International Organizations in Vienna: Vital Attention to the Global Challenges Facing Humanity in the Coming Decades

Vigencia de los organismos internacionales en Viena: atención vital a retos globales de la humanidad en décadas por venir

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Abstract
In this article, the author outlines some of the actions of the Vienna-based United Nations international organizations focused on addressing current problems and situations with a view to harnessing both global and Mexican responses in specific areas, including the peaceful use of nuclear energy, nuclear safety, clean energy, sustainable development, relocation and decarbonization of industry, cybercrime and illicit trafficking in firearms.

Resumen
En este artículo, el autor enumera algunas de las acciones de los organismos internacionales de las Naciones Unidas con sede en Viena enfocadas a la atención de problemas y situaciones actuales para encauzar las respuestas del mundo y de México en aspectos específicos, entre otros, el uso pacífico de la energía nuclear, la seguridad nuclear, las energías limpias, el desarrollo sustentable, la relocalización y la descarbonización de la industria, el cibercrimen y el tráfico ilícito de armas de fuego.

Keywords
Specialized international organizations, nuclear energy, sustainable development, relocation of industries, cybercrime, illicit arms trafficking

Palabras clave
Organismos internacionales especializados, energía nuclear, desarrollo sustentable, relocalización de industrias, cibercrimen, tráfico ilícito de armas

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Luis Javier Campuzano Piña

The major changes in international geopolitics, the staggering and challenging resurgence of the use of war to seek to impose nationalistic visions and the enormous challenges facing humanity, such as pandemics and climate change, are taking place in an international context in which international organizations, whose *raison d'être* is to serve as auxiliary instruments in the solution of universal problems while ensuring international peace and security, have been called into question. The recourse to unilateral decisions and actions by states in recent years has apparently weakened these institutions. However, reality ultimately prevails, as there is no possibility of facing our challenges collectively without the active collaboration of all actors, and it is within the spheres of competence of international institutions that we can find the paths capable of providing us with alternatives and answers, as well as the frameworks for cooperation needed for their implementation.

This article outlines some of the key actions being implemented by the Vienna-based international organizations of the United Nations both in addressing current problems and situations, as well as in channeling the responses of the world and Mexico in very specific areas that will be at the center of our attention in the coming decades.

* English translation by Alexander Smith.

The International Atomic Energy Agency

The Statute of the International Atomic Energy Agency (IAEA) entered into force on July 29, 1957. In its objectives, it provided that "the Agency shall seek to accelerate and enlarge the contribution of atomic energy to peace, health and prosperity throughout the world" (Article 2) and established that the assistance to be provided should not be utilized to contribute to military purposes, hence the creation of a system of verification through safeguards. Furthermore, with the development of the various nuclear technologies and applications, another of the primary functions that the IAEA has acquired are those related to nuclear safety and security, which have been accompanied by their corresponding legal framework. All these functions are of great importance, as can be seen in the following examples.

Peaceful applications of nuclear energy are wide-ranging and fundamental towards the achievement of the Sustainable Development Goals

The COVID-19 pandemic highlighted the vulnerability of both national and global health systems, as well as the impossibility of individual solutions. No one is spared from such diseases and only through global efforts can they be controlled and prevented. Considering that the majority of human diseases are zoonotic in origin, the IAEA launched the Zoonotic Disease Integrated Action (ZODIAC) to prepare countries for the early detection and containment of new pathogens capable of infecting humans.[1] All countries must work together and strengthen their laboratories and personnel to reduce the risks of new pandemics affecting humanity as a whole.

[1] IAEA, "Strengthening the Agency's Activities related to Nuclear Science, Technology and Applications: Report by the Director General," GOV/2022/30-GC(66)/9, August 8, 2022, Annex 7, pp. 1-9, at *https://www.iaea.org/sites/default/files/gc/gc66-9.pdf* (date consulted: December 19, 2022).

