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## Nuclear Threats and Security

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### Abstract

*This article presents highlights and insights from the International Conference on "Nuclear Threats and Security" organized by the World Academy of Art and Science in association with the European Leadership Network and the Dag Hammarskjöld University College of International Relations and Diplomacy and sponsored by NATO at the Inter-University Centre, Dubrovnik on September 14-16, 2012. The conference examined important issues related to nuclear non-proliferation and disarmament, the legality of nuclear weapons and their use, illicit trade in nuclear materials, the dangers of nuclear terrorism, nuclear- and cyber-security. Papers and video recordings of the major presentations and session summaries can be found [here](#).*

The opening presentations by representatives of WAAS, ELN, Pugwash, NATO and other participants sounded a common theme that reverberated throughout the conference — a shared conviction that urgent measures are needed to achieve a world without nuclear weapons. The complex international situation with respect to nuclear weapons is destabilizing and counter-productive. While nuclear weapons have virtually no conceivable military value, the status and prestige associated with their possession provide incentives for nuclear proliferation, especially by states concerned about the possibility of external intervention to bring about regime change. The prevailing nuclear paradigm subsists on the basis of deeply-seated, unsupportable misconceptions regarding the utility of nuclear weapons, their essential role in national security, their contribution to peace during the Cold War and the impossibility of eradicating them from existence. The conference strongly endorsed measures to promote objective examination and public education to remove numerous myths that undermine essential steps toward complete nuclear disarmament.

### 1. Nuclear Weapons in the Middle East

In recent months the drums of war have once again been beating in the Middle East. The build-up of political pressure, social unrest and open civil war in the Middle East combine to make the issue of Iran's nuclear program a dangerous knot in international relations today. The acquisition of nuclear weapons by Iran would be a major setback to peace in the Middle East and is likely to unleash further proliferation by other states. Iran has categorically denounced nuclear weapons and rejects accusations that it is trying to acquire them. However, recent disclosures by the International Atomic Energy Agency suggest that the

country is keeping its options open, although major intelligence agencies agree that Iran has made no decision to make a nuclear warhead.

Iran is a proud nation with an ancient history. Neither sanctions nor threats of physical intervention are likely to dissuade the country from exercising its legal right to develop nuclear energy under the NPT for peaceful purposes. Actual physical attack on Iran's nuclear facilities would undermine the legitimacy of the Nuclear Non-Proliferation Treaty and is likely to unleash catastrophic war in the Middle East. Positive efforts that provide a means for Iran to preserve or enhance its credibility rather than merely succumb to international pressure are far more likely to bear fruit. There is no viable alternative but to intensify efforts for mediation to enhance a peaceful resolution of this crisis.

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The creation of nuclear-weapon-free zones (NWFZs) represents an integral element in a comprehensive multi-lateral strategy for a nuclear-weapons-free world. The extension of nuclear-free zones to encompass 114 nations is a significant achievement, which can be enhanced by concerted efforts to create NWFZs in the Middle East, in the territory neighboring on the Arctic region, and elsewhere. Efforts to make the Middle East a Nuclear-Weapons-Free Zone are stymied by the high level of rhetoric and exchange of threats between Israel and Iran combined with Israel's insistence on its own right to possess a significant arsenal of nuclear weapons. This situation is too serious to be left to the foreign policy inclinations of neighboring states. The whole world has a critical stake in a peaceful resolution of tensions in the Middle East, including a complete removal of weapons of mass destruction from the region.

The Iranian problem focuses attention away from the more fundamental issue — the complete abolition of nuclear weapons from the face of the earth. NATO and all nuclear weapon states must be urged to accept full responsibility for elimination of these weapons as soon as possible by adopting proactive policies and actions rather than imposing preconditions on other parties for progress on this issue so critical to the welfare of all humanity.

## **2. Legality of Nuclear Weapons**

At the heart of the conflict over Iran's nuclear program are the inherent inequity and hypocrisy on which the prevailing regime of non-proliferation is based. The 1996 advisory opinion of the International Court of Justice categorically affirmed the legal obligation of the nuclear weapon states to initiate and bring to a successful conclusion good faith negotiations leading to nuclear disarmament. This has not happened in spite of the conducive atmosphere that existed following the end of the Cold War. Indeed, 47 years after the signing of the NPT and 16 years since the ICJ's advisory opinion, none of the nuclear weapons states have abandoned reliance on this class of weapons. On the contrary, some signatories to the treaty have raised the salience of nuclear weapons in their defense strategies. Nuclear missiles remain on high alert in Russia and USA. China is still expanding its nuclear arsenal. In addition, at least three new nuclear weapon states have come into existence and there are immanent threats

of further proliferation. Countries such as Pakistan, India, Israel and North Korea continue to strengthen their nuclear weapons capability outside any framework of arms control. Although the practical value of missile defense systems is highly questionable, continued efforts to deploy them add unnecessary obstacles to the reduction of the nuclear threat. Concerted efforts are needed to establish the legal framework and practical basis for an arms control regime that covers all nuclear weapon states.

