INENS | Insights

Issue 2 2012

Letter from **Washington**

Interviews

Tibor Tóth

Rafael Grossi

Angela Kane

WINS Achievements and the Academy

South East Asian **Nuclear** Free **Weapon** Zone and the **P5**

Young **Science** and **Industry** **Professionals** gather for **IYNC2012** Conference

Dare to Lead | **Increasing** Stability in South Asia

Edited by:
Martin Lloyd

Designer:
Chris Radley | Hitch.ART Studios

Advertising enquiries:
publications@inens.org

Contact:

Communications Director
Sonia Drobysz
sonia-drobysz@inens.org

Publications Lead
Mikael Shirazi
mikael-shirazi@inens.org

Copyright is normally owned by The International Network of Emerging Nuclear Specialists. Permission to reprint or republish in any form whatoever of this magazine or its content must be sought from INENS: email – publications@inens.org

Printed by:
Mixam UK Ltd, Unit 43, Wenta Business Centre, Colne Way, Watford, Hertfordshire WD24 7ND, United Kingdom

INENS
63A Great Russell Street, London WC1B 3BJ, United Kingdom
www.inens.org

Executive Director
Meena Singelee
meena-singelee@inens.org

Coordinator
Mikael Shirazi
mikael-shirazi@inens.org

Communications Director
Sonia Drobysz
sonia-drobysz@inens.org

Industry Liaison
Christhian Rengifo
christhian-rengifo@inens.org

Membership Liaison
Elva Hardarson
elva-hardarson@inens.org

Global Directories Liaison
Tong Zhao
tong-zhao@inens.org

Careers and Professional Development Liaison
Yogesh Yoshi
yogesh-yoshi@inens.org

Young Generation Networks Liaison
Markus Salletmaier
markus-salletmaier@inens.org

Vienna Liaison
Marcy Fowler
marcy-fowler@inens.org

Africa Liaison
Awwal Bisallah
awwal-bisallah@inens.org

South Asia Liaison
Alankrita Sinha
alankrita-sinha@inens.org

Science and Industry Liaison
Samuel Brinton
samuel-brinton@inens.org

Associate Social Media Liaison
David Harvey
david-harvey@inens.org

INENS Insights, launched in May 2012, is published by The International Network of Emerging Nuclear Specialists. Any views expressed in this publication are solely those of the authors and do not necessarily reflect the views of their respective organisations, INENS or the Nuclear Threat Initiative.

This issue of INENS Insights is funded by:
The Nuclear Threat Initiative

The International Network of Emerging Nuclear Specialists is a company limited by guarantee (registered no 7747588)

Contributors

Natasha Barnes, Education and Communications Officer, Disarmament and Security Centre, New Zealand

Rafael Grossi, Chef de Cabinet and Assistant Director General for Policy, International Atomic Energy Agency

Angela Kane, High Representative for Disarmament Affairs, United Nations

Gaukhar Mukhatzhanova, Senior Research Associate, the James Martin Center for Nonproliferation Studies, United States

Kristin Zaitz, President, North America Young Generation Network, United States

Sasikumar Shanmugasundaram, INENS Member, India

Sadia Tasleem, Lecturer and PhD Candidate, Department of Defence and Strategic Studies, Quaid-I-Azam Universtity, Pakistan

Ambassador Tibor Tóth, Executive Secretary, Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization

Dr Roger Howsley, Executive Director, World Institute for Nuclear Security

Table of Contents

Feature Articles

Letter from Washington 4
Gaukhar Mukhatzhanova

The South East Asian Nuclear Weapon Free Zone and the P5 10
Natasha Barnes

Dare to Lead: Increasing Stability in South Asia 21
Sadia Tasleem and S. Sasikumar

Spotlight On

WINS – Achievements and the Academy 13
Dr Roger Howsley

Next Generation Dialogues – Young Science and Industry Professionals gather for IYNC2012 Conference 15
Kristin Zaitz

An Interview with:

Tibor Tóth 6
Executive Secretary, CTBTO

Rafael Grossi 17
Assistant Director General for Policy and Chef de Cabinet, IAEA

Angela Kane 23
High Representative for Disarmament Affairs, United Nations

About INENS 29

Our Projects 30

Previous Events 31

Note from Executive Director

Dear Readers

We are delighted to publish the second issue of INENS Insights, our official magazine. Insights was launched earlier this year with the intention and hope of providing our members and collaborative partners with a platform to exchange ideas.

