

Report of the Secretary-General to the 77th Session of the General Assembly  
on the Implementation of the Recommendations of the  
2002 UN Study on Disarmament and Non-Proliferation Education

**Implementation of the recommendations by civil society  
and non-governmental organizations**

**James Martin Center for Nonproliferation Studies  
at the Middlebury Institute of International Studies at Monterey**

Education and training efforts covering the last two years (**from June 2020 until May 2022**)

**Executive Summary:**

Since its founding in 1989, CNS has sought to combat the spread of weapons of mass destruction by training the next generation of nonproliferation specialists and raising public awareness on WMD issues. Graduate students in the MA in Nonproliferation and Terrorism Studies program pursue a two-year degree program that combines formal coursework at the Middlebury Institute of International Studies with on-the-job training at CNS and internships at international organizations. CNS experts offer a variety of trainings through several formats. CNS has increasingly made use of various forms of online learning tools and new technologies to reach out to more diverse communities, including a training program using open source technologies to enhance nonproliferation verification and an outreach initiative targeted at young women to encourage them to study and work in the field. For more information, please see [our website](#).

CNS Disarmament and Nonproliferation Education activities over the **past two years** are listed below.

### **Graduate School-Level Formal Education:**

1. The core educational program of CNS has been to provide nonproliferation and disarmament education for graduate students. In 2010, the Middlebury Institute launched the world's first Master of Arts degree program in Nonproliferation and Terrorism Studies. The Certificate in Nonproliferation Studies, a predecessor of the new degree program, remains as a standalone non-degree graduate program. The MA curriculum provides students with in-depth knowledge and specialized professional skills necessary to analyze weapons of mass destruction and other security threats posed by both state and non-state actors, and to develop effective strategies to address these challenges. The curriculum includes courses, seminars, workshops, and simulations taught by academic, policy, scientific, and technical specialists. Graduates are prepared for careers in governmental, international, non-governmental, and private-sector organizations dedicated to nonproliferation, disarmament, arms control, and counterterrorism. Since 1997, over 900 students have graduated from nonproliferation studies program. More than 80% of these graduates are now active professionals involved in nonproliferation and disarmament-related work. In the past two academic years, 111 students have earned MAs in Nonproliferation and Terrorism Studies or Certificate in Nonproliferation Studies. For more information, please see <http://www.miis.edu/academics/programs/npts/>.

2. In fall 2016, the Middlebury Institute of International Studies at Monterey (MIIS) launched a new dual-degree program with a Russian University, MGIMO (the Moscow State Institute of International Relations), one of Russia's most prestigious educational institutions in the field of nonproliferation studies. Under the dual degree program, students enroll in both the MA program in Nonproliferation and Terrorism Studies at MIIS and the MA program in International Affairs at MGIMO as a stepping stone to professional careers in the global sphere of nonproliferation and disarmament. In the past two academic years, 25 students have earned the dual-degree. For more information, please see <https://www.middlebury.edu/institute/academics/degree-programs/nonproliferation-terrorism-studies/overview/dual-degree>

### **Simulation, Participatory Learning:**

3. As part of the MA program in Nonproliferation and Terrorism Studies, students have the option to participate in a semester-long simulation of international or bilateral arms control and nonproliferation treaty negotiations in which participants adopt the roles of "real-world" negotiators. Simulation exercises encourage participatory learning and promote empathy by encouraging participants to view the world through the eyes of others. During the Fall 2020 and Fall 2021 semesters, 15-20 Middlebury Institute graduate students from a wide range of countries and visiting fellows participated in simulations of the NPT Preparatory Committee (PrepCom) and 2020 NPT Review Conference. The students had the opportunity to engage with senior negotiators and learn firsthand about the intricacies of multilateral diplomatic negotiations. Although the 2020 course was taught fully online due to the COVID-19 pandemic, with effective usage of online education platforms, the simulation class was productive and lively.

## Education for High School Students and Teachers:

4. The high school outreach and exchange program of CNS, the Critical Issues Forum (CIF), brings high school students from the United States, Japan, and closed nuclear cities in the Russian Federation together to study nonproliferation, disarmament and international security issues. For more information, please see <http://sites.miis.edu/criticalissuesforum>.

5. For the past two years, due to the ongoing global pandemic, all CIF activities were conducted fully online. Based on experiences during the early stages of the pandemic, CIF effectively and innovatively utilized online communication tools to make the project engaging. CIF took advantage of the online format as an opportunity to increase outreach to a more diverse audience. These developments will continue to positively impact the project as we return to in-person activities. During the past two years, CIF conducted 1) a Speaker Series, 2) two Spring students conferences, and 3) Outreach activities and information dissemination.

