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From the Editor

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From the Editor's Desk

Dear Colleagues,

Continuing our conversation with you about global issues and innovations in nuclear security, we are pleased to present issue 4.1 of our journal. This issue contains six articles, plus the winning essay in our annual student writing competition, and four book reviews.

We open with “The ‘Double Standard’ of Nonproliferation: Regime Type and U.S. Response to Nuclear Weapons Program,” by Alina Shymanska, a Nuclear Non-Proliferation Education & Research Center (NEREC) Research Fellow at the Korea Advanced Institute of Science and Technology. Shymanska discusses how the United States has in the past treated states that are accumulating nuclear arsenals, either holding them accountable, or not, to the conditions of the Non-Proliferation Treaty. She argues that the U.S. has repeatedly displayed a double standard when enforcing the treaty’s regulations, often exercising more lenient enforcement standards for countries with democratic governments when compared to countries with more autocratic governments. The article concludes that this double standard is not mere bias, but a strategic feature of U.S. foreign policy.

The next article, “Developing Kenya’s Educational Capacity in Nuclear Security Through Nuclear Forensics Research,” by Hudson Kalambuka Angeyo in the Department of Physics at the University of Nairobi, discusses Kenya’s current capacity for delivering education in nuclear security. The author highlights key features of Kenya’s nuclear security education infrastructure and argues that even though progress is being made, it could be accelerated through increased stakeholder investment and government participation in building educational infrastructure.

The article “Irradiation Experiment for Living Insect-Based Radiological Dispersal Device,” by Braden Goddard of Virginia Commonwealth University and Walid Metwally and Ahmad Ababneh of the University of Sharjah, presents the findings of an experiment on the frontiers of nuclear threat analysis, addressing the question of whether insects could be used as radiological dispersion devices.

Next, we present an article by five officials from the National Nuclear Energy Agency in Indonesia (BATAN): “Conducting Nuclear Security Culture Self-Assessments in Nuclear Research Facilities Using the IAEA Methodology.” The authors discuss outcomes of self-assessments that were designed following IAEA guidelines and carried out at three different nuclear facilities in Indonesia. This article makes the case that surveying three distinct sub-cultures—security personnel, non-structural personnel, and structural personnel—was productive in revealing projected benefits of disseminating security-related concepts within multiple sub-cultures.

The following article, “Iran’s Arak Heavy Water Reactors: Past, Present and Future,” by independent defense analyst and nuclear systems consultant Debalina Ghoshal, tracks the development of the Arak Heavy Water Reactors in Iran, explaining the role these reactors played during negotiations for the Joint Comprehensive Plan of Action. Ghoshal then considers the reactors’ current status, and contemplates their future.

Finally, the journal’s own Arjun Banerjee—who is an assistant commissioner in India’s revenue service—offers the article “Arms and The Man: International Security Challenges of 3D Printing.” In this

article, Banerjee discusses, within a nuclear security context, implications of the increasing use and access to 3D printing. Outlining a number of issues that could arise, he argues for the importance of getting regulations into place before these problems occur. Specifically, he writes that the Multilateral Export Control Regimes should be updated as soon as possible in order to mitigate future threats posed by 3D printing.

Next, we are pleased to present the winner of IJNS's annual student writing competition: Khadija Moussaid, assisted by professor Oum Keltoum Hakam, both of the University Ibn Tofail in Morocco. Moussaid's winning article, "Recommended Corrective Security Measures to Address the Weaknesses Identified Within the Shapash Nuclear Research Institute," analyzes the virtual research facility detailed in the IAEA's *Hypothetical Facility Data Book: The Shapash Security Research Institute*. This IAEA book is a training tool used by experts and researchers to practice nuclear security measures. Moussaid's article identifies potential security weaknesses in the Shapash Nuclear Research Institute and concludes by proposing a new layout for the hypothetical facility.

We close the issue with four reviews of recent contributions to the fields of international relations and nuclear security: *Destined for War: Can America and China Escape Thucydides's Trap?* by Graham Allison, *Neighbours in Arms: An American Senator's Quest for Disarmament in a Nuclear Subcontinent* by Larry Pressler, *Global Security in the Twenty-First Century: The Quest for Power and the Search for Peace* by Sean Kay, and *Our Time Has Come: How India is Making its Place in the World* by Alyssa Ayres.

Thank you once again for joining us as we discuss issues and developments in nuclear security. We invite you now, and in the future, to contribute to our discussion by reading these articles, sharing them with colleagues and other interested parties, and by adding your voice to the conversation by contributing materials of your own.

We are grateful for your ongoing engagement and support.

Very best regards,

Dr. Russel Hirst, Managing Editor
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