Cancer care

Nuclear medicine and radiopharmaceutical production are vital for the treatment and therapies of cancer and other chronic diseases. It is estimated that half of all cancer patients will require radiotherapy at some stage. This requires an uninterrupted and secure supply of radioisotopes and radiopharmaceuticals.[2] The IAEA launched the Rays of Hope initiative in 2022 to help States to increase access to affordable, equitable, effective and sustainable radiomedicine services.[3] There is a wealth of potential in this field through the possible installation of linear accelerators in public medical centers to avoid cuts in supply chains and ensure availability. Mexico could expand its medical oncology services with strategic planning that would allow, in the coming decades, the construction of bunkers to house incredibly sophisticated equipment to serve communities that are still marginalized from such services.

Sustainable energy contribution

The geostrategic complications of fossil fuels across Europe and globally, as well as the urgent need to reduce greenhouse gas emissions to try to curb climate change, have substantially revalued the importance of nuclear energy as a sustainable alternative to be included in global energy matrices, in addition to meeting the commitments of the Paris Agreement and the Sustainable Development Goals (SDGS) of the 2030 Agenda. New small modular nuclear reactors also represent an excellent alternative as they are cheaper and faster to build. Mixed energy production and water desalination, and even hydrogen production, are also being considered.[4] This approach addresses central development issues in several countries, and, for this reason, there will be a substantial growth in this type of reactor

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[2] IAEA, "Nuclear Technology Review 2022: Report by the Director General," GC(66)/INF/4, September 2022, p. 8, at *https://www.iaea.org/sites/default/files/gc/gc66-inf4.pdf* (date consulted: December 19, 2022).

[3] IAEA, "Strengthening the Agency's Activities...," Annex 1, p. 6.

[4] *Ibid*., Annex 8, pp. 1-2 and Annex 16, pp. 1-6.

in the decades to come. Mexico could draw on this type of technology to ensure the supply of electricity and drinking water to peninsular cities and coastal areas. The challenge of the multiplicity and incompatibility of systems in the respective reactors remains, and the IAEA's efforts to facilitate the greatest possible harmonization of standards, norms and regulations for these reactors should be encouraged.

Nuclear safety and security

Major nuclear accidents and catastrophes such as Chernobyl and Fukushima have demonstrated the paramount importance of full compliance with all nuclear safety conventions, standards and regulations, as well as the need to continuously update these parameters in order to react to all challenges arising from, among other sources, the expansion of peaceful applications of nuclear energy, the expansion of power reactors and their lifetime. The IAEA's various technical nuclear safety missions, as well as the various nuclear peer review mechanisms, are invaluable tools in the search to ensure the highest common denominator of safety. Mexico and each of the countries with nuclear facilities should invest the necessary resources to guarantee the highest safety standards in all their facilities, permanently train their personnel and ensure the autonomy of the competent regulatory authority.[5]

On the other hand, the challenges posed by organized crime, terrorism and armed conflict to nuclear materials and facilities are and will be immense in terms of the potentially catastrophic consequences of the misuse of such materials or facilities. All legal, technical and physical parameters must be further developed to provide the most comprehensive physical security and protection for such materials and facilities.

In this context, the call made by IAEA Director General Rafael Mariano Grossi at both the U.N. Security Council and the IAEA for the immediate establishment of a safety and security protection zone (SSZ) around

[5] IAEA, "Nuclear and Radiation Safety: Report by the Director General," GOV/2022/35-GC(66)/10, July 29, 2022, at *https://www.iaea.org/sites/default/files/gc/gc66-10.pdf* (date consulted: January 20, 2023).

the Zaporizhzhia Nuclear Power Plant in Ukraine is crucial. The plant is the largest in Europe, has six nuclear reactors online and is at great risk.[6] Since the beginning of the Russian invasion, all seven pillars of nuclear safety have been affected in Ukraine. This has been aggravated by the fighting in close proximity to the plant. Given this scenario, we as an international community have a chance to avert a catastrophe with global consequences, not only because of the devastating potential of a nuclear explosion in the surrounding area and in Central Europe, but also because of the impact on the environment and on grain production in the region, feeding billions of people around the world.