6. *The Speaker Series* was a creative and innovative product of remote work during the pandemic with an aim to reach out to a wider audience. CIF conducted six sessions of speaker series with diverse speakers. Each session attracted more than 100 participants from around the US, Japan, Russia, and other countries including Canada and Nigeria. For more information, please see <https://sites.miis.edu/criticalissuesforum/speaker-series-2020-2021/>

7. *The 2020-2021 Spring Student Conference* and CIF project theme was “Toward a World Free of Nuclear Weapons: The Role of Youth as Change Agents in an Age of Global Crisis.” This was the first time that CIF conducted all project activities fully online. The COVID-19 pandemic has taught us how interdependent we are and highlighted the urgent need for greater international cooperation if we are to have any chance of successfully tackling any number of existential threats, such as those posed by nuclear weapons. This cooperation requires concerted engagement of all citizens, especially young people like CIF students. For more information, please see <https://sites.miis.edu/criticalissuesforum/2021-spring-conference/>

8. *The 2021-2022 Spring Student Conference* and CIF project theme was “Using Disarmament and Nonproliferation Education to Empower Youth to Address Global and Social Challenges.” The conference was held on April 30, 2022 with over 100 high school students and teachers from around the world including Japan, Russia and the United States. This year’s CIF project was an excellent platform to enhance collaboration between CNS and the **United Nations Office for Disarmament Affairs (UNODA)**, especially its **Youth4Disarmament Initiative**. For more information, please see <https://nonproliferation.org/engaging-high-school-students-in-addressing-nuclear-challenges/>

## Education to Expand Regional Perspectives:

9. During the period covered by this report, CNS experts provided several short courses in cooperation with national governments, research institutions, and universities. CNS, in collaboration with the Mexican Foreign Ministry, the Agency for the Prohibition of Nuclear Weapons in Latin America and the Caribbean (OPANAL), and the Instituto Matias Romero

(Diplomatic Academy in Mexico City), hosted a two-week online Nonproliferation and Disarmament Summer School for Latin American and Caribbean Diplomats. The 2020 Summer School was held in a fully online format from July 6-17, 2020 using Zoom and a unique course platform developed by the Instituto Matias Romero. As opposed to previous years, the online format allowed for a much larger group of participants and experts from around the world. With the focus on junior to mid-career diplomats from the region, the 2020 Summer School brought together more than **70 participants** from more than 25 Latin American and Caribbean countries and OPANAL, as well as close to **30 expert speakers**, including senior diplomats and heads of international organizations, a *hibakusha* (atomic bomb survivor), two Nobel laureates, and many world-renowned experts in nuclear weapons and associated materials, nuclear diplomacy, and international law. For more information, please see

<https://nonproliferation.org/leading-by-example/>

10. The 7th Disarmament and Nonproliferation Summer School for Latin American and Caribbean diplomats jointly organized by CNS in partnership with the Mexican Foreign Ministry, the agency for the Prohibition of Nuclear Weapons in Latin American and the Caribbean (OPANAL) and the Matías Romero Institute in Mexico City, was held in a virtual format from June 28-July 9, 2021. The course gathered more than 30 junior to mid-level diplomats from 16 countries in the region (with a majority of women participants) as well as 35 expert speakers and panelists from all over the world. For more information, please see <https://nonproliferation.org/2021-disarmament-and-nonproliferation-summer-school-for-latin-american-and-caribbean-diplomats/>

11. CNS continued its fifth year of collaboration with the African Center for Science and International Security (**AFRICISIS**) on building capacity in WMD nonproliferation and security in the African continent targeting women in STEM. Building on the successful outcomes of an earlier **fruitful partnership** on advancing women in STEM, CNS and AFRICISIS held a two-week virtual intensive course on *WMD Nonproliferation and Security for Women in STEM* from January 25-February 5, 2021. The **course** provided female technical experts, researchers, scientists, and government officials with a broader understanding of weapons of mass destruction, nonproliferation, arms control, disarmament, peaceful uses of nuclear energy, chemical, biological, radiological, and nuclear security, as well as the various institutions, tools, and mechanisms necessary to address current nonproliferation and security challenges. For more information, please see <https://nonproliferation.org/promoting-the-role-of-women-in-stem-in-africa-through-wmd-nonproliferation-capacity-building/>

