws and regulations that are spread across sectors, including Law Number 17 of 2006 concerning Customs, Law Number 16 of 2012 concerning the Defense Industry, and Law Number 7 of 2014 concerning Trade. In addition to regulations, data collection also includes the analysis of concrete cases of dual-use technology export violations, such as the Mitutoyo Corporation case involving A.Q Khan's network and semiconductor smuggling cases to Russia and China that show the modus operandi of corporate actors.

The selection of the United States (US) and the European Union (EU) as the object of comparative legal approach is based on the characteristics of the accountability model needed to build an ideal model for Indonesia. The United States (US) was chosen because it represents an aggressive law enforcement model with doctrine *Strict Liability* (Strict Liability) and a quick

¹⁵ Stephanie Lieggi and Masako Toki, *The Mitutoyo Case: Will Japan Learn from Its Mistakes or Repeat Them?* (Washington D.C: Nuclear Threat Initiative, 2007), <https://www.nti.org/analysis/articles/will-japan-learn-its-mistakes/>.

¹⁶ Stanley Keller and Edwards Wildman Palmer, "U.S. Export Laws and Related Trade Sanctions," *Harvard Law School Forum on Corporate Governance*, November 17, 2012, <https://corpgov.law.harvard.edu/2012/11/17/u-s-export-laws-and-related-trade-sanctions/#:~:text=When%20these%20laws%20and%20regulations,reputational%20harm%20to%20a%20company.>

¹⁷ Muhaimin, *Metode Penelitian Hukum* (Mataram: Mataram University Press, 2020).

administrative sanction mechanism in the form of *Temporary Denial Order* (TDO). Instead, the EU was chosen because it offers a preventive approach (*ex-Ante*) through the obligation to apply *Internal Compliance Programme* (ICP) as an absolute requirement for trading facilities, where emphasis is placed on the internal prevention system of corporations.

The validity of the research is carried out through qualitative data analysis techniques with interpretation of legal norms to understand the purpose, scope, and effectiveness of the rules in preventing proliferation. However, the limitations of this method lie in the nature of the analysis based on norms and comparisons of legal texts, so access to practice is still limited to the existing literature and case studies, and the absence of specific national jurisprudence on prosecuting corporations in technology cases *dual-use comprehensively*.

The focus of the analysis is directed at sources of international law such as *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT), *Chemical Weapons Convention* (CWC), *Biological Weapons Convention* (BWC) and UNSCR 1540 (2004) which establishes the state's obligation to prevent the proliferation of weapons by non-state actors. Meanwhile, at the national level, the research examines laws related to the export of strategic goods, and corporate responsibility. This study uses a comparative legal approach by comparing Indonesia's legal practice with other countries such as the United States (US) and the European Union. By conducting a comparison, this study is expected to find an ideal model of corporate accountability that can be adapted into the Indonesian legal system. Data analysis is carried out qualitatively through a systematic interpretation of legal norms to understand their purpose, scope, and effectiveness in the context of proliferation prevention.¹⁸

Theoretical Framework

This research will use the doctrine of State Responsibility (*State Responsibility*) in international law, as mandated by UNSCR 1540 (2004) states bear the primary responsibility for preventing the spread of weapons of mass destruction. However, this doctrine has evolved to include the state's obligation to control the behavior of non-state actors (*non-state actors*) in its jurisdiction through effective domestic regulations.¹⁹ A state's failure to enforce supervisory rules or allow export violations by companies can accelerate proliferation that has implications for the country's international responsibilities.²⁰

Furthermore, this study also uses the doctrine of Strict Liability (*Strict Liability*). In the theory of corporate criminal law, this doctrine is a deviation from the principle of *non facit reum nisi mens sit rea* (an act does not make a person guilty if it is accompanied by malicious intent) According to LB Curzon,²¹ inside *Strict Liability*, the public prosecutor only needs to prove that the prohibited act (*Actus Reus*) has been done by the defendant, without the need to prove that there is a *Mens Rea* (malice, intentionality or negligence). The application of this doctrine is particularly relevant in the context of administrative violations or “*Public Welfare Offenses*” as Francis Sayre thinks²² In his article entitled *Strict Liability* allowed to be applied to activities that have a high potential danger to the wider community, such as the distribution of drugs, explosives or in the context of this research technology *dual-use*. The rationale is to force corporations to internalize risk and apply the highest standards of prudence. In this model,

¹⁸ Peter Mahmud Marzuki, *Penelitian Hukum (Edisi Revisi)* (Jakarta: Kencana, 2014).

¹⁹ James Crawford, *State Responsibility: The General Part* (Cambridge: Cambridge University Press, 2013).

²⁰ Daniel H Joyner, *Interpreting the Nuclear Non-Proliferation Treaty* (Oxford: Oxford University Press, 2011).

²¹ L.B. Curzon, *Criminal Law*, 10th ed. (London: Pitman Publishing, 2002).