The articles in Insights are written by our members and partners and reflect the diverse range of topics and areas of specialisation in which they work. In this issue, we feature articles on disarmament, stability in South Asia, and the work of other non-governmental organisations on next generation activities. This issue also includes interviews with three leading figures in the nuclear field; Ambassador Tibor Tóth, Rafael Grossi, and Angela Kane.

We would greatly appreciate your comments and thoughts on INENS Insights – write to us with your ideas at **publications@inens.org**. For more information on INENS and how to get involved, please consult the "About INENS" section of this edition or visit our website at **www.inens.org**.

We extend our sincere thanks and gratitude to the Nuclear Threat Initiative for their support in our endeavour.

Meena Singelee
Executive Director

Letter from Washington

Gaukhar Mukhatzhanova

Nuclear-Weapon States Meet in Washington, Hold a Public Event - *But Questions Remain Unanswered*

The third "P5 Conference" – consultations among the five nuclear-weapon states (NWS) on the implementation of the nuclear Non-Proliferation Treaty – took place in Washington, DC on June 27-29, 2012. The first two such meetings took place in London in 2009 and Paris in 2011. For the first time, the P5 Conference was preceded by a public event, "Three Pillars for Peace and Security: Implementing the NPT," where representatives of the five NWS shared their countries' perspectives on priorities in the NPT and answered a few questions. In line with the US and UK's efforts to enhance transparency, the event was a welcome development yet left many in the audience wishing for a more substantive discussion on nuclear disarmament.

The first of the two panels at the event featured high-ranking government officials, while the second panel was comprised of the NGO representatives from China, France, Russia, the United Kingdom, and the United States. None of the delivered remarks were for direct attribution, however. It is not clear why such a public event was held under the Chatham House rule, especially considering that all the government representatives spoke in their official capacity and did not share anything sensitive or, indeed, new about their countries' nuclear policies.

Introduced by the moderator Strobe Talbott (Brookings Institution), Pang Sen (China), Patrick Maisonnave (France), Ambassador Grigory Berdennikov (Russia), Robert Hannigan (the UK), and Rose Gottemoeller (the U.S.) took turns in outlining challenges they believe the NPT regime is facing and priorities for the current review cycle. For the most part, the speakers argued that disarmament was on the "right track" and significant progress was achieved in implementing Article VI of the NPT. Looking forward, some of the officials emphasized the need for advances in verification and transparency, while others suggested that more countries should participate in arms reductions. The speakers did not, however, dwell very much on disarmament, turning instead to other challenges such as the nuclear programs of Iran and the DPRK and the need to strengthen provisions on withdrawal from the NPT (Article X). At least one speaker highlighted both compliance and withdrawal as priority issues for the period leading up to the 2015 NPT Review Conference.

While agreeing that the core NPT bargain remains sound, the NWS representatives highlighted the treaty's lack of universality as a serious problem. They proceeded to identify South Asia as the main obstacle to disarmament (referring mostly to Pakistan), suggesting also that it was important to focus on the South Asian nuclear powers' accession to the Comprehensive Nuclear-Test-Ban Treaty (CTBT). Israel, on the other hand, did not receive any mention in the context of universality, NPT outliers, and disarmament, and only one speaker referred to the planned 2012 Middle East Conference as a matter of importance.

When asked about their own plans for implementing Article VI of the NPT and the disarmament section of the 2010 Action Plan, the NWS appeared mostly unprepared to discuss such details. A question from the audience concerning humanitarian dimensions of the nuclear weapons problem – an issue that has been rising in prominence since the 2010 RevCon – provoked a few seconds of awkward silence.