12. CNS successfully launched *The Black Sea Women in Nuclear Network*. This project was a joint effort between CNS and the **Los Alamos National Laboratory** that culminated in the establishment of a professional network for women working in nuclear fields in the Black Sea region. The formation of *The Black Sea Women in Nuclear Network* took place during a virtual workshop that was hosted by CNS, in partnership with the **Odessa Center for Nonproliferation** and **WiN (Women in Nuclear) Ukraine**, from November 29 to December 3, 2021. The aim of the workshop was to inaugurate the network, amplify voices of women in nuclear fields, highlight the existing abundance of regional knowledge and experience, share views on gender related issues, and explore mentorship, training, and networking opportunities

for women from the Black Sea region working in nuclear fields. For more information, please see <https://nonproliferation.org/the-black-sea-women-in-nuclear-network/>

13. CNS launched another initiative focused on the Black Sea region, the US-Black Sea Nonproliferation Exchange Initiative. The initiative is sponsored by the International Security and Nonproliferation Bureau of the US State Department and will serve as a channel for deeper coordination and support between nonproliferation professionals in the US and Black Sea region, including scholars/researchers and diplomats/practitioners. On April 26-30, over 20 emerging and prominent weapons of mass destruction (WMD) nonproliferation experts from the Black Sea region and other US and international experts convened in Vienna, both in person and virtually, to participate in an inaugural US-Black Sea Nonproliferation Exchange meeting. For more information, please see <https://nonproliferation.org/cns-launches-the-us-black-sea-nonproliferation-exchange-initiative/>

14. CNS's Director of the Middle East Nonproliferation Program, Dr. Chen Kane, established the Middle East Next Generation of Arms Control Specialists Network (MENACS) (<http://www.menacs.org>) in 2010 in order to develop and promote region-based approaches to arms control, nonproliferation, and disarmament in the Middle East. These approaches include capacity building, training, regional dialogue, knowledge dissemination, and teaching by example. The Network has also developed a website with the objective of expanding nonproliferation knowledge and academic teaching in the region and promoting the establishment of Weapons of a Mass Destruction-Free Zone in the Middle East. The network conducts annual meetings for reviewing their research and educational activities.

**Education to Promote Gender Diversity: (All of education activities in the regional expansion section are also promoting gender diversity.)**

15. CNS launched its Young Women in Nonproliferation Initiative in Fall 2018. This program seeks to increase gender diversity in nonproliferation, arms control, and disarmament by introducing more female undergraduate students at US colleges and universities to these issues. As a part of this Initiative, CNS conducts outreach events at US institutions of higher education, with a strong focus on women's colleges, in order to promote greater awareness of WMD issues among young women. CNS also maintains a website featuring articles, learning tools, and resources of particular relevance for young women who want to learn how to professionalize their interest in the field. In addition, CNS leads and coordinates a mentorship program which offers participants support, networking opportunities, and tools to pursue careers in nonproliferation, arms control, and disarmament. The mentorship program is a yearlong commitment that is open to women undergraduates at colleges and universities where the Initiative has held outreach events. Each student participant is matched with a mentor who shares her interests. All mentors are world-renowned experts and practitioners, including current and former diplomats, UN officials, and scholars from leading research institutions and NGOs. Over ten young women participated in the mentorship program in 2020 and 2021. In 2022, the number of participants continued to increase. For more information, please see <https://www.nonproliferation.org/education/women-in-nonproliferation/>.

## Online Educational Resources:

16. CNS has increasingly made use of various forms of online learning, including lectures to students in different countries, including Russia and Japan, via video conference applications such as Zoom. Other forms include dissemination of timely information and analysis via listserves and an online preparation module for the International Nuclear Safeguards Policy course, the Critical Issues Forum teachers' workshop, and the Information Analysis and the Nonproliferation Short Course at the VCDNP (VCDNP education activities are included in a separate report). CNS also utilizes social media such as Facebook and Twitter, and uploads recorded seminars and events onto its own YouTube channel to disseminate information and reach a wider audience. In 2022, CNS also launched two new series, Nuclear Threats and the War in Ukraine, and Machiavelli in the Ivory Tower, both in Videocast and Podcast formats. For more on CNS online and multimedia programs, please see:

[http://www.nonproliferation.org/category/topics/tutorials\\_videos-publication](http://www.nonproliferation.org/category/topics/tutorials_videos-publication).