²² Francis Bowes Sayre, “Public Welfare Offenses,” *Columbia Law Review* 33, no. 1 (1933): 55–88.

the law serves as a utilitarian instrument to minimize social risk, where the efficiency of law enforcement takes precedence over the moral faultfinder of the individual.²³

Discussion

International Legal Arrangements Governing Corporate Responsibility for the Transfer of *Dual-use* Technologies Potentially Used for the Proliferation of Weapons of Mass Destruction

Today's technological developments have had a significant impact on the dynamics of international security, particularly related to the proliferation of weapons of mass destruction (*Weapons of Mass Destruction/WMD*). One of the central issues that emerged was technology transfer *dual-use*, which is technology that can be used for civilian and military purposes, including its potential use in the development of WMD.²⁴ In the context of globalization and supply chain digitalization, the role of corporations as non-state actors is becoming increasingly crucial, both as innovators, producers, and technology distributors *Dual-Stuttgar*.²⁵ The definition of dual-use is reflected in various international legal instruments, one of which is contained in Council Regulation (EC) No. 428/2009 which reads: “*Dual-use items are defined as items which can be used for both civil and military purposes*”²⁶

Real-life examples of technology *dual-use* is a sodium fluoride used in the production of toothpaste, but it can also be used as a precursor to the nerve agent sarin.²⁷ The fields of digital, encryption technology, artificial intelligence (AI), and quantum computing are also included in the category *dual-use* Because it can be used for civil data protection as well as military and espionage applications.²⁸ Key characteristics of the technology *dual-use* Includes:²⁹ 1) ambiguity of purpose of use: one technology can be used for both constructive and destructive purposes, depending on the actor and context of its use, 2) accessibility and risk of proliferation: many technologies *dual-use* Especially in the digital realm, it is increasingly accessible to non-state actors, high-risk countries, and cybercriminals, 3) Regulatory and ethical challenges: regulation of technology *dual-use* must strike a balance between innovation, safety and ethics, 4) exponential impact: small advances on technology *dual-use*, particularly AI and cyber, can have major global security implications.

International legal arrangements governing corporate responsibility for technology transfer *dual-use* Indirectly, the global non-proliferation regime places obligations on the state, not on corporations directly. The international legal instruments that regulate the identification and control of technology *dual-use* Among others: 1) *Treaty on the Non-Proliferation of Nuclear Weapons* (NPT), regulating the transfer of nuclear technology and emphasizing the importance of preventing the proliferation of nuclear weapons and promoting the peaceful use of nuclear

²³ John C Coffe Jr, “No Soul to Damn: No Body to Kick, an Unscandalized Inquiry into the Problem of Corporate Punishment,” *Michigan Law Review* 79, no. 3 (1981): 386–459.

²⁴ Janos Szekely, “Legal Aspects of Dual-Use Technologies: Emerging and Disruptive Technologies,” *Studies of the Central European Professors Network*, 2024, 309–53, https://doi.org/10.54237/profnetwork.2024.zkjeszcodef_7.

²⁵ Paul L Gunn, “Dual-use Innovation Can Enhance Supply Chain Resilience,” *Inc.*, September 15, 2025, <https://www.inc.com/paul-gunn/dual-use-innovation-can-enhance-supply-chain-resilience/91239830>.

²⁶ Machiko Kanetake, *Dual-Use Export Control: Security and Human Rights Challenges to Multilateralism*, European Yearbook of International Economic Law (Netherlands: Utrecht University, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3792973.

²⁷ Kanetake, *Dual-Use Export Control: Security and Human Rights Challenges to Multilateralism*.

²⁸ Pau Alvarez Aragonés, “The New Arms Race in Dual-Use Technologies,” *Global Affairs*, September 2, 2024, <https://www.ie.edu/insights/articles/the-new-arms-race-in-dual-use-technologies/>.

²⁹ Aragonés, “The New Arms Race in Dual-Use Technologies.”

weapons,³⁰ 2) *Chemical Weapons Convention* (CWC), regulating the transfer of chemicals and precursors that can be used for the production of chemical weapons, on the principle that transfers may only be made for purposes not prohibited by the convention,³¹ 3) *Biological Weapons Convention* (BWC), prohibiting the transfer of biological agents, toxins, and related equipment for purposes other than peace, 4) *Wassenaar Arrangement*, compile export control lists of conventional dual-use goods and technologies, including hardware, software, and information technology,³² 5) *Nuclear Suppliers Group* (NSG), setting export guidelines for equipment, materials, and technology *dual-use* nuclear-related,³³ 6) Australia Group, regulate chemical and biological export control *dual-use* that can be used for the production of chemical or biological weapons,³⁴ 7) *Missile Technology Control Regime* (MTCR), regulates the transfer of technology and components that can be used for the development of a weapon of mass destruction launcher system.³⁵

Corporations, especially multinational corporations, play an important role in innovation, production and distribution of technology *dual-use* at the global level.³⁶ In the era of digitalization and supply chain globalization, technology companies, manufacturing, and logistics services are the main link between technology inventors, manufacturers and end-users *dual-use*. Companies such as Google, Microsoft, OpenAI, Palantir, Huawei, and ZTE are concrete examples of how corporate governance decisions can have a direct impact on global security and stability.³⁷ Corporations also play a role in technology transfer through: 1) technology transfer (*technology transfer*): through a license, *joint venture*, direct investment and research partnerships with entities in other countries, 2) Supply chain digitalization: use *internet of thing* (IoT), *artificial intelligence* (AI), *blockchain*, and *cloud computing* to improve efficiency and transparency, but also to unlock the potential for misuse of data and technology,³⁸ 3) Export of goods, software, and knowledge: through physical exports and electronic transfers (*deemed export*), including technical training and consulting.³⁹

Corporations certainly face legal, reputational and security risks if they fail to identify and control technology transfer *dual-use* which has the potential to be used for the proliferation of

³⁰ Giovanna Maletta, Mark Bromley, and Kolja Brockmann, "Non-Proliferation, Nuclear Technology and Peaceful Uses: Examining the Role and Impact of Export Controls," *Non-Proliferation and Disarmament Papers* 1, no. 95 (2025): 1–20.

³¹ Kanetake, *Dual-Use Export Control: Security and Human Rights Challenges to Multilateralism*.