Safeguards and Nuclear Non-Proliferation

Through the application of comprehensive safeguards agreements, the IAEA verifies that nuclear materials, facilities, equipment, activities and information of member countries of the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (Treaty of Tlatelolco) and the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) are dedicated solely to peaceful purposes. Nevertheless, the system of safeguards has had to be adapted over time in order to fully meet its objectives. The discovery in the 1990s of a clandestine nuclear program in NPT member Iraq triggered a process to strengthen safeguards and a more comprehensive and intrusive system was developed, culminating in the Additional Protocol on Safeguards. Nevertheless, geopolitical issues, armed conflicts, non-state actors and terrorist groups, challenges to cybersecurity, artificial intelligence and other technological developments make ongoing updating

[6] Rafael Mariano Grossi, "Statement to the Sixty Sixth Regular Session of the IAEA General Conference," September 26, 2022, at *https://www.iaea.org/newscenter/statements/statement-to-the-sixty-sixth-regular-session-of-the-iaea-general-conference* (date consulted: January 22, 2023); "Director's General Introductory Statement to the Board of Governors," September 12, 2022, at *https://www.iaea.org/newscenter/statements/iaea-director-generals-introductory-statement-to-the-board-of-governors-12-september-2022* (date consulted: January 22, 2023); Estelle Marais and Michael Amdi Madsen, "UN Security Council: IAEA Grossi Calls for Establishment of Nuclear Safety and Security Protection Zone at Zaporizhzhya NPP," in IAEA, Septmeber 7, 2022, at *https://www.iaea.org/newscenter/news/un-security-council-iaea-grossi-calls-for-establishment-of-nuclear-safety-and-security-protection-zone-at-zaporizhzhya-npp* (date consulted: January 22, 2023).

of the IAEA safeguards system essential to ensure the fulfillment its role as a guarantor of the nonproliferation of nuclear weapons, and thus a pillar of international peace and security.

Mexico should continue to be a leader in modernizing and updating safeguards, seeking a balance between the IAEA's promotional functions (peaceful applications of nuclear energy) and regulatory functions (safeguards and security). But at the same time, it must continue its efforts for full compliance with the NPT as far as nuclear disarmament is concerned. In this context, the central role Mexico has played in the elaboration, approval, signature, entry into force and active work for the implementation of the Treaty on the Prohibition of Nuclear Weapons should be understood.

UNIDO: Industry, an engine for economic development

In 1966, the U.N. General Assembly adopted by consensus resolution 2152 (XXI) establishing the United Nations Industrial Development Organization (UNIDO):

> *Recognizing* that the industrialization of developing countries is essential for their economic and social development and for the expansion and diversification of their trade [...]
> 1. The purpose of the Organization shall be to promote industrial development [...] and by encouraging the mobilization of national and international resources to assist in, promote and accelerate the industrialiaation of developing countries, with particular emphasis on the manufacturing sector.[7]

Subsequently, on September 16, 1975, the U.N. General Assembly detailed how UNIDO would contribute to the implementation of industrial policies

[7] UN General Assembly, "Resolution 2152 (XXI). United Nations Industrial Development Organization," A/RES/2152/XXI, November 17, 1966, at *https://documents-dds-ny.un.org/doc/RESOLUTION/GEN/NR0/004/55/PDF/NR000455.pdf?OpenElement* (date consulted: December 23, 2022).

in developing countries through resolution 3362 (S-VII) "Development and International Economic Cooperation".

Nevertheless, the vision of economic liberalism that opposed the idea of industrial policy—both national and international—gained traction in the 1980s and 1990s. International financial institutions and even developing country governments shifted away from the idea of industrial policies in favor of deregulated economies and free trade.[8] UNIDO lost relevance, political support and significant members such as Australia, Canada, France, the United Kingdom, and the United States

In reaction to this, in the first two decades of the 21st century, UNIDO has attempted to reposition its vocation of industrial development in the prevailing vision of sustainable development.