17. CNS is introducing new technologies and tools for disarmament and nonproliferation education and is on the forefront of using powerful open source information and new technical tools to support nonproliferation and disarmament verification. Satellite imagery, 3-dimensional (3D) modeling, geospatial data, big data analysis, and virtual reality applications are key strengths in this body of work. Such tools extend the ability of non-governmental organizations to identify and determine the capabilities of proliferation-related activities, verify further reductions of nuclear weapons, track illicit transfers of technology, and break new ground in societal verification research. All of this enhances the ability of citizens worldwide to verify compliance with international arms control treaties. CNS enhanced the educational value of the Open Sources Tools for Nonproliferation Studies and has been offering a semester-long academic course every semester since 2020. In addition, CNS offered a short-term course and workshop on open source intelligence analysis. For more information about CNS' new tools and featured experts, please see <https://www.middlebury.edu/institute/news/power-open-source-intelligence> and <http://middleburymagazine.com/features/true-detectives/>.

18. CNS continues to produce nonproliferation and disarmament-related resources for the Nuclear Threat Initiative ([www.nti.org](http://www.nti.org)) including country profiles, a Global Incidents and Trafficking database, and highly enriched uranium and disarmament resources. CNS, in partnership with the NTI, developed a new [set of educational tutorials](#) on today's nonproliferation challenges. The tutorials are designed to build a basic understanding of these issues for anyone new to the field—including students, young professionals, and the media—or to serve as a refresher course for experienced professionals. They can be used on the job, in the classroom, or on the road to get oriented on key concepts and issues related to nonproliferation. Currently, CNS has developed nine tutorials. Please visit the Tutorial homepage at <http://tutorials.nti.org/table-of-contents/>. CNS has also developed a variety of 3D models for the NTI website including missiles, nuclear weapons, and nuclear facilities. For more educational resources CNS contributed for the NTI website, please visit the Education Center website at <https://www.nti.org/learn/education-center/>

## Fellowship and Internship Programs:

19. Established in 1991, the CNS Visiting Fellows program is designed to assist young and mid-career professionals from various foreign ministries, national export control bodies, journalism outlets, and research/academic institutions to develop the skills necessary to make a positive impact on arms control and nonproliferation and disarmament policy in their respective countries. Originally targeted towards specialists from the former Soviet Union and then People's Republic of China, the program has trained approximately 400 visiting fellows from Russia, former Soviet countries, China, and other countries. Since 2007, CNS has extended its training program to junior diplomats from the Non-Aligned Movement. During the past two years, due to the pandemic, both fall 2020 and spring 2021 fellowship programs were conducted fully online. For fall 2021 and spring 2022, the program resumed its in person format. In these four groups of visiting fellows, CNS has trained approximately 20 individuals from countries including Chile, Nigeria, Costa Rica, Morocco, the Bahamas, Peru, Argentina, Russia, Turkey, Bulgaria, and Ukraine. For more information, please see <http://www.nonproliferation.org/visiting-fellows-program>

20. CNS, in collaboration with the State University of New York's Center for Policy Research (CPR), conducted our fellowship training program for export control officials and scholars in summer 2021. The program, held each summer since 2004 and funded by the U.S. Department of Energy's International Nonproliferation Export Control Program, featured a multi-week virtual format in 2021. The program aims to enable participants to develop both the broader perspectives on the critical importance of nonproliferation-related trade controls for international security, and the essential elements of effective national export controls - from legislation to the monitoring and enforcement of national regulations and multilateral/international commitments. Participants of the fellowship are selected from national authorities implementing various aspects of national export control systems. In the summer 2021 program, CNS trained fellows from Latin America, including officials from Argentina, Brazil, Chile, Mexico and Panama.

21. CNS, in collaboration with King's College London and CRDF Global, contributed subject matter expert instructors and facilitators to virtual and e-learning workshops in November 2021 and January-February 2022 aimed at increasing awareness among administrators of academic institutions, as well as government officials responsible for export control and related outreach to those institutions, of: i) the proliferation-relevant, dual-use nature of emerging technologies, and ii) the importance of developing control mechanisms to reduce risk of unintended/unauthorized diversion of those technologies to end-users engaged in WMD proliferation. Participants in these workshops included university administrators, faculty, and government officials in Eastern Europe and East Asia.

22. CNS, in cooperation with CRDF Global, conducted virtual workshops for government and industry practitioners in Nigeria and Kenya in January 2022, in support of increasing awareness of the proliferation-relevant, dual-use potential of emerging technologies. Additionally, the workshops informed strategies that both research institutions and new enterprises can use to detect 'red flags' of tactics that proliferators use to exploit innovative research-and-development and illicitly acquire/divert such technologies to WMD-related applications.

23. CNS, in cooperation with CRDF Global, chaired a nonproliferation sanctions awareness virtual workshop for export control compliance officials from Malaysia in August 2021.