The P5 Conferences are viewed as part of the NWS efforts to fulfill disarmament obligations under the NPT. The first such conference, in London in 2009, was convened to discuss confidence building measures toward disarmament, with the UK placing particular emphasis on verification. The second conference, in Paris in 2011, referenced Action 5 of the 2010 Action Plan, which calls on the NWS to "engage promptly" on a range of issues to achieve progress in nuclear disarmament. At the public event in Washington, however, disarmament seemed to have taken a back seat, and neither Action 5 nor any other specific action item from the 2010 Plan received any special attention. In a particularly frank response to the audience's questions, one of the speakers stated: "Our focus is not on disarmament."

P.S. The joint statement that the P5 issued on June 29 after the end of their confidential, closed meetings made up somewhat for the disappointment of the public event. It was a long and substantive statement, a significant part of which was devoted to transparency and verification. According to the statement, the five states agreed on the work plan for the working group on terminology, chaired by China. In addition to the UK-Norway warhead dismantlement verification project and lessons learnt from implementing START and New START agreements, the statement references – for the first time in such as public manner – the US-UK verification work. The P5 are even considering holding an additional briefing on this work. Disarmament verification appears to be the most promising area for dialogue and cooperation among the NWS. The overall pace of progress in implementing the 2010 Action Plan, however, should continue to draw questions from the non-nuclear-weapon states.

The Joint Statement is available here: **http://www.state.gov/r/pa/prs/ps/2012/06/194292.htm)**

"We must ensure that terrorists never acquire a nuclear weapon." – President Obama, Prague, April 2009

The Monterey Institute's first-of-its-kind Master of Arts in Nonproliferation and Terrorism Studies degree trains professionals for careers in analyzing, preventing, and responding to terrorist threats and the spread of weapons of mass destruction.

- Courses taught by policy, academic, scientific, and technical specialists
- Practical, hands-on work opportunities at the James Martin Center for Non-proliferation Studies or the Monterey Terrorism Research and Education Program
- Internship opportunities at organizations like the United Nations and the International Atomic Energy Agency
- Extensive alumni network in government, international, and private sector organizations

Choose the degree that will make a difference.

Monterey Institute of International Studies
A Graduate School of Middlebury College



Be the Solution • www.miis.edu

An Interview with: Ambassador Tibor Tóth



INENS interviews Ambassador Tibor Tóth on the CTBT's entry into force, capacity building, and cooperation with other international organisations.

Following the National Academy of Sciences (NAS) report on technical issues associated with the CTBT released in March 2012, what do you think could be the main remaining doubts about US ratification voiced by the senators, and how would you answer them?

The recent NAS report examined the capabilities of the International Monitoring System, which is in a much more advanced stage than when the previous report was published in 2002 and which has been tested twice by nuclear tests conducted by the Democratic People's Republic of Korea in 2006 and 2009, and by the tragic events in Japan in March 2011. From my reading of the report, the central concern for US senators is whether the CTBT will improve national security. The CTBT verification regime makes it extremely difficult for a potential violator to conduct a clandestine test without being detected. These detection capabilities will improve further once the Treaty enters into force as new technologies and techniques can be added to the monitoring toolbox, as well as national technical means. Finally, an on-site inspection may be approved to clarify the nature of an ambiguous event. So as far as the verification regime is concerned, it is ready to verify compliance with the Treaty.

Looking into the future and in the event of US ratification of the CTBT, what do you personally think will be the hard cases delaying entry into force, and what would be the best strategy to engage them?

Each remaining Annex 2 State has its own unique set of challenges, and sometimes those challenges are interlocking. US President Obama's Prague agenda injected fresh energy into the push for entry-into-force, and some Annex 2 States could be encouraged to ratify the Treaty if the US were to take the lead on this. This would certainly alter the geopolitical landscape for some countries. The Indian Prime Minister said in 2009 that ratification by the US and China would produce a new situation for India. The Democratic People's Republic of Korea has only recently inaugurated a new leader and it is still unclear what its policies will be long-term. The CTBT would also be a powerful confidence-building measure for the states in the Middle East. The importance of the CTBT for international peace and security cannot be underestimated. Through diplomacy and engagement, not only with states but also all kinds of stakeholders, we can communicate what the membership benefits are.

There are still a number of non-Annex 2 states which have not yet signed or ratified the CTBT. What can be done to encourage these states to sign up to the treaty?