In a study, Mariana Mazzucato noted that "this requires reintroducing industrial strategy into the vocabulary of policymaking. But rather than focusing on specific sectors, industrial strategy should start whit challenges, to catalyze investment and innovation across *multiple sectors*—including in manufacturing, natural resources and services".[9]

What is certain is that industrial policy has reappeared on government agendas in different regions across the globe, accelerating this trend to address the imbalances generated by geopolitical rivalries and conflicts between powers, as well as the severe disruption of value chains due to the COVID-19 pandemic and the necessity to generate jobs.

Even in the United States, President Joseph Biden's administration has adopted an industrial "strategy" aimed at "revitalize domestic manufacturing, create good-paying American jobs, strengthen American supply

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[8] Joseph E. Stiglitz, Justion Yifu Lin and Célestin Monga, *The Rejuvenation of Industrial Policy*, Washington D.C., World Bank (Policy Research Working Paper, 6628), 2013, p. 6, at https://openknowledge.worldbank.org/handle/10986/16845 (date consulted: December 29, 2022).

[9] Mariana Mazzucato, *Transformational Change in Latin America and the Caribbean. A Mission-oriented Approach*, Santiago, Economic Commission for Latin America and the Caribbean, 2023, p. 75, at *https://www.cepal.org/en/publications/48299-transformational-change-latin-america-and-caribbean-mission-oriented-approach* (date consulted: January 20, 2023).

chains, and accelerate the industries of the future".[10] The CHIPS and Science Act, adopted in 2022, deepens this industrial policy in the microprocessor sector to strengthen U.S. autonomy *vis-à-vis* China.

Nearshoring and industrial decarbonization processes

In this context, the process of nearshoring appears as a major strategic opportunity for Mexico in the short and medium term to attract investment and industrial processes to our country and to reposition itself in the most advanced industrial production chains while consolidating the integration process in North America.

Interestingly, industry accounts for around a third of carbon emissions (34% in 2019)[11] but is also the indispensable platform for the development of renewable energy technologies and infrastructures (solar cells, wind farms, green hydrogen, etc.). Therefore, the energy transition needed to tackle climate change and comply with the Paris Agreement will inevitably require policies that intervene in the market to accelerate the use of renewable energy and reduce the energy intensity of the economy.

In the multilateral context, industrial development has also made a comeback. While the Millennium Development Goals (MDGs) omitted any reference to industry, the SDGs of the U.N.'s 2030 Agenda include inclusive and sustainable industrial development (SDG 9).

In this framework, UNIDO has a window of opportunity to reclaim its role as a specialized U.N. agency capable of facilitating inclusive and sustainable industrial development in developing countries, as well as addressing

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[10] White House, "FACT SHEET: CHIPS and Science Act Will Lower Costs, Create Jobs, Strengthen Supply Chains, and Counter China," January 10, 2023, at *https://www.whitehouse.gov/briefing-room/statements-releases/2022/08/09/fact-sheet-chips-and-science-act-will-lower-costs-create-jobs-strengthen-supply-chains-and-counter-china/* (date consulted: January 23, 2023).

[11] IPCC, "Summary for Policymakers", in *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, Geneva/Cambridge, Cambridge University Press/IPCC, 2022, p. 12, at *https://report.ipcc.ch/ar6/wg2/IPCC_AR6_WGII_FullReport.pdf* (date consulted: January 25, 2023).

global challenges and achieving circular economies and lower environmental impact.

In 2021, UNIDO elected the German Gerd Müller as Director General, marking the first time that the Organization will be headed by the national of an industrialized country. Symbolically, industrial development is reiterated as a shared goal between developed and developing countries. The new Director General and UNIDO's members face the challenge of attracting funding and political commitments enabling UNIDO to influence sustained economic growth in developing countries, with fair employment and contributing to the reduction of greenhouse gases, in order to meet the SDGs of the 2030 Agenda and the Paris Agreement.

In this logic, Mexico is currently cooperating with UNIDO in the development of strategies to enhance the country's industrial capacities (for example, through the *Prospective Atlas: Territorial-Industrial Atlas for Investment Attraction*),[12] the implementation of the Montreal Protocol to eliminate substances used by industry that damage the ozone layer and, more recently, by outlining the roadmap for the development of green hydrogen in Mexico, in support of the private sector.

