



Nonproliferation and Disarmament – No Future Without Education

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It has been 15 years since the United Nations conducted a study on disarmament and nonproliferation education, as well as provided 34 recommendations on how to move it far ahead. A lot has been done in this field over this period; however, yet unresolved issues and new challenges suggest that new efforts and policies are by stake-holders all around the world are needed to make it safe and free of weapons of mass destruction.

UN Recommendations Remain Unexecuted but Relevant

In 2008 UN General Assembly passed a resolution 69/65, which contained 34 recommendations aimed at promotion of disarmament and nonproliferation education. The progress for the last 15 years has been uneven. As the Report of the Secretary-General on the disarmament and nonproliferation education issued in 2016 suggests, only few of the recommendations are being implemented and consequently reported by either member states or NGOs. In 2016 report stated that activities associated with implementation of 29 out of 34 recommendations were reported.¹ However, these efforts do not seem to be enough. Over the 15 years, as few as 31 UN member-states submitted a report on national efforts to promote nonproliferation and disarmament education at least once as a follow-up to the 2002 report of the UN Secretary General. Among these countries there is only one nuclear power – the Russian Federation, while the rest of the governments staying silent about their activities inspired by the 34 recommendations. It is worth noting that NGOs, think-tanks and academic institutions from those countries submit their reports annually.

Out of the UN recommendations, those related to language issues deserve to be highlighted once again. Recommendation number twenty-two from the UN study says “Regional organizations, academic institutions and NGOs are encouraged to develop and disseminate material online in languages other than English.” And recommendation number twenty-five calls the Office for Disarmament Affairs to develop a disarmament and nonproliferation online education resource site in the six official UN languages”. The point is that English should not and cannot be the sole or the primary language for instruction on these global issues. While the UN Office for Disarmament Affairs has developed a multilingual site that offers the wide range of educational materials, most

¹ Disarmament and non-proliferation education. Report of the Secretary-General. A/71/124. July 8, 2016 <http://www.undocs.org/A/71/124>

of them are available only in English.² Out of ten publications that website offers only one is available in German, and none in Russian. The video portal of the web site offers a brilliant collection of videos on the issues of nonproliferation, but again most of them are available only in English.³ While some have an option of subtitles in different languages none has Russian or Chinese subtitles. In 2016 only Mexico, Qatar, Spain, Turkmenistan, and Ukraine submitted their reports to the UN on the implementation of the recommendations, making it extremely difficult to access the general picture around the globe.⁴

With the progress on the 34 recommendations being modest, they remain highly relevant which is attested to by the recent multilateral documents related to nonproliferation and disarmament. In 2010, the NPT Review Conference adopted the 64-action plan in which action 22 clarified that “States are encouraged to implement the recommendations contained in the report of the Secretary-General of the United Nations (A/57/124) regarding the United Nations study on disarmament and non-proliferation education, in order to advance the goals of the Treaty in support of achieving a world without nuclear weapons”.⁵

Ministerial statement of the Nonproliferation and Disarmament Initiative released in April 2014 also emphasized that “effort exerted on disarmament and non-proliferation education should be continued regardless of the progress that has been made”.⁶

The Joint Statement on Disarmament and Nonproliferation Education delivered to the 2015 NPT Review Conference underlined the necessity of the education on the sphere of disarmament and nonproliferation and called the State Parties to implement the 34 recommendations.⁷ The draft final document of the 2015 NPT Review Conference, although not adopted by the parties, also “encourages all States parties to continue and intensify efforts in the field of disarmament and non-proliferation education to raise awareness of the public, in particular of younger and future generations, as well as of leaders, disarmament experts and diplomats on all topics relating to nuclear disarmament and non-proliferation”.⁸

This position was reiterated in his Statement from the representative of Japan to the First Session of the Preparatory Committee for the 2020 NPT Review Conference on May 4, 2017. The Statement also suggested that “in implementing this action, States Parties should take into account measures as cooperation among a diverse range of

² UN Office for Disarmament Affairs. Publications on disarmament.

<https://www.un.org/disarmament/education/publications.html>

³ UN Office for Disarmament Affairs. Disarmament video library.