The example of the ratification by Guatemala in January, followed by Indonesia, an Annex 2 country, in February this year is encouraging and introduced fresh momentum towards entry-into-force. It is important to continue to make the case for the CTBT – a future without nuclear testing is of extraordinary value to the national security of every state. The Provisional Technical Secretariat of the Preparatory Commission for the CTBTO, the Article XIV Coordinators – designated member-states who coordinate entry-into-force efforts - and the member states are all working hard to promote



Infrasound Monitoring Stations



Radionuclide Monitoring Stations



Hydroacoustic Monitoring Stations



Seismic Monitoring Stations

the Treaty and get across a message that every ratification counts. The CTBT already has 183 signatories, out of 196 states in the world. We work with all outstanding ratifications individually, as well as in a multilateral framework. The involvement of non-traditional stakeholders, however, is crucial. NGOs, universities, individuals, research institutions – these are all what I call force multipliers: they build support and critical momentum for the Treaty and its entry-into-force.

The CTBTO offers multidisciplinary, free of charge training programmes as part of its Capacity Development Initiative and an Itunes U page pooling educational and informational material about the CTBT. What have been the main tangible achievements of the CDI to date and what are your aims for the future?

CDI is really the core of our engagement with non-traditional stakeholders. Since the beginning of last year, we have had over 300 people come to Vienna to take the courses, with hundreds more taking the course online through the live stream and archived lectures available on the e-learning platform. Participants are required to complete various requirements to receive a certificate of successful completion. There is tremendous interest and engagement from the online participants. This shows the impact of the e-learning platform, that all these people all over the world, who have never visited the CTBTO, are learning about the CTBT and its verification technologies and how valuable it is for peace and security. Enrolments for the courses have a very wide geographical distribution and the majority of participants come from developing countries. That's very inspiring.

We held the Intensive Policy Course in July, and we will hold the Advanced Science Course, "Around the Globe and Around the Clock: The Science and Technology of the CTBT" from 12 to 23 November in Vienna. The course will provide an in-depth and interactive look at the verification technologies of the CTBT and I hope that INENS members will participate in the course.

What are the biggest hurdles to completing the build-up of the IMS and how do you think these can be overcome?

The IMS is made up of 377 facilities and is currently close to 85% complete, which shows significant progress since just a few years ago. One of the main challenges to completing the IMS is that we are unable to start construction in those countries that are yet to join the

Treaty. In addition, some facilities are yet to be certified and start transmitting data to the International Data Centre in Vienna. While the IMS should be complete by the time of entry into force, it's not the case that stations can be switched on immediately. Meticulous work, extensive testing and fine-tuning are needed to make sure that the data flows as intended. That's why many countries are already providing data from their stations 24/7.

The other challenge, of course, is the construction of stations in remote and difficult-to-access areas. A lot of these stations are to be constructed from the ground up, rather than having existing facilities as a basis. But with the dedication of the PTS, national data centres and states signatories, and confirmed financial support from states signatories, this hurdle will be overcome.

During the 2011 Japanese earthquake and subsequent accidents at Fukushima Daiichi, the CTBTO made an important contribution to data monitoring, sharing and projection of seismic activity, tsunami warning and radioactive materials. Is there scope for strengthening the role that the CTBTO could assume in future natural and man-made catastrophes?

First of all, the earthquake and accident in Japan were very worrying and saddening events. The Preparatory Commission wanted to do whatever it could to help people who were affected. On 18 March 2011, we started sharing the data from our radionuclide network with the IAEA and the World Health Organization (WHO). This year, we also formalised our membership of the IAEA's Joint Radiation Emergency Management Plan, the inter-agency framework for responding to these kinds of events. Disaster mitigation and response remains a key civil application of the CTBT's verification system and I have been engaging on international forums, such as the Global Platform for Disaster Risk Reduction, on this issue. The main action we can take right now is to maintain the cooperation at the working level.

With ongoing concerns in recent months about a third nuclear test by the DPRK, how would you describe the benefits for the international community if this event would happen with the CTBT being in force as compared to the DPRK's nuclear tests in 2006 and 2009?