Within the framework of the new global strategic recomposition of energy, industrial relocation processes and the need to decarbonize industrial processes, Mexico has enormous potential to strategically insert itself into the hydrogen production chains over the next decade, given its considerable comparative advantages as it has some of the brightest areas on the planet, bordering its main trading partner to the north. This region is suitable for the intensive production of solar energy and, consequently, the production of green hydrogen. With the above-mentioned combination, the problem of intermittent solar energy is covered and at the same time the mass production of hydrogen for export, as well as for use in various industries, including high-emission industries such as steel and cement, is made possible.

[12] Mexican Ministry of Foreign Affairs (SRE), UNIDO and U.N. Habitat, *Prospective Atlas: Territorial-Industrial Atlas for Investment Attraction,* Mexico, U.N. Habitat, 2021, at *https://publicacionesonuhabitat.org/onuhabitatmexico/Resumen-Atlas_ENG.pdf* (date consulted: May 2, 2023).

Finally, Mexico should strive for UNIDO to become the global center of discussion and reflection on the industrial policies of the 21st century to eradicate poverty, generate jobs, accelerate the implementation of the SDGs, achieve self-sustaining, gender-sensitive and environmentally sustainable economic and social development. This will lead to an industry that responds to the macro trends of digitalization, decarbonization and circular economy.

Crossroads in the negotiation of a new comprehensive international convention on combating the criminal misuse of Information and Communication Technologies (cybercrime)

The great advances in information and communication technologies (ICTs) have made possible a dizzying acceleration of their applications and multiple benefits for humanity, the economy, science and the development of countries, but at the same time, they have been exploited by national and transnational criminal groups to boost and/or empower their criminal activities. The acceleration of change makes it imperative to have international legal frameworks that foster cooperation to address these threats. Existing conventions or regulations on cybercrime are not universal and have been unable to adapt to change. It is essential to have a global and flexible instrument that allows for a common understanding and a capacity to address innovations and challenges in order to deal with the multiple emerging challenges.

U.N. General Assembly resolutions 74/247 and 75/282 form the main basis for the Ad Hoc Committee on the elaboration of the new comprehensive international convention on combating the criminal misuse of ICTs (Ad Hoc Committee),[13] which began meeting at the end of February 2022 in New York.

[13] See UNODC, "Ad Hoc Committee to Elaborate a Comprehensive International Convention on Countering the Use of Information and Communications Technologies for Criminal Purposes", at *https://www.unodc.org/unodc/en/cybercrime/ad_hoc_committee/home* (date consulted: January 25, 2023).

The crucial challenges of negotiating the new convention, against the backdrop of the confrontation and mutual distrust between Russia and the United States and their respective allies, would be:

- The difficulty in achieving a common understanding on what acts constitute a "cybercrime" and, on the scope of the new instrument.
- Determine whether the new instrument should consider only "cyber-dependent crimes", or also include "cyber-enhanced crimes".[14]
- If included, determine how best to analyse them, seeking to avoid omission or duplication of existing international and national provisions, or to unintentionally modify or amend such existing provisions.
- The constant evolution in the dimension, scope and even nature of traditional crimes, an evolution accelerated given that these acts are committed online (*e.g.* child sexual abuse, whose traditional dimension is physical abuse and its dissemination online, but which now also has a cyber-dependent dimension, such as cyber grooming).
- The need for the international regime, being established after the entry into force of the convention, to be constantly updated with a view to preventing exponential technological development from rendering it soon obsolete.
- Finding the right balance between legitimate sovereignty and cybersecurity concerns on the one hand, and between cyber-policing and respect for people's right to privacy, including digital privacy, on the other.