³² Wikipedia, "Wassenaar Arrangement," *Wikipedia: The Free Encyclopedia*, 2025, https://en.wikipedia.org/wiki/Wassenaar_Arrangement.

³³ International Atomic Energy Agency, *Guidelines for Transfers of Nuclear Related Dual-use Equipment, Materials, Software and Related Technology*, INHCIRC/254/Rev.10/Part 2a (Vienna: International Atomic Energy Agency, 2018), 1–95, <https://www.iaea.org/sites/default/files/publications/documents/infcires/1978/infcirc254r10p2c.pdf>.

³⁴ Office of the Secretary of Defense, *Multilateral Export Control and Non-Proliferation Regimes*, n.d., accessed November 10, 2025, <https://www.dtsa.mil/SitePages/promoting-engagement/multilateral-non-proliferation-regimes.aspx>.

³⁵ Congressional Research Service, *Arms Control and Nonproliferation: A Catalog of Treaties and Agreements*, no. RL33865 (United States: Congressional Research Service (CRS), 2024), 1–83, https://www.congress.gov/crs_external_products/RL/PDF/RL33865/RL33865.59.pdf.

³⁶ Metodi Hadji-Janev, "Navigating the Governance, Risk, and Compliance of Dual-Use Digital Technologies: Balancing Innovation with Security," in *Spectrum of Dual-Use Technologies: Unforeseen Risks Versus Returns*, ed. Ashok Vasashta and Alvaro Rocha (Cham: Springer Nature Switzerland, 2026), 229–60, https://doi.org/10.1007/978-3-032-00202-0_9.

³⁷ Hadji-Janev, "Navigating the Governance, Risk, and Compliance of Dual-Use Digital Technologies: Balancing Innovation with Security."

³⁸ Kanetake, *Dual-Use Export Control: Security and Human Rights Challenges to Multilateralism*.

³⁹ Jingzhuo Hu, "Comparative Analysis of EU Export Control Regulations of Dual-Use Item," *Science of Law Journal* 2, no. 1 (2023): 13–21, <https://doi.org/DOI:%252010.23977/law.2023.020103>.

weapons of mass destruction. The case of export control violations by ZTE and Huawei shows serious consequences in the form of billions of dollars in fines, business restrictions and damage to global reputations.⁴⁰ As for corporate responsibilities, it is contained in the UN *Guiding Principles on Business and Human Rights* (UNGPs), where UNGPs are a global framework that governs corporate responsibility to respect human rights, including in the context of technology transfer *dual-use*. The main principles of the UNGPs include:⁴¹ 1) the state's obligation to protect Human Rights: the state is obliged to create and implement appropriate policies, regulations, and adjudications to protect against human rights violations by corporations, 2) corporate responsibility to respect human rights; corporations are obliged to do *due diligence* to prevent and avoid human rights violations due to their business activities, 3) access to remedies for victims: corporations and the state must provide effective redress mechanisms for victims of human rights violations.

Principle *due diligence* in the UNGPs requires companies to “identify, prevent, and mitigate human rights violations that occur as a result of business activities carried out by corporations”⁴² Principle *due diligence* This includes risk assessment, integration of findings into business processes, tracking the effectiveness of actions, and communication to stakeholders.⁴³

Under international law, the state remains the main subject responsible for the implementation of the treaty and compliance with non-proliferation obligations.⁴⁴ The doctrine of state responsibility (*state responsibility*) provides that states may be held liable for violations of non-proliferation agreements, either directly or through negligence in supervising private entities in their jurisdiction.⁴⁵ However, in the context of technology transfer *dual-use*, states are also required to: 1) adopt and enforce effective national laws to prevent the proliferation of weapons of mass destruction by non-state actors, including corporations, 2) develop export controls, law enforcement, and sanctions for violations by private entities, 3) conduct international and information cooperation with other countries and international institutions.

Although the Corporation is not the primary subject of international law, it still has a responsibility to respect national and international law and apply the *due diligence, compliance program*, and internal audits to prevent export control violations.⁴⁶ In some jurisdictions, corporations may be subject to administrative, civil, or criminal sanctions for violations of export controls, including fines, business restrictions, and revocation of export licenses.⁴⁷ The UNGPs assert that the Company bears strict responsibility – or no fault – for their own adverse

⁴⁰ Wilson Ang et al., “Record Penalties for US Sanctions and Export Controls Violations,” *Norton Rose Fullbright*, May 1, 2023, <https://www.nortonrosefulbright.com/en/knowledge/publications/1044514d/record-penalties-for-violations-of-us-sanctions-and-export-controls>.

⁴¹ Jonathan Bonnitcha and Robert McCorquodale, “The Concept of ‘Due Diligence’ in the UN Guiding Principles on Business and Human Rights,” *European Journal of International Law* 28, no. 3 (2017): 899–919, <https://doi.org/10.1093/ejil/chx042>.

⁴² Bonnitcha and McCorquodale, “The Concept of ‘Due Diligence’ in the UN Guiding Principles on Business and Human Rights.”

⁴³ United Nations Development Programme, *Human Rights Due Diligence: An Interpretive Guide* (Bangkok, Thailand: United Nations Development Programme, 2023), 1–30, https://www.undp.org/sites/g/files/zskgke326/files/2022-10/HRDD%20Interpretive%20Guide_ENG_Sep%202021.pdf.

⁴⁴ Lawcenta Team, “Understanding Responsibility for Breaching Non-Proliferation Treaties in International Law,” *Law Centa*, 2025, <https://lawcenta.com/responsibility-for-breaching-non-proliferation-treaties/>.