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*“The number of countries covered by nuclear-weapon-free zones has multiplied more than five-fold and now covers 115 nations, a clear indication of the will of the international community affirming the illegality of nuclear weapons.”*

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Circumstances are radically altered since the time of the ICJ’s advisory opinion, as detailed in Winston Nagan’s “Simulated ICJ Judgment”.<sup>1</sup> The continued insistence on and proliferation of nuclear weapon states is the most compelling argument for fresh action by the World Court. In addition, since 1996 many other countries of the world have weighed in to clearly state their abhorrence for these weapons. The number of countries covered by nuclear-weapon-free zones has multiplied more than five-fold and now covers 115 nations, a clear indication of the will of the international community affirming the illegality of nuclear weapons. Moreover, new insights have come to light regarding the horrendous consequences of nuclear radiation on human health and the potentially catastrophic impact on the earth’s climate. In the absence of immediate initiation of good faith negotiations by all the existing nuclear weapon states, steps should be taken to refer the matter back to the ICJ for further instructions leading to complete nuclear disarmament. These negotiations must necessarily identify essential conditions for achieving that goal without setting obstructive preconditions for the start of real negotiations.

*“Organized public opinion is effective public conscience. Law is a codification of the public conscience.”*

Nation-states are a central player in the formulation of international law, but they are not its sole arbiters. Organized public opinion is effective public conscience. Law is a codification of the public conscience. The universal principles of justice and the will of humanity as a whole are not fully and adequately represented by national governments. International law cannot be defined or based on what any individual country may or may not accept. The concept of sovereignty needs to evolve along with the evolution of the global community toward a greater inclusive notion of authority rooted in all peoples’ expectations about peace, security and dignity. International law, in short, must be predicated on the rights of not only nation-states but also the rights of individual citizens within nations and the rights of humanity as a whole.<sup>2</sup>

Nuclear weapons constitute a clear and present danger to the security of all humanity. The risks of terrorism, the spread of radioactive fallout, and the possibility of serious impact on climate change mean that the future of the whole world depends on the actions of individual

sovereign entities. All humanity has a right to a voice in determining the legality of actions by nation-states that may have ramifications far beyond their national boundaries. The authority of all sovereign entities rests with humanity as a whole. Civil society, which is presently the most evolved vehicle for the participation of humanity in global affairs, has already had a major influence on prevailing concepts of international humanitarian law and the legality of nuclear weapons. The core of the nuclear weapons problem is the challenge of evolving effective institutions for global governance. The solution to this and other serious challenges can only be resolved by humanity as a whole. More effective mechanisms are urgently needed to involve and give expression to the will of humanity on the legality of nuclear weapons. The threat or use of nuclear weapons is completely incompatible with the authority foundations of international law based on the people's expectations in the global community.

Recently, Kazakhstan launched a global initiative for the abolition of nuclear weapons called The Atom Project. The devastating impact of nearly 500 Soviet nuclear tests during the Cold War has led to cancer rates 50% higher than elsewhere in Kazakhstan, afflicting more than 1.5 million victims with early death, disease and birth deformities. Kazakhstan renounced and eliminated its nuclear arsenal 20 years ago. Now it is launching a global program of public education to be followed by a global referendum of humanity to garner international support for a nuclear-weapons-free world. Building on this example, we propose an initiative by nations and civil society to convert the negative pressure on Iran to forego nuclear weapons into a positive multi-national initiative for a nuclear-weapons-free world. Nuclear weapons constitute a threat to all humanity and to the physical environment of the earth. No nation has the right to unilaterally possess or wield a weapon whose consequences endanger the entire human race. A global referendum would provide an opportunity to all humanity to voice its views on this issue, giving concrete endorsement to the idea that the foundations of global authority rest with the aggregate of people of the earth-space community.

### **3. Collateral Threats**

It is important to celebrate real successes such as START as a victory of multilateralism. The growing intensity of extremist positions based on religious, ethnic or political ideologies represents a serious threat to both national and global human security. We cannot afford to be complacent. If we want people to make peace, we must be able to curb the vitiating impact of hate speech. The development of global communications systems facilitates the instantaneous dissemination of inflammatory material both within nations and across national borders. Concerted efforts are needed to counter the social and psychological threats to multilateralism and world peace by celebrating all positive initiatives to create a more conducive atmosphere for peace and cooperation.

The threat of illicit nuclear material proliferation and terrorism is growing. All countries with nuclear weapons or energy programs are potential hosts for illegal transfers of nuclear technology and are vulnerable to accidents and theft during the transit of nuclear materials. The prospect of illicit trade in nuclear materials leading to nuclear terrorism poses catastrophic threats that necessitate far stronger measures to control access and drastically reduce the size of nuclear stockpiles. The known stockpile of highly enriched uranium is sufficient for the manufacture of more than ten thousand nuclear weapons. The absence of a safe repository for spent nuclear fuels in many countries, which necessitates their transport over long distances, makes these nuclear wastes highly vulnerable to both accidents and theft. South

East Europe is particularly susceptible to illicit trade in nuclear materials. The existence of largely neglected depositories of radioactive wastes in places such as the Vinca Institute of Nuclear Sciences at Belgrade demands urgent remedial efforts to ensure their safe storage and permanent disposal.