Mexico is pushing for the new convention to include both types of cybercrime with:

- clear and concise definitions of cyber-dependent and cyber-enhanced crimes;

[14] There are still no universally accepted definitions of cyber-dependent and cyber-enhanced crimes. For the purposes of this article, working definitions are: cyber-dependent crimes: offences that require a computer system for their commission, e.g. cyber-bullying; and cyber-enhanced crimes: traditional crimes that when committed online can acquire greater scope and volume, but whose commission online does not alter the essence of the crime, e.g. online arms trafficking.

- the linkage between the new regime of this convention with existing international regimes dealing with traditional offenses;
- exclusive boundaries to address those dimensions that arise from the commission of cyber-enhanced crimes online and that, as a result of recent technological developments, are not adequately covered in other instruments.
- the need to question whether committing crime online entails a substantive change in its scope, volume and, above all, nature, in order to identify and determine what new dimensions of traditional crimes need to be considered.
- promoting interaction between the mechanism to be established for reviewing the implementation of the new convention with fora, regimes and agencies working on traditional crimes in order to adapt States' responses to the new challenges that will arise from technological progress.

Among the challenges that lie ahead will be the possibility of substantive changes in the dimension and nature of crimes such as drug trafficking and firearms trafficking that may find dimensions where they are not only cyber-enhanced, but also cyber-dependent. Mexico should reinforce the idea of a convention capable of being continuously updated.

Challenges posed by technological advances and trends in drug trafficking

For example, in the case of drugs, the phenomenon of "digital drugs" or e-drugs, consisting of digitally accessible audio files of "binaural beats", which cause mental alterations similar to those caused by drugs, is beginning to appear, albeit incipiently. There is also talk of image files that provoke the same effects. Various studies give an alarming account of their growing popularity.[15]

[15] See Monica J. Barratt *et al*., "Who Uses Digital Drugs? An International Survey of 'Binaural Beat' Consumers," in *Drug and Alcohol Review*, vol. 41, no. 5, July 2022, pp. 1126-1130, at *https://doi.org/10.1111/dar.13464* (date consulted: February 4, 2023).

The emergence of e-drugs is merely a reflection of the impact that advancement is having on all aspects of human affairs. In the case of drugs, this trend has been seen in the increased production, trafficking and use of fentanyls and other synthetic opioids, as well as other "designer drugs" such as methamphetamines.

Major drug trafficking organizations have been replacing cannabis with fentanyl and methamphetamines as the main products they manufacture and market, because synthetic opioids are highly addictive, much easier and cheaper to produce and transport, and can easily be repackaged or spiked, which also facilitates their distribution. The World Drug Report produced by the United Nations Office on Drugs and Crime (UNODC)[16] and the annual reports and its supplements on precursors of the International Narcotics Control Board (INCB)[17] reflect this reality.

Moreover, there are worrying trends such as the growing production of "designer precursors", developed for the purpose of circumventing the control mechanisms established for controlled precursors, and the growing use of other licit chemicals in the production and manufacture of illicit drugs. The free flow of information on the web and easy access to tutorials on electronic platforms and cyber forums will further enhance these trends.

The use of synthetic opioids is growing in Mexico and is causing alarm due to their high toxicity, which can lead to severe harm, and even death.

New realities, patterns and trends in drug production, trafficking and consumption are inevitably testing the international control regime established with the adoption of the 1961 Single Convention on Narcotic Drugs as amended by the 1972 Protocol, the 1971 Convention on Psychotropic Substances and the 1988 United Nations Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.[18]

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16 UNODC, "World Drug Report 2022," at *https://www.unodc.org/unodc/en/data-and-analysis/world-drug-report-2022.html* (date consulted: May 2, 2023). Earlier editions can be consulted at *https://www.unodc.org/unodc/en/data-and-analysis/wdr-2022---previous-reports.html.*

17 The 2022 Report and previous editions can be consulted at INCB, "Annual Reports," at *https://www.incb.org/incb/en/publications/annual-reports/annual-report.html* (date consulted: May 2, 2023).

18 UNODC, *The International Drug Control Conventions*, New York, U.N., 2013, at *https://www.unodc.org/documents/commissions/CND/Int_Drug_Control_Conventions/Ebook/The_International_Drug_Control_Conventions_E.pdf* (date consulted: February 6, 2023).