⁴⁵ Team, “Understanding Responsibility for Breaching Non-Proliferation Treaties in International Law.”

⁴⁶ Bonnitcha and McCorquodale, “The Concept of ‘Due Diligence’ in the UN Guiding Principles on Business and Human Rights.”

⁴⁷ Ang et al., “Record Penalties for US Sanctions and Export Controls Violations.”

human rights impacts. This means that companies have a responsibility to provide redress whenever they violate human rights; *due diligence*, understood as a standard of behavior, irrelevant. However, due diligence, as a standard of conduct, is relevant in defining the extent to which a company is liable for adverse human rights impacts of third parties.⁴⁸

Indonesia itself has adopted various laws and regulations related to export control and technology transfer *dual-use*, such as: 1) Law Number 17 of 2006 concerning Customs, 2) Law Number 16 of 2012 concerning the Defense Industry, 3) Law Number 7 of 2014 concerning Trade, 4) Law Number 9 of 2008 concerning the Use of Chemicals and the Prohibition of Use as Chemical Weapons, 5) Law Number 15 of 2003 concerning Terrorism, 6) Government Regulation Number 29 of 2008 concerning Permits for the Use of Ionizing Radiation and Nuclear Materials, 7) Government Regulation Number 54 of 2012 concerning Security of Nuclear Installations, 8) Government Regulation No. 2 of 2014 concerning Licensing of Nuclear Installations, 9) Presidential Decree No. 125 of 1999 concerning Explosives, and 10) Presidential Decree No. 58 of 1991 concerning the Ratification of the Biological Weapons Convention.

However, the regulation is still sectoral and has not specifically regulated the control of export goods *dual-use* comprehensively. Implementation *Strategic Trade Management* (STM) is still in the development stage with the main challenges in the form of limited resources, inter-agency coordination, and supervision in a large archipelago.⁴⁹ Indonesia is also not yet a member of strategic export control regimes such as the Wassenaar Arrangement, NSG, MTCR, and Australia Group, citing concerns over trade barriers and access to technology for peaceful purposes.⁵⁰ UNSCR 1540 (2004) has specifically closed the loophole for non-states by requiring all member states to take effective steps to establish domestic laws that prevent the proliferation of weapons of mass destruction by non-state actors, including the obligation to control technology transfer *dual-use* through export and import regulations, licensing processes, and strict law enforcement.

Although the international treaty itself does not directly name the company, countries parties are required to design and enforce national regulations that bind corporations regarding technology transfer *dual-use*. In practice, the responsibility of corporations for technology transfer lies in the implementation and enforcement of state obligations to the corporation. Countries must ensure that each business entity is subject to export licensing, recordkeeping, and sanctions for violations, in order to comply with international non-proliferation norms.⁵¹

The Ideal Form of Corporate Legal Accountability to Be Applied in Indonesia to Prevent the Misuse of Dual-Use Technology Transfer in Support of the Proliferation of Weapons of Mass Destruction

An analysis of the ideal form of corporate legal accountability in Indonesia must begin with the identification of gaps (*gap analysis*) in the current legal framework. The threat of the proliferation of weapons of mass destruction facilitated by non-state actors, especially

⁴⁸ Bonnitcha and McCorquodale, "The Concept of 'Due Diligence' in the UN Guiding Principles on Business and Human Rights."

⁴⁹ Andy Rachmianto, "Indonesia's Approach to Strategic Trade Controls: The Perspective of a Developing and Archipelagic Country," *Strategic Trade Review* 2, no. 2 (2016): 130–39.

⁵⁰ Rachmianto, "Indonesia's Approach to Strategic Trade Controls: The Perspective of a Developing and Archipelagic Country."

⁵¹ Scott Jones, "Resolution 1540: Universalizing Export Control Standards?," *Arms Control Association*, 2006, <https://www.armscontrol.org/act/2006-05/features/resolution-1540-universalizing-export-control-standards#:~:text=To%20ensure%20compliance%20with%20the,businessmen%20who%20had%20been%20cooperating.>

transnational corporations, is an urgent global security risk. The international legal regime, especially UNSCR 1540 (2004), explicitly requires all member states to adopt and enforce effective domestic laws to prevent non-state actors (including corporations) from participating in the proliferation of WMD. These obligations include controlling the transfer of technology, goods, and services *dual-use* (dual function).

Although Indonesia has ratified various non-proliferation conventions and has a set of related regulations, the current framework is inadequate to address the specific threat of technological misuse *dual-use* by corporations.⁵² However, in Indonesia, regulations are still sectoral in nature where regulations are spread across various laws such as Law Number 17 of 2006 concerning Customs, Law Number 7 of 2014 concerning Trade, and Law Number 16 of 2012 concerning the Defense Industry and regulations related to chemicals and nuclear, and none of these regulations are comprehensively designed to manage the security risks of goods *dual-use* comprehensively and in-depth and secondly, the study shows that Indonesia's existing export-import regulations, known as the Prohibition and Restriction system, are essentially designed for economic purposes. The main focus is to increase product competitiveness and market expansion as well as improve the capabilities of exporters or importers.⁵³

Indonesia has not yet adopted the system *Strategic Trade Management* (STM) comprehensive. Indonesia does not have a list of goods control *dual-use* consolidated and published national Annex or *Commercial Control List* The United States (US) and is not yet a member of the multilateral export control regime.⁵⁴ Indonesia's existing efforts tend to focus on the downstream aspect, namely related to funding. The Financial Transaction Reporting and Analysis Center (PPATK) and the Financial Services Authority (OJK) have actively developed a framework for the Prevention of Funding the Proliferation of Weapons of Mass Destruction (PPSPM). However, the focus on funding does not address the core issue of control over commodities, software, and technology itself.⁵⁵