Government officials from Malaysia also participated. This event was a follow-on to a similar workshop conducted in November 2019, and provided updates on nonproliferation and related sanctions developments, while strengthening relationships among industry practitioners responsible for compliance with export controls and related laws. The workshop featured an overview of nonproliferation sanctions, their international legal foundations (UN Security Council Resolutions), examples of circumvention of sanctions, and strategies companies can use to detect ‘red flags’ of illicit sanctions-evasion efforts.

24. CNS initiated an intensive one-week course on international nuclear safeguards in 2008. The course is offered in June in cooperation with Lawrence Livermore National Laboratory (LLNL) and with support from the U.S. Department of Energy’s Next Generation Safeguards Initiative (NGSI). The course is for graduate students and young professionals and it provides background knowledge and analytical tools and techniques useful for careers in nuclear safeguards. Lecturers include nonproliferation policy analysts from CNS, technical experts from LLNL and the private sector, and International Atomic Energy Agency (IAEA) current and former staff members. The course typically is conducted for approximately 40 students. However, for the past two years and again in 2022 the course has been done virtually allowing it to be provided to approximately 60 students. For the 2022 course, in addition to participants from the United States, there will be participants from Argentina, Belgium, Brazil, Canada, Czech Republic, France, Ghana, Greece, Japan, Jordan, Kenya, Malaysia, Mexico, Myanmar, Nigeria, Pakistan, Serbia, Sierra Leone, South Korea, Turkey, and Uganda. For more on this intensive course please see: <https://nonproliferation.org/education/courses/international-nuclear-safeguards/>

25. CNS offers part-time, paid graduate research assistantships, enabling students studying nonproliferation issues to experience a unique combination of formal coursework and on-the-job training. As an assistant, a student contributes to databases, website publications, fact sheets, and analytical briefs. Every semester, CNS senior staff members mentor approximately 20 students as graduate research assistants. Over the past two years, CNS has trained 54 graduate students as research assistants.

26. CNS provides graduate students from the Middlebury Institute of International Studies at Monterey (MIIS) with nonproliferation expertise via positions as staff members at nonproliferation international organizations, for periods of four to six months. The overall objectives of the internship program are to augment the education of MIIS students by providing practical experience in dealing with nonproliferation issues and to enhance the capability of international organizations in performing tasks and analysis relating to nonproliferation. The CNS Internships at International Organizations originally consisted of a single position at the United Nations Centre for Disarmament Affairs (UNCDA) in New York in 1993. Since that time, it has expanded significantly, including the United Nations Office for Disarmament Affairs, United Nations Institute for Disarmament Research, International Atomic Energy Agency, Comprehensive Nuclear Test Ban Treaty Organization, Vienna Center for Disarmament and Nonproliferation, and Czech Technical University in Prague. During the past two years, due to the pandemic, the most of internship was conducted remotely. For more information, please see: <http://www.nonproliferation.org/about-2/nonproliferation-internships/#ionp>

27. CNS, in cooperation with Lawrence Livermore National Laboratory (LLNL) and with support from the U.S. Department of Energy's National Nuclear Security Administration's Next Generation Safeguards Initiative has provided ten-week paid summer internships at LLNL Livermore, California since 2008. The internship is designed to provide US citizens who have completed the international nuclear safeguards course with the experience of working on nuclear nonproliferation and safeguards policy issues in the national laboratory environment. The centerpiece of the internship is a safeguards policy research project which the student completes in consultation with a LLNL staff mentor. Additionally, students see first-hand the intersection of nuclear safeguards policy and technology issues by touring LLNL facilities and consulting with technical and policy staff. Typically, the internship is awarded to 4 to 6 people. For 2022 four interns will work with LLNL. For further information on the internship see: <https://nonproliferation.org/education/courses/international-nuclear-safeguards/>

28. Since 1997, CNS has offered on-the-job training during the summer for undergraduate students in nonproliferation studies. Students conduct research on issues related to the spread and control of WMDs including nuclear, chemical, and biological weapons and on regional security issues in the former Soviet Union, Eurasia, East Asia, South Asia, and the Middle East. They are also involved in projects related to open source tools for nonproliferation, export controls, and WMD terrorism. In addition to working on ongoing projects at CNS, students develop their own research projects under the guidance of senior CNS faculty. CNS offers nonproliferation and disarmament specialized lectures and training for all undergraduate participants throughout the summer. Undergraduate participants are also invited to all CNS seminars and other events. During the summer of 2020 and 2021, the program was conducted fully online due to the pandemic. Although participants did not have a chance to meet in person, the program was vigorous and engaging. 2020 and 2021 had 13 and 14 undergraduate student participants each. For more information, please see <http://sites.miis.edu/summerintern>.