<https://www.un.org/disarmament/education/films.html>

⁴ Disarmament and nonproliferation education. Report of the Secretary-General. A/71/124. July 8, 2016 <http://www.undocs.org/A/71/124>

⁵ Excerpted from <http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/npt/revcon2010/2010NPTActionPlan.pdf>

⁶ Excerpted from <http://www.mofa.go.jp/files/000035199.pdf>

⁷ Joint Statement on Disarmament and Non-Proliferation Education Delivered by H.E. Toshio SANO, Ambassador, Permanent Representative of Japan to the Conference on Disarmament. The 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons.

[http://www.disarm.emb-japan.go.jp/Statements/150506_NON-PROLIFERATION%20EDUCATION\(2015NPT%20RevCon\)\(Final\).htm](http://www.disarm.emb-japan.go.jp/Statements/150506_NON-PROLIFERATION%20EDUCATION(2015NPT%20RevCon)(Final).htm)

⁸ Excerpted from <http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/npt/revcon2015/documents/DraftFinalDocument.pdf>

actors, critical thinking, information technology and raising awareness for the realities of catastrophic humanitarian consequences”.⁹ The ideas were reflected and supported in the Chair’s factual summary on May 11, 2017.¹⁰

The Open-ended Working Group released a final report in 2016, in which its members “recalled that the overall objective of disarmament and non-proliferation education and training is to impart knowledge and skills to individuals to empower them to make their contribution, as national and world citizens, to the achievement of concrete disarmament and non-proliferation measures”.¹¹

Most recently, a working paper submitted by the members of the Nonproliferation and Disarmament Initiative at the 2020 NPT Review Conference Preparatory Committee in May 2017, pointed out “the importance of disarmament and non-proliferation education as useful and effective means to advance the goals of the Treaty in support of achieving a world free of nuclear weapons was underscored”, thus it specifically targeted the disarmament and non-proliferation education and awareness-raising.¹²

Young Generation Must Address New Challenges

World is witnessing serious technological and political shifts. These shifts challenge continuity, integrity and sustainability of nonproliferation regime, arms control and disarmament dialogues. International cooperation in the sphere of nonproliferation and nuclear safety and security is under significant pressure from political factors. Meanwhile, the new generation is coming to power.

Weapons are back into politics. It has been more than 70 years since nuclear weapons were used for the first and, hopefully, last time in history. The generation of people who witnessed that horrific demonstration of power understood the potential for destruction that nuclear weapons have. Even in the worst moments of the Cold War, when the conflicting parties were on the brink of starting a nuclear war, the lessons of Hiroshima and Nagasaki prevented the United States and the USSR from stepping over the threshold and pressing the “red button”. It seems like the idea of nonproliferation is still widely accepted, nuclear tests are stigmatized; however, the current generation of politicians and experts brings nuclear weapons into their discourse and discuss the possibility of a “limited” use of such weapons. Undoubtedly, use of even one modern nuclear weapon would cause an environmental and humanitarian disaster, and the way that decision-makers engage in such deliberations worries a lot. It is the responsibility of the military to draw all believable and unbelievable plans, but not that of the expert

⁹ Statement By Nobushige Takamizawa Ambassador Of Japan to the Conference On Disarmament. First Session Of The Preparatory Committee For The 2020 Review Conference Of The Parties To The Treaty On The Non-Proliferation Of Nuclear Weapons (NPT). <http://www.disarm.emb-japan.go.jp/files/000253811.pdf>

¹⁰ Preparatory Committee for the 2020 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons. Chair’s factual summary (working paper). <http://undocs.org/NPT/CONF.2020/PC.I/WP.40>

¹¹ Excerpted from

[http://www.unog.ch/80256EDD006B8954/\(httpAssets\)/B7F8C26BC8E15317C1258018003E1D71/\\$file/Final+Report+of+the+OEWG,+as+submitted+to+GA+\(clean\).pdf](http://www.unog.ch/80256EDD006B8954/(httpAssets)/B7F8C26BC8E15317C1258018003E1D71/$file/Final+Report+of+the+OEWG,+as+submitted+to+GA+(clean).pdf)

¹² Excerpted from <http://www.reachingcriticalwill.org/images/documents/Disarmament-fora/npt/prepcom17/documents/WP16.pdf>

community and political elites. The level of acceptance of the use of nuclear weapons should be significantly decreased.