Although there is still a legal vacuum regarding the list of goods control *Dual-Stuttgart*, at least Indonesia has a strong legal basis regarding corporate criminal liability in general. For years, criminal prosecutions of corporations have been hampered by procedural law vacuums. Therefore, the Supreme Court then issued Supreme Court Regulation Number 13 of 2016 concerning Procedures for Handling Criminal Cases by Corporations. This Supreme Court Regulation provides crucial guidance for law enforcement officials on how to identify corporations as subject to the law, who can represent them and how to assess and prove wrongdoing (*Mens Rea*) corporations.⁵⁶

In addition, with the existence of the new Criminal Code (Criminal Code) through Law Number 1 of 2023, it has expressly positioned corporations as the subject of criminal acts, where Article 46 of the new Criminal Code describes in detail when a criminal act is considered

⁵² Rachmianto, "Indonesia's Approach to Strategic Trade Controls: The Perspective of a Developing and Archipelagic Country."

⁵³ Hadi Rahmat Purnama, Rizky Banyualam Permana, and Arie Afriansyah, "Strengthening Indonesia's Strategic Trade Management Regulation Against Proliferations of Weapons of Mass Destruction," *Brawijaya Law Journal: Journal of Legal Studies* 11, no. 1 (2024): 1–26, <https://doi.org/10.21776/ub.blj.2024.011.01.01>.

⁵⁴ Rachmianto, "Indonesia's Approach to Strategic Trade Controls: The Perspective of a Developing and Archipelagic Country."

⁵⁵ Otoritas Jasa Keuangan, *Panduan Penerapan Program Pencegahan Pendanaan Proliferasi Senjata Pemusnah Massal Berbasis Risiko* (Jakarta: Otoritas Jasa Keuangan, 2023).

⁵⁶ Wahyu Prestianto, "Peraturan Mahkamah Agung Republik Indonesia Nomor 13 Tahun 2016 Tentang Tata Cara Penanganan Perkara Tindak Pidana Oleh Korporasi; Solusi Sementara Upaya Meminta Pertanggungjawaban Pidana Korporasi," *Dharmasiswa Jurnal Program Magister Hukum FHUI* 1, no. 3 (2021): 15591572.

to be committed by a corporation. Articles 49 and 50 stipulate who can be held accountable, which includes the corporation itself, managers who hold functional positions, the givers of orders (*order giver*), the operator (*controller*), and/or beneficial owners (*beneficial owner*).⁵⁷ The most relevant thing is the mechanism for proving errors (*Mens Rea*) corporations. Article 46 of the new Criminal Code which is in line with Supreme Court Regulation Number 13 of 2016 stipulates that corporate wrongdoing can be proven if the criminal act: 1) is carried out to benefit the corporation, 2) is accepted as a corporate policy, 3) the corporation deliberately allows the criminal act to occur, 4) the corporation fails to take the necessary steps aimed at preventing, preventing greater impacts, or ensure compliance with regulations.

Number 3 (allowing) and Number 4 (failing to prevent) in Article 46 of the new Criminal Code are a form of *Mens Rea*, where if law enforcement wants to sue the corporation, then the law enforcement must prove in court that the corporation “negligent in preventing” or “deliberately allowing”. That is, the burden of proof (*burden of proof*) is still in the hands of law enforcement to point out any management or system errors. It is not automatically wrong. In Indonesia, prosecutors have to argue in court to question, does the company already have an SOP? Is the SOP running? Do the directors know? Of course, this will take time and the proof is complex. As for the United States (US), for administrative sanctions such as fines, the US Government does not need to prove whether the company has an SOP, whether the directors know, or whether they are bribery, but it is enough for the fact that the company is shipping prohibited goods, it is enough to make the company fined.

Although Indonesia already has Supreme Court Regulation Number 13 of 2016 and Article 46 of the new Criminal Code, this legal framework is still trapped in the paradigm of Identification Theory (*Identification Theory*). This regulation requires law enforcement to prove the existence of malicious intent (*Mens Rea*) to the management or controller of the corporation before it can punish its entity. In the context of technology transfer *dual-use* complex, this approach can certainly be a fatal loophole. Corporate structure allows directors to take refuge behind ignorance (*willful blindness*), making it difficult for law enforcement to prove intent. As a result, criminalization has been slow and ineffective in responding to immediate proliferation risks (*imminent*). In the context of the proliferation of weapons of mass destruction where the threat is imminent, the evidentiary requirements *Mens Rea* as Article 46 of the new Criminal Code can be a weakness. The court proving process will certainly take a long time, while dual-use technology may have already changed hands to dangerous actors. Therefore, Indonesia needs a mechanism that adopts *Strict Liability* Especially for dangerous goods export violations, so that sanctions such as freezing/revocation of permits can be carried out immediately without waiting for proof of complicated errors.