Right now the IMS works around the clock and the IDC analysts are ready to detect a nuclear test should it occur. I often say that in the past decade we had only two tests compared to hundreds in the decades of the cold war. Two tests too many, but the CTBT is not just a ban, it is also a simple and powerful idea that the world does not need or want any more nuclear tests. Bringing the Treaty into force is not just about a piece of international law, it is about promoting an enduring commitment to that simple idea. It is said that On-site Inspections that can be requested after the CTBT entry into force represent an ultimate verification measure, which will deter any potential violator from attempting a nuclear test because this violation may be uncovered during such an inspection. From this perspective, if a country conducted a nuclear test after the Treaty's entry into force, another State could submit an OSI request to the Executive Council. If the request was approved by 30 out of 51 members of the Executive Council, a team of inspectors would be dispatched with a purpose to clarify whether a test has been carried out or not and collect facts that could identify the possible violator.

What are the objectives of the 2014 Integrated Field Exercise (IFE)? What can an on-site inspection contribute to verify compliance with the treaty as compared to currently available verification measures?

The objectives of IFE are threefold: to test crucial aspects of each phase of the OSI in an integrated manner, to test procedures, including the Draft OSI Manual and identify areas that require more attention. IFE14 will test 15 OSI techniques, four more than IFE08, and will be at least one week longer than IFE08. A lot of progress has been made since 2008, and IFE14 will be a major opportunity to evaluate that progress.

How can organisations like INENS contribute to the work of the CTBTO?

NGOs and professional associations can contribute as advocates by raising awareness and promoting CTBT education for students and young diplomats and other professionals, especially through in the context of our Capacity Development Initiative. INENS in particular is an organization for young people and it is key that the next generation have the knowledge, the capacity and the passion to maintain, strengthen and enhance the CTBT and its verification regime. The journey of the CTBT has been a difficult one. It is simple, and perhaps too convenient, to come to negative assessments when circumstances become challenging, but young people have the energy and the fresh perspectives to move forward in the face of pessimism. Ultimately, it is they who will have to live with what we build or choose not to build. History has proven over time that the actions or inactions of one generation will have an impact on many generations to come. This is why I believe the Commission's CDI offers unique opportunities for the next generation to take responsibility for the future. To paraphrase President Kennedy, I have started to say, "ask not what the CTBT can do for you, but what you can do for the CTBT".

CTBTO PREPARATORY COMMISSION | preparatory commission for the comprehensive nuclear-test-ban treaty organization

AROUND THE GLOBE AND AROUND THE CLOCK: THE SCIENCE AND TECHNOLOGY OF THE CTBT

12 - 23 November 2012

The course will take an in-depth look at the verification technologies of the test ban, including live lectures from internationally-renowned expert lecturers as well as CTBTO staff, interactive sessions and site visits. The course is free of charge and can be taken either in-person in Vienna or online and offers the opportunity to achieve a certificate of successful completion. The course will cover:

- The science and technologies supporting the CTBT verification regime;
- Data analysis techniques and data products;
- Atmospheric transport modelling and data fusion;
- The development of the on-site inspection regime, including a simulation exercise;
- The civil and scientific applications of CTBT verification technologies;
- And much more...

The course is part of the CTBTO Capacity Development Initiative (CDI), which aims to train and educate the next generation of CTBT experts, in particular from developing countries, in the technical, scientific, legal and political areas of the Treaty and its verification regime. Women are especially encouraged to participate.

register online at ctbto.org/cdi

cdi capacity development initiative

Training and educating the next generation of CTBT experts

The South East Asian Nuclear Weapon Free Zone and the P5

Natasha Barnes

On July 8, 2012, the South East Asian Nuclear Weapon-Free Zone (SEANWFZ) Commission postponed the signing of the Protocol to this Treaty at the 45th Association for South East Nations (ASEAN) Foreign Ministers Meeting held in Cambodia. This postponement was due to reservations from four of the five recognized nuclear-weapon states (NWS).[1]