Ageing workforce creates a generational gap. It is estimated, that in the US alone nuclear energy industry employs around 100,000 people. With the inclusion of all the government positions charged with the oversight of the industry, the number is likely to be double of that.¹³ For the UK the forecasts show that the demand in the nuclear workforce is likely to increase from 78,000 in 2015 to 111,000 by 2021.¹⁴ This increasing demand is hard to meet, as the data show that on average nuclear workforce is ageing and there is little inflow of the young people into industry. As the Nuclear Workforce Assessment shows, the demographic average age in the UK nuclear industry is around 54, many of the most experienced and valuable workers reaching retirement age in the coming decade.¹⁵ For the US, assessment is that 39 percent of the nuclear workforce will retire by 2018, leaving the demand for 20,000 new workers.¹⁶ This is the common trend for the most of the countries with the developed nuclear industry. Therefore, there is an urgent necessity for the training of the young specialists, which should place an emphasis on nuclear nonproliferation.

Newcomers need educated workforce. While some countries are closing their nuclear programs, many developing nations are opting for it. Paris Agreement and the goals that countries set for themselves in accordance with it for the reduction in CO₂ emission plays an important role in this process. While such energy sources like wind and solar energy are still being developed, and are by themselves not able to sustain energy demands of a country, nuclear energy can provide environmentally-friendly, cheap and sustainable solution for the developing states that have rising energy demands, but that are also eager to cut down their CO₂ emissions. Therefore, there is a steady increase in demand for the specialists in the field of nuclear energy. One can also argue that the states that decided to stop their nuclear programs need specialists as well because putting a nuclear power plant out of operation is a complex technical project requiring specific expertise.

The estimates for the demand in nuclear workforce in the emerging nuclear countries differ from state to state, depending on the scale of the planned development and the stage of their respective nuclear program. On average, however, each of the newcomer countries will require from 6000 to 8000 new skilled professionals by 2020.¹⁷ The “newcomers” also have a demand for the workforce to be local, which places additional importance on the development of the training program worldwide.

¹³ Penny Hitchin. “The next POWER generation” Nuclear Engineering International. 01.02.2017 <http://www.neimagazine.com/features/featurethe-next-power-generation-5729349/>

¹⁴ Penny Hitchin. “The next POWER generation” Nuclear Engineering International. 01.02.2017 <http://www.neimagazine.com/features/featurethe-next-power-generation-5729349/>

¹⁵ Nuclear Energy Skills Alliance. Nuclear Workforce Assessment 2015, p. 5

¹⁶ Ray Russel. “Who will Replace Nuclear Power’s Aging Work Force?” Power Engineering magazine 02.05.2015 <http://www.power-eng.com/articles/npi/print/volume-8/issue-1/nucleus/who-will-replace-nuclear-power-s-aging-work-force.html>

¹⁷ Estimates are based on the IAEA reports “Human Resources for Nuclear Power Expansion” https://www.iaea.org/About/Policy/GC/GC54/GC54InfDocuments/English/gc54inf-3-att5_en.pdf and “Evaluation of Human Resource Needs for a New Nuclear Power Plant: Armenian Case Study” http://www-pub.iaea.org/MTCD/Publications/PDF/TE_1656_Web.pdf;

Education Requires Fresh Approaches

The challenges outlined above point to the necessity to kindle the interest of the new generation of specialists. Therefore, educational methods are in demand that aimed for the development of interest and proliferation of knowledge. It is also important for these methods to be effective, so it would be possible to cover wide amount of population with less efforts.

Adapting and adjusting educational programs. Nonproliferation and disarmament education system should be adjusted based on three categories of audience which determine the level of education:

- Public,
- Elites,
- Professionals.