The vulnerability of modern computer networks to cyber-attack represents a new category of catastrophic threats to national and human security. This form of attack challenges traditional principles of deterrence. Unknown attackers make it extremely difficult to retaliate or hold the perpetrators accountable. In addition, an offensive and defensive cyber ‘arms’ race is escalating. This danger not only affects on-line systems, but also off-line nuclear command and control systems. While it is not clear to what extent military systems might be susceptible to cyber-attack, it is evident that global networks controlling governance, finance, economy and other major fields of social activity are extremely vulnerable. The use of cyber-attacks to counter nuclear fuel processing in Iran sets a dangerous precedent for new forms of terrorism. There is an urgent need to formulate new international law norms to completely outlaw electronic forms of aggression and terrorism, most especially those directed against civil functions essential for the survival and stability of modern society.

#### **4. Nuclear Energy, Human Rights & International Law**

The challenges related to non-proliferation and abolition of nuclear weapons are aggravated by the necessity of vastly increasing global energy production during the next half century. Nuclear energy is also a potential source of bulk energy that does not contribute to raising the levels of atmospheric CO<sub>2</sub>. Consumption of enriched uranium for energy production also offers one way to reduce the enormous stocks of nuclear waste, while at the same time aggravating the risks of theft or diversion for military purposes. Moreover, nuclear accidents at Chernobyl and Fukushima are indicative of the immeasurable risks involved with the reliance on nuclear energy. The production of nuclear energy generates a series of challenges that may endure for hundreds of thousands of years.

The prospects for expansion of nuclear energy are constrained by four unresolved problems: high relative energy cost, especially when the full costs of catastrophic risk which make it impossible to privately insure new facilities are taken into account; perceived adverse safety, environmental and health effects; potential security risks stemming from proliferation and terrorism; and unresolved challenges in long-term management of nuclear wastes. Combined, these factors have generated high levels of public resistance to the expansion of nuclear energy in many countries and the decision of several other countries, including Germany and Switzerland, to completely phase out existing plants. Although much progress is being made to guarantee the security of highly enriched uranium worldwide, much more needs to be done urgently. Real understanding of the danger has still not penetrated governments and decision-making bodies.

The environmental and health risks associated with nuclear energy also raise important issues regarding the responsibility of generating states for the consequences of nuclear accidents that extend beyond their national boundaries. International licensing mechanisms are needed to clearly define the responsibilities and regulate the operations of nuclear energy producers, while safeguarding the rights and welfare of those who may be inadvertently affected. Full evaluation of the feasibility and desirability of future reliance on nuclear energy must

take into account the full range of political, social, medical, economic and ecological issues. Given the complex risks associated with nuclear energy, widespread public discussion and debate are needed to inform and educate world public opinion and global public policy.

## 5. Conclusions

The following concrete measures can be immediately taken to further progress on these issues:

1. Initiative by international statesmen and non-aligned nations to induce Iran to take a positive leadership role in garnering international support for a nuclear-weapons-free world, as a means to provide a positive solution for the pending crisis in the Middle East and strengthen the commitment of Iran to remain a non-nuclear weapons state.
2. Concerted effort of civil society organizations and sympathetic national governments to conduct a global program of public education to challenge myths and superstitions regarding nuclear weapons that obstruct steps toward complete nuclear disarmament.
3. Exploratory steps to constitute an international consortium of civil society organizations and national governments to conduct a global referendum for a credible assessment of the will of humanity regarding the legality of nuclear weapons.
4. Reference back to the International Court of Justice for review of its 1996 Advisory Opinion on the legality of nuclear weapons and specific time-bound responsibilities of nuclear weapon states for achieving complete nuclear disarmament.
5. Formulation of a time-bound plan and steps leading to complete nuclear disarmament to be presented at the NATO conference in Split, Croatia on May 10-11, 2013.
6. Establishment of international advisory licensing boards to regulate the establishment and operation of nuclear energy reactors.

Scientific evidence rejects the view that aggression and violence are a natural and inevitable characteristic of human behavior. Biologically, war is not a necessary part of the human condition. War results from multiple motivations and plays multiple roles in human affairs. After centuries of incessant warfare, the establishment of enduring peace in Western Europe after 1945 clearly illustrates that aggression and war are products of culture and can be radically reduced by cultural means. War can and must be abolished. The total abolition of nuclear weapons and shift from nuclear to renewable energy resources will constitute landmark steps toward this essential goal.

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## Notes

1. Winston Nagan, "Simulated ICJ Judgment: Revisiting the Lawfulness of the Threat or Use of Nuclear Weapons," *Cadmus* 1, no. 4 (2012): 93-115.
2. Winston Nagan and Garry Jacobs, "New Paradigm for Global Rule of Law," *Cadmus* 1, no. 4(2012):130-146.

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