Comparative Study of Export Control Accountability Model in the United States (US) and the European Union

The model in the United States (US), managed by the Bureau of Industry and Security (BIS), the Office of Foreign Assets Control (OFAC), and the Department of Justice (DOJ), is characterized by aggressive law enforcement and focuses more on enforcement and punishment as the primary tool for creating corporate compliance. Where the key points are: 1) very severe sanctions, where violations, even unintentional ones can be subject to enormous civil sanctions, reaching hundreds of thousands of dollars per violation. If the offense is intentional (criminal),

⁵⁷ Chalid Heyder and Teguh Darmawan, “Corporate Criminal Liability in Indonesia under the New Criminal Code - Is There Any Difference?,” *Hogan Lovells*, February 6, 2023, <https://www.hoganlovells.com/en/publications/corporate-criminal-liability-in-indonesia-under-the-new-criminal-code-is-there-any-difference>.

the fine can reach \$1 million per offense and up to 20 years in prison for the executives involved.⁵⁸ 2) Absolute Liability (*Strict Liability*), regarding civil sanctions, the United States (US) government does not need to prove that the corporation intends to violate the law, simply by the fact that the company is shipping the prohibited goods, even if the company does not know that the goods are prohibited, that is enough to put the company in a fine, and place a very high burden of proof on the corporation.

The most powerful administrative tools in the US model are *Temporary Denial Order* (TDO). A TDO is a civil sanction that BIS can quickly issue to immediately suspend or shut down a company's export rights (including non-US companies). A TDO is issued based on evidence that an imminent violation (*Imminent breach*) is ongoing. These tools are effectively used to dismantle illegal procurement networks that support Russian and Chinese military programs.⁵⁹

The effectiveness of the United States (US) model lies not only in the amount of fines, but also in the philosophical foundation of the Doctrine of Absolute Liability (*Strict Liability*) in its administrative law. In contrast to Indonesia, which looks for subjective errors, *Bureau of Industry and Security* (BIS) applies objective standards: *Actus Reus* In the form of sending prohibited goods, it is enough to impose civil sanctions without the need to prove malicious intent. This shift in the burden of proof allows for the issuance of *Temporary Denial Order* (TDO) instantly, cut the slow judicial bureaucracy to immediately shut down offenders' export access. This demonstrates that in the public safety delict (*public welfare offenses*), the efficiency of law enforcement must take precedence over the search for moral error.

The model in the European Union focuses more on prevention systems (*ex-ante*). Through Council Regulation (EU) 2021/821, the EU created a single regulation that binds 27 member states. These regulations include not only controls over exports, but also intermediaries (*brokering*), technical assistance (*technical assistance*), and freight transit *dual-use*. The new regulations also introduce controls *catch-all* for items *cyber surveillance* that are not registered if suspected of being used for serious human rights violations.⁶⁰ As for the points related to the model in the European Union are: 1) focus on internal systems, the biggest innovation of the new EU regulation (Regulation 2021/821) is its emphasis on *Internal Compliance Programme* (ICP). ICP is a set of internal policies and procedures made by companies to ensure that companies do not violate export control rules. 2) ICP as a ticket for trade facilities, the EU not only recommends ICP, but also requires for companies that want to export, i.e. Global Export Authorization (*Global Export Authorization*). 3) Business incentives such as, if there is no ICP, the company must apply for a permit every time they want to export goods *dual-use*, even to the same customers, of course this is slow, expensive and hinders the company's business. However, if the company already has an ICP, the EU will provide a global export license so that with this license, the company does not need to ask for permission every time it exports

⁵⁸ Nicholas Klein, Ignacio Sanchez, and Melanie Garcia, "US Government Reminds Non-US Companies of Requirement to Comply with US Sanctions and Export Controls," *FOR Piper*, March 14, 2024, <https://www.dlapiper.com/en/insights/publications/2024/03/us-government-reminds-non-us-companies-to-comply-with-sanctions-and-export-controls>.

⁵⁹ Bureau of Industry & Security, "BIS Issues Temporary Denial Order Against Fifth Russian Airline and Names Second Abramovich Aircraft Violating U.S. Export Controls," *Bureau of Industry and Security*, May 20, 2022, <https://www.bis.gov/press-release/bis-issues-temporary-denial-order-against-fifth-russian-airline-names-second-abramovich-aircraft>.

⁶⁰ Sean M Reilly, "The New EU Dual-Use Regulation Enters into Force: Overview of the Main Changes," *Hughes Hubbard & Reed*, September 9, 2021, <https://www.hugheshubbard.com/news/the-new-eu-dual-use-regulation-enters-into-force-overview-of-the-main-changes>.

goods *dual-use*.⁶¹ The most important innovation of this EU regulation is its emphasis on the role of corporations. The rule expressly requires (*mandatory*) companies to own and implement *Internal Compliance Programme* (ICP) effective as a condition for obtaining global export authorization.

The EU's approach through Regulation 2021/821 reflects the implementation of Organizational Fault Theory (*Organizational Fault Theory*). EU law no longer sees wrongdoing as an individual act, but rather as a systemic failure of corporations to build a culture of compliance. By requiring *Internal Compliance Programme* (ICP) mandatory, the EU shifts control responsibilities from the state to corporations (*privatization of control*). The absence of ICP is not just an administrative violation, but authentic evidence of defects in the company's organization, which legitimizes the rejection of export facilities. This model fills a void in Indonesian law that does not yet have standard parameters regarding 'preventive measures' mentioned in Article 46 of the New Criminal Code.

As a middle way, Indonesia needs to implement a strategy Unilateral Compliance (*Unilateral Adherence*). In the formation of the Law *Strategic Trade Management* (STM) proposed, Indonesia does not have to immediately ratify complex full membership, but is obliged to adopt it directly Control List (*Control List*) that are aligned with EU standards or the List *Wassenaar*. This harmonization step works As *Confidence Building Measure* (CBM) for the international community. By harmonizing the classification of goods *dual-use* and software according to global standards, Indonesia can eliminate the status of 'country at risk' on the global technology trade map, while closing the legal loophole that may be exploited by proliferation networks.