Raising public awareness. Governments in the partnership with civil organizations should organize a campaign aimed at raising general awareness about weapons of mass destruction. Such campaign can include documentaries and fiction films, talk-shows on the issues of nonproliferation and nuclear industry, public lectures at educational institutions, etc. A more engaging way would be to organize art festivals promoting peace and non-violence, as well as nonproliferation of weapons of mass destruction. The message of these efforts is to foster a balanced approach of general public to these issues, which would include non-acceptance of the use of weapons of mass destruction, understanding of the reasons why

Training the trainers, educating the educators. Educators bear an important task to raise the interest in the topic of nonproliferation among their students. Investment in the training courses for educators will also have a multiplicative effect, as on average each of them covers 50-100 students, so that even 10 educators can lead to 1000 students with deep understanding of the disarmament and nonproliferation issues.

Conducting vocational programs. Professionals that come in touch with the issues of nuclear technology and nuclear weapons in their lines of duties – politicians, diplomats, civil officers, and journalists require specialized training in order to be able to do their job to the best of their abilities. PIR Center for the last 17 years conducts an International School for the young diplomats, civil officers, journalists, and lecturers, which gathers all of them for one week for an intensive discussion with the leading experts in the field of nonproliferation and disarmament. The School is also serves as a rare Russian-language platform for the discussion on these issues, as participants of the school come from more than 12 countries of the CIS, BRICS, Europe, and the United States.

Developing in-depth programs. Office for Disarmament Affairs web site offers an overview of the educational options available for the prospective students of the disarmament and nonproliferation. Among them there are only three fully-developed Master's program devoted to the nonproliferation. Development of such programs will help prepare much needed specialists with an in-depth knowledge of the issues surrounding the nonproliferation sphere. One of the program is developed by PIR Center, MGIMO and Middlebury Institute of International Studies at Monterey and is designed for students interested in WMD nonproliferation and U.S.-Russian relations and is taught by leading academics and practitioners in this field. Interdisciplinary

curriculum covers global security, history, science and technology, area studies, public policy, and research methods — with emphasis on practical skills. Upon completion of the program, students will earn both a Master's in Nonproliferation and Terrorism Studies from MIIS and a Master's in International Affairs from MGIMO.

Fostering dialogue between role-models and future leaders. It is important for students in any field of specialization to see examples of practitioners that have made a successful career in that field. Involvement of such experts in the process of training can serve as an additional boost. The Double Degree MA program in WMD Nonproliferation, jointly organized by PIR Center, Moscow State Institute of International Relations (MGIMO-University), and Middlebury Institute of International Studies at Monterey uses this feature fully. Students have a unique opportunity to listen and talk with some of the biggest experts in the field of nonproliferation, who not only write academic papers, but who are or were very active professionally – IAEA officers, participants of negotiations on disarmament, diplomats, managers of the nuclear energy companies etc.

Personalizing the experience. Education process should be personalized through the simulations, role-playing games, and similar activities that make students not only obtain information, but to digest it through their personal experience. The most important thing is for student to be engaged, so that they could form their own unique experience within this issue. Specifics forms could be various – role-playing games, modelling, simulations, debates, even board games or virtual reality. This will allow students to not only get an in-depth information, but also to form their own unique experience that will help them connect with the issue. At the very least, most of the nuclear power plants allow guided tours for students, during which they explain them the basics of operations. Such type of events help remove the curtain of mystery from the nuclear industry, and make it more mundane and normal process for the students.

Supporting student initiatives. Universities should provide all the necessary conditions for the students' interests to thrive – in the form of students' clubs and organizations. Administrative, informational and scientific support should be given to the initiatives coming from students. The format of student clubs and study groups allows young people to immerse themselves in the topic of their interest and get even more information that they would have in the classroom. The multiplicative effect of such initiatives can be easily seen, as even one student with an enthusiasm can spark an interest in 5-10 others. And with due support from the university together they can share their message on an even wider scale.

The main challenge that the disarmament and nonproliferation education faces nowadays is the task to awake interest in the young generation, both for raising awareness and training of the specialists that are in ever-increasing demand. The best way to do this is to focus on the personalization of education and creation of the individual experiences using interactive education and new technologies. The main efforts and resources should be invested in development of the national centers for nonproliferation and disarmament education, which includes training of the trainers and those who shape public opinion, respecting interests and sovereignty of their counties and can harmonize interests of national development and global security.