The regime has been able to adapt and cope with some of these new challenges, such as the emergence of new psychoactive substances, including synthetics. But in the face of the explosive emergence of new substances, the model based on the simple scheduling of all new substances is beginning to show signs of exhaustion. As a result, experts at the UNODC, the INCB and other bodies have begun to propose controlling only the base compounds and not the new drugs *per se*. On the other hand, this international regime has not been flexible enough to deal adequately with the growing trend of cannabis consumption deregulation, the increasing refinement of the actions of criminal organizations dedicated to drug production and trafficking, as well as the interaction between drug trafficking and other types of crime such as firearms trafficking. To address this, Mexico promoted resolution 65/2 in the Commission on Narcotic Drugs in 2022, aware of the damage caused by the highly armed drug trafficking organizations and that to weaken their capacity it is necessary, among other measures, to prevent them from having access to firearms.[19] Bilateral and multilateral international cooperation is essential to confront these crimes that cause so much harm and violence to all societies.

Challenges stemming from technological advances and trends in illicit arms trafficking

Accelerated technological development is also exponentially increasing the threat posed by the production, manufacture and illicit trafficking of firearms. The advent of the internet has facilitated contact between customers, particularly new, unconnected customers, and arms suppliers, even in plain sight and without the need to resort to the *darkweb*.

[19] Economic and Social Council (ECOSOC)-Commission on Narcotic Drugs, "Strengthening International Cooperation to Address the Links between Illicit Drug Trafficking and Illicit Firearms Trafficking," in Commission on Narcotic Drugs, *Report on the Sixty-Fifth Session (December 10, 2021 & March 14-18, 2022),* New York, U.N. (Economic and Social Council. Official Records, 2022: Supplement No. 8), 2022, pp. 7-10, at *https://documents-dds-ny.un.org/doc/UNDOC/GEN/V22/017/90/PDF/V2201790.pdf?OpenElement* (date consulted: February 7, 2023).

In addition, tutorials on how to repair weapons that have been discarded after being rendered inoperable by law enforcement or how to convert small-caliber weapons into semi-automatic, automatic or high-powered weaponry are easily accessible to anyone on popular open portals such as YouTube.

These challenges are compounded by the threat posed by the use and refinement of emerging technologies in the manufacture and illicit trafficking of firearms, such as the use of 3D printers, the incorporation of weaponry into robots or drones, as well as the use of artificial intelligence.

In this context, Mexico promotes in the framework of the UNODC, and in particular of the Working Group on Firearms of the Conference of the Parties to the United Nations Convention against Transnational Organized Crime (COP-UNTOC), to give due attention to technological progress in the prevention and combating of illicit manufacturing of and trafficking in firearms.

Mexico has led 2 resolutions during the COP-UNTOC. Resolution 9/2 of COP-UNTOC9 seeks to promote the exchange of information, best practices, experiences and training on illicit manufacturing of firearms through the use of advanced technology and new technological tools and tagging and registration technologies, the use of state-of-the-art technologies for surveillance and border inspection, as well as the detection and disruption of crimes committed through the criminal use of ICTs, such as the dark web and cryptocurrencies.

COP-UNTOC10 resolution 10/2 calls for the tackling of threats linked to technological developments and changes in *modus operandi*, but also for the harmonization of responses to threats related to these developments, including the use of modular weapons, 3D printing of firearms, firearms conversion and the use of the dark web and cryptocurrencies, as well as the importance of providing training in new technologies for the identification, recording and reporting of firearms seizures. This resolution also calls for strengthening early detection capabilities through technological tools.

In 2023 and 2024, Mexico will chair the Group of Experts of the Wassenaar Arrangement,[20] the body in charge of maintaining the lists of con-

[20] For more information on the Wassenar Arrangement, see the Wassenar website at: *https://www.wassenaar.org/*

ventional arms and of technologies and goods for conventional use that are subject to the international export control regime.