So, the ideal model for Indonesia is to combine models from the US and the EU. Indonesia's criminal justice system is often slow, even though the risk of proliferation is time-sensitive. Waiting for a criminal verdict with permanent legal force to stop the offending corporation is not an effective strategy.⁶² Therefore, Indonesia can adopt ICP obligations such as those within the EU as preventive compliance standards and rapid administrative sanctions mechanisms such as the US TDO as the main enforcement mechanism to stop direct threats.

⁶¹ Ilaria Curti and Maria Christina Michelini, "European Union Adopts New Regulation No. 2021/821 on Dual-use," *Portolano Cavallo*, July 15, 2021, <https://portolano.it/en/newsletter/portolano-cavallo-inform-compliance/european-union-adopts-new-regulation-no-2021821-on-dual-use>.

⁶² Dewi Nawang Bulan and Nandang Sambas, "Kebijakan Pemidanaan Korporasi Dalam RUU KUHP: Analisis Normatif Dan Kesiapan Praktis Aparat Penegak Hukum," *Collegium Studiosum Journal* 8, no. 1 (2025): 25–30.

Table 1. Comparison of the Accountability System

Comparative Aspects	United States (US) Model (Enforcement)	EU Model (Preventive)	Indonesia's Current Framework	Ideal Model Proposal
Basic Philosophy	<i>Strict Liability</i>	<i>Organizational Fault</i>	<i>Fault-Based Liability with mens rea proof</i>	Dual Track Integration: <i>Strict Liability</i> for Administrative and <i>Fault Based</i> for Criminal
Key Focus	Aggressive enforcement and large fines	Internal compliance as a condition of trading facilities	Economic facilitation and state revenue (customs)	Balance: mandatory prevention and rapid action
Control Mechanism	Transaction-based licensing and <i>denial list</i>	Must have an <i>Internal Compliance Programme</i> (ICP) for global licenses	General export-import supervision	Mandatory ICP (EU adoption) as an absolute requirement for strategic export licenses
Burden of Proof	<i>Actus Reus</i> is sufficient, there is no need to prove intent for civil sanctions	System audit. The absence of an ICP is considered a failure of compliance	The public prosecutor must prove the malicious intent/negligence of the management	Administrative Sanctions: <i>Actus Reus</i> Criminal Sanctions: <i>Mens Rea</i>
Dominant Sanctions	<i>Temporary Denial Order</i> (TDO) for temporary permit freeze	Revocation of Export Licenses and administrative sanctions of member states	Criminal fines and imprisonment (through lengthy court proceedings)	Adoption of TDO for rapid response to proliferation threats

First Form: Corporate Preventive Liability

The first form is to change obedience, from a voluntary one to a strict legal obligation. The model is to require every corporation in Indonesia involved in the export, import, intermediary, or transfer of technology to be identified as a *dual-use* to develop, implement *Internal Compliance Programme* (ICP).⁶³ This ICP serves as a preventive measure. Failure to have an ICP or have an ICP on paper (*paper compliance*) but fails to implement it, can be direct evidence for prosecutors to prove elements of corporate negligence. Based on international best practices, an effective ICP should include at least 8 (eight) core elements, namely:⁶⁴ 1)

⁶³ Purnama, Permana, and Afriansyah, "Strengthening Indonesia's Strategic Trade Management Regulation Against Proliferations of Weapons of Mass Destruction."

⁶⁴ The National Association of Software and Services Companies, *Elements of an Effective Internal Compliance Programme for Export/Transfer of Dual-Use Items*, 1.0 (India: The National Association of

Management leadership's commitment, clear policy statement from leadership that supports compliance, 2) Organizational Structure and Resources, appointment of compliance officers (*compliance officer*) authorized and adequate provision of resources, 3) Training Programs, regular training for all employees relevant to risk *dual-use*, 4) Classification of Goods and Transaction Screening, a formal procedure for classifying products (whether including *dual-use*) and screens all transactions against the sanctions list and *red flags*, 5) Performance Audits and Reviews, periodic internal or external audits to assess the effectiveness of ICPs, 6) Record Keeping (*recordkeeping*), storage of all export-related documents (including communications *due diligence*) over a certain period, 7) Reporting and Corrective Actions, internal reporting mechanism (*whistleblowing*) and procedures to deal with alleged breaches, 8) Physical and Technical Security, access control to protect sensitive goods and technology, including cybersecurity to prevent the transfer of intangible technology (*intangible technology transfer*) illegally.

Second Form: Supply Chain Due Diligence Integration

The second form is to expand corporate responsibilities, from internal (ICP) to external (transaction partners). Corporations are not only responsible for what they export, but also to whom they export. This requires due diligence (*due diligence*) proactive supply chain. Banks, financial institutions, and large exporters in Indonesia have been required by the Financial Services Authority (OJK) and the Financial Transaction Analysis Reporting Center (PPATK) to implement *Know Your Customer* (KYC) and *Customer Due Diligence* (CDD). This form will expand the existing KYC/CDD obligations to:⁶⁵ 1) *Know Your End-User* (KYE), requires every exporter to identify the actual end user of the goods or technology, not just intermediaries or distributors, 2) *Know Your Customer's Customer* (KYCC), in certain cases, exporters conduct due diligence on customers from their customers, to prevent diversion (*diversion*)

The operational trigger for due diligence is to identify *Red Flag Indicators*. Ignore *Red Flag Indicators* or intentionally closing your eyes (*self blinding*) can be strong evidence of negligence or even malicious intent (*Mens Rea*). Based on guidance from the BIS and the EU, *red flags* that Indonesian corporations must be aware of include:⁶⁶ 1) new customers are reluctant to provide information about the end use (*End Use*), 2) the customer's business background is unclear or newly established, 3) the ordered product does not correspond to the customer's business line (for example, a university orders missile components or a toothpaste factory orders uranium enrichment centrifuges), 4) the customer refuses standard installation, training or maintenance services, 5) the delivery route is illogical, involving some countries a transshipment hub that is known to be risky, 6) the use of unclear intermediaries, Shell Company (*shell companies*) or shipping agent (*freight forwarder*) as the final goal. 7) The customer requests the removal of the "prohibited re-export" clause (*no re-export*) of the contract.