There were widely held expectations that the NWS would sign this protocol at the meeting as negotiations had been revived after 10 years of stalemate. At the 19th ASEAN Summit in November, 2011, it was reported that the NWS had agreed in principle to sign the protocol.[2] United States (US) Ambassador Susan Burk commented in February, 2012, that she was "pleased to report that we have resolved our substantive differences and upon completion of some procedural steps, we expect to be able to sign the SEANWFZ Protocol this year."[3] The Chairperson's Statement at the 20th ASEAN Summit, held in April, 2012, noted that ASEAN "looked forward to the signing of the Protocol by the five Nuclear Weapon States in July 2012."[4] As late as July 6, 2012 a spokesperson for Cambodia's Ministry of Foreign Affairs and International Cooperation indicated that the NWS states would sign. The NWS are now expected to sign this protocol at the 21st ASEAN Summit in November, 2012.

While decade long negotiations and last minute delays are no surprise in the field of international nuclear relations, the late change of heart suggests that the NWS were very close to signing the protocol. This renewed momentum around the SEANWFZ Protocol is notable as it comes partly as a result of the Obama Administration's support for Nuclear Weapon-Free Zone (NWFZ) treaties as part of the Prague Agenda.[5] More importantly however, it is notable given the recent difficulties in achieving consensus between the NWS and is remarkable given that the Protocol effectively requires the denuclearization of South East Asia.[6]

NWS accession to SEANWFZ

NWS accession to SEANFWZ is necessary in order fulfill the ultimate goal of the treaty, which is to prohibit any nuclear weapons-related activity in the zone. In addition, agreement by the NWS to respect the provisions of the treaty and to provide legal assurances that they will not use such weapons against zone members helps to strengthen the commitment by regional states not to pursue nuclear weapons. Despite the worthy contribution of the SEANWFZ Treaty, which entered into force in 1997, to regional and global non-proliferation and disarmament norms, it requires 'legally binding' commitments from the NWS. The United Nations (UN) Disarmament Commission has emphasised the importance of NWS commitment to NWFZ treaties in report dated April 30, 1999.[7]

There is no question of the contribution of the SEANWFZ within the region. The treaty acts as a confidence building measure, increasing transparency, accountability and communication between regional treaty partners. The fact that the treaty negotiation process was initiated from within the region increases states party buy-in to global non-nuclear weapons-state and anti-nuclear norms. SEANFWZ also provides a secure platform from which the international community can build-capacity around nuclear security, nuclear safety and nuclear energy, as the Treaty reaffirms states' commitment to work under regulation of the International Atomic Energy Agency (IAEA). The role of NWFZs was reaffirmed in the Final Document of the 2010 Review Conference of the Nuclear Non-Proliferation Treaty (NPT).

This role, including in constraining proliferation, will only increase in importance as states in the region look to nuclear power as an energy source. As Peter Crail and Xiaodon Liang note: "the treaty incorporates measures for the investigation of suspected violations and allows zone members to collectively establish fact-finding missions. Such a regional mechanism could be utilized to address Myanmar's suspected illicit nuclear-related work."[8]

The question, from a NWS perspective, is whether it is viable and practical to constrain their nuclear activities in the region and whether this will in some way shape or determine future disarmament efforts.

The SEANWFZ Treaty

The provisions of the SEANWFZ Treaty can be broadly classified:[9]

What states parties undertake not to do themselves (with respect to nuclear weapons)

The treaty requires each state party not to "develop, manufacture or otherwise acquire, possess or have control over nuclear weapons; station or transport nuclear weapons by any means; or test or use nuclear weapons." These provisions have a world wide application.[10]

What states parties undertake not to allow other states to do (with respect to nuclear weapons)

The treaty outlines the same requirements for NWS, but does not prohibit the transport of the weapons, thereby preserving the right to innocent passage under the United Nations Convention on the Law of the Sea (UNCLOS). Each state is to decide individually whether to allow foreign ships or aircraft (which could be nuclear powered or nuclear armed) to visit or transit through their airspace or territorial waters.

Obligations in relation to the peaceful uses of nuclear energy and the dumping of radioactive material and wastes.

The treaty also outlaws the dumping of radioactive waste or materials anywhere in the zone, and requires all states parties to maintain full scope International Atomic Energy Agency safeguards over their nuclear facilities.