The Wassenaar Arrangement is placing increasing emphasis on the challenge of emerging control technologies, particularly with regard to dual-use technologies and goods.

Moreover, while technologies previously deployed for military purposes have come from very specific industrial sectors, such as aeronautics, the application of goods and technologies for conventional weapons and other military equipment is increasingly coming from nontraditional industrial or commercial sectors.

At the moment, the high cost of acquisition and operation of equipment, such as 3D printers, that facilitate the handmade production of weapons or weapons incorporating technological advances, such as armed robot dogs, is a deterrent for the average person to access them.

This new reality will force states to rethink their notions and paradigms of security, while putting aside their political and geostrategic differences in order to open a window of opportunity to strengthen controls on the production, manufacture and illicit trafficking of firearms, their parts and components and ammunition.

Final reflections

The COVID-19 pandemic highlighted the vulnerability and interconnectedness of global health while severely disrupting international trade, as supply and production chains were drastically interrupted. Similarly, dramatic changes in international geopolitics have led to growing tensions, aggressions, conflicts and unilateral measures that have impacted international law and coexistence among states. However, solutions and possible responses to pressing global challenges can only be found through the collaboration of all parties without exception, and the ideal framework for this is through multilateralism in specialized international fora. Each of these fora is facing problems, as, regardless of their technical and scientific character, they cannot be divorced from reality and political confrontations. It is for the necessary common good that we must find the essential meeting places to identify the solutions that will allow the continuity of humanity on the planet.

In congruence with the above, a central pillar of Mexico's foreign policy must be to strengthen its participation in international organizations that help it to tackle global problems. In this sense, in organizations such as the IAEA, Mexico should be proactive in specific fields of vital interest, such as the prevention of zoonotic diseases that affect millions of people and collaboration in oncology to ensure the availability of radiopharmaceuticals, nuclear medicine equipment and the ongoing training of its clinical staff in this area.

Likewise, taking into account the resurgence of nuclear energy in many countries, Mexico should take advantage of this wave to enhance its sustainable energy matrix, under parameters of physical and technological security guaranteed through collaboration with the IAEA. Mexico should actively participate in the review meetings of the nuclear conventions and in the peer review processes of these instruments in order to update and ensure the best security and safety standards for nuclear materials and facilities. The aim is to minimize the possibility of nuclear accidents with potentially catastrophic consequences.

True to its tradition in favor of disarmament and nonproliferation, as well as to the great contributions made by eminent Mexican diplomats such as Nobel Prize winner Alfonso García Robles, Mexico should promote and update the most effective and efficient techniques and procedures for safeguards of nuclear facilities and materials through the IAEA in order to prevent their diversion for military purposes and the proliferation of nuclear weapons, while underpinning international peace and security.

In the international industrial field, Mexico should seek to strengthen UNIDO to transform it into a hub for contemporary and cutting-edge sustainable industrial policies to address the disruption of value chains, geopolitical challenges, climate change, industrial relocation processes, changes in global consumption and production patterns, Industry 4.0, as well as the generation of jobs.

In the global industrial relocation processes, it will be highly opportune for Mexico to continue expanding to other regions of the country, as well as to add more chapters to the *Prospective Atlas*, which was developed with the support of UNIDO and U.N. Habitat.

Exponential technological development offers tremendous advantages in addressing multiple social, economic and developmental problems.

However, uncivil society and transnational organized crime will also employ increasingly sophisticated technologies to streamline their criminal activities. In this context, Mexico must continue to work in international fora to have the necessary international instruments and conventions to be able to deal with the various manifestations of cyber-dependent and cyber-enhanced crimes. It must ensure that the instruments have the necessary flexibility to be able to cope with the changes and rapid evolution of digital, computer and cyber technologies.

Mexico's role in international organizations dealing with areas of national interest such as illicit arms and drug trafficking should be maintained and strengthened. Collaboration between international bodies dealing with this issue should be promoted, within their specific fields of competence, while at the same time identifying synergies and generating congruence in the global achievement of the objectives of ensuring societies free of violence, enjoying peace and security.