Third Form: Layered Sanctions (Administrative, Civil and Criminal)

The third form is law enforcement. To be effective, sanctions must be fast, proportionate and have a deterrent effect. The third ideal form must combine the speed of administrative sanctions as in the US with the weight of criminal sanctions as in the Criminal Code Law

Software and Services Companies, 2022), 1–25, <https://www.mea.gov.in/Images/CPV/NASSCOM-GoI-Elements-of-an-Effective-Internal-Compliance-Programme.pdf>.

⁶⁵ InCorp Editorial Team, "Customer Due Diligence in Indonesia: Everything You Need to Know," *In Corp*, July 3, 2025, <https://www.cekindo.com/blog/customer-due-diligence-indonesia>.

⁶⁶ Bureau of Industry & Security, "Supplement No.3 to Part 732 - BIS's 'Know Your Customer' Guidance and Red Flags," *Bureau of Industry and Security*, 2025, <https://www.bis.gov/node/1533>.

Number 1 of 2023. The competent authorities should be empowered to impose prompt administrative sanctions, even before criminal proceedings begin. The sanctions can be in the form of:⁶⁷ 1) Blacklist or Suspension of Export Permits, authorities should be able to immediately freeze the export or import rights of corporations (and related individuals) that are strongly suspected of being involved in serious violations or pose a threat to proliferation that *imminent* (imminent), 2) Revocation of Permits (permanent or temporary), for compliance violations (e.g. failure to implement ICP), 3) Administrative Fines, for minor procedural violations

Then criminal sanctions, these sanctions are provided for intentional violations (*Wilful*), repeated, or very serious that results in a tangible contribution to the proliferation of weapons of mass destruction by imposing criminal sanctions of fines and additional criminal penalties such as permanent revocation of business licenses, confiscation of assets, and placement of corporations under supervision.⁶⁸

The above form of accountability certainly cannot stand alone. To be effective, this form must be supported by adequate legislation. The solution is the formation of a comprehensive law on *Strategic Trade Management* (STM).⁶⁹ The STM Law must explicitly explain about:⁷⁰ 1) establish STM as a national security priority, 2) issue a list of Goods control *National Strategic Goods List* which adopts international regime standards, 3) requires the implementation of pillar 1 (ICP) for corporations, 4) requires the implementation of pillar 2 (KYE due diligence). Therefore, the ideal form of corporate accountability for Indonesia is not just a single law or one type of sanction, but rather a synergistic regulatory ecosystem where the state sets standards such as the STM Law, then corporations internalize ICP & YEE standards, and administrative and criminal sanctions are strictly enforced against corporatists who fail to meet those standards.

Conclusion

International legal arrangements, especially UNSCR 1540 (2004), do not directly burden corporations but require states to create effective domestic laws to prevent non-state actors, including corporations, from engaging in the proliferation of WMD. Compliance with this international mandate is constrained in Indonesia due to a legal framework that is still fragmented, sectoral, and oriented towards economic facilitation. This situation creates a regulatory gap (*regulatory gap*) because Indonesia does not yet have a system *Strategic Trade Management* (STM) comprehensive and goods control list *dual-use* consolidated national standards.

Therefore, the ideal form of accountability for Indonesia is the creation of a hybrid regulatory ecosystem under the umbrella of a new STM Law. This model should require corporations to implement *Internal Compliance Programme* (ICP) EU-style prevention and due diligence *Know Your End-User* (KYE). The failure of the corporation in carrying out this

⁶⁷ Bureau of Industry & Security, "BIS Issues Temporary Denial Order Against Fifth Russian Airline and Names Second Abramovich Aircraft Violating U.S. Export Controls," *Bureau of Industry and Security*, May 20, 2022, <https://www.bis.gov/press-release/bis-issues-temporary-denial-order-against-fifth-russian-airline-names-second-abramovich-aircraft>.

⁶⁸ Kharisma Wulan Fadila, "Criminal Law Reform and Corporate Accountability in the 2023 Criminal Code Law," *Action Research Literate* 8, no. 3 (2024): 649–57.

⁶⁹ Purnama, Permana, and Afriansyah, "Strengthening Indonesia's Strategic Trade Management Regulation Against Proliferations of Weapons of Mass Destruction."

⁷⁰ Luis M Catibayan, *Strategic Trade Management Act*, no. 10697 (Tokyo: Department of Trade and Industry, n.d.), 1–30, https://supportoffice.jp/outreach/2016/asian_ec/pdf/day1/Day1_1700_Mr.%20Luis%20M.%20Catibayan.pdf.

internal prevention can be used as a basis for proof *mens rea* (negligence) based on Article 46 of the New Criminal Code (Law 1/2023). This ecosystem is enhanced with hybrid sanctions that combine expedited administrative sanctions (ala US TDO) for urgent threats and severe criminal sanctions (fines as well as additional penalties) for serious violations.

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