Compliance, implementation and verification

The treaty provides for the Commission for SEANWFZ to oversee the implementation of this treaty and ensure compliance with its provisions. The treaty also gives each state party the right to ask another state party for clarification or a fact-finding mission to resolve an ambiguous situation or one which may give rise to doubts about compliance. State parties can resolve breaches of the treaty by coming into full compliance. If this fails, the Commission has responsibility for deciding on appropriate measures, including the submission of the matter to the IAEA and, where the situation might endanger international peace and security, the Security Council and the General Assembly of the United Nations.

The SEANWFZ Protocol

It is the requirements of the Protocol, and the far-reaching provisions in the main body of the Treaty, that are proving to be the stumbling block to NWS accession to the treaty. The SEANWFZ Protocol requires that NWS "do not use or threaten to use nuclear weapons within the zone, contribute to any violation of the treaty and commit to stopping nuclear weapon proliferation and testing in the Southeast Asia."[11] While this wording is similar to the protocols attached to the Treaties of Pelindaba (African NWFZ), Rarotonga (South Pacific NWFZ) and Tlateloco (South America NWFZ) with reference to the use or threat of use of weapons against states parties and to weapons testing, the SEANWFZ Treaty goes beyond other existing NWFZ agreements. It prohibits nuclear weapons from being launched from within the zone against outside targets. It also extends the zone of application to include the continental shelves and exclusive economic zone (EEZ) of the States parties.[12]

NWS Reservations

The NWS are generally reluctant to limit their rights and operational capabilities, particularly where doing so may established a precedent for future decision making in the region, and across the board.

The NWS hold reservations against the scope of the treaty including the definitions of territory, the legally binding negative security assurances to states in the region, the influence of the treaty on the sovereignty rights, the right to self defense, and the right of foreign ships and aircraft passing into the zone.

Territory

NWS are concerned at the exact geographical extent of the Southeast Asian zone. This problem of definition is aggravated by the overlapping EEZs in the South China Sea variously claimed by Brunei, China, Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam. China has specific concerns that the treaty will affect its claims to sovereignty over territory, EEZs and continental shelves in the South China Sea.[13] The US, in particular, is concerned about the possibility of territorial disputes as a consequence of the definition.

Freedom of navigation and consistency with the 1982 UN Convention on the Law of the Sea (UNCLOS)

Russia and the US have expressed concerns regarding the rights of foreign ships and aircraft to pass into the nuclear-weapons free zone.[14] Russia and the US are seeking to protect their right to transport nuclear warheads through the region, and the tradition of neither confirming nor denying whether their ships are armed with nuclear weapons. While the treaty expressly allows for freedom of navigation, it also prohibits state parties from allowing another state to "possess or have control over nuclear weapons" in the territory of the states party. Given that the definition of 'territory' within the zone is extensive and as such is disputed, this provision is problematic and may not be in accordance with UNCLOS. The US has stated that any restrictions on the freedom of navigation could create a "unfortunate precedent" that undermines the US interpretation of maritime law.[15]

Legally binding negative security assurances to states in the region

Four of the five NWS have indicated their support for negative security assurances to states parties in the region. Such assurances have proven to be problematic for many of the NWS as it removes the calculated ambiguity around nuclear deterrence.

Although the current US nuclear posture limits nuclear strikes against states in compliance with their obligations under the NPT, the US remains concerned by the overly broad nature of the legally binding negative security assurances in the Treaty.[16] China is the only NWS that

has explicitly rejected the first use of nuclear weapons and has pledged not to use nuclear weapons against any NNWS and/or member of a NWFZ. A spokesperson for the Chinese Foreign Ministry has stated that: "According to relevant provisions of the Protocol, the five nuclear states, namely China, the US, Russia, the UK and France should assume the obligation of not using or threatening to use nuclear weapons against the signatories to the Treaty upon signing and ratifying the Protocol."[17] France, Russia, and the United Kingdom (UK) generally accept the UN principles for establishment of NWFZs. They make their decisions to support individual NWFZs on a case-by-case basis.

No use pledge

NWS, particularly the US, "also raised concerns about the scope of application of the no-use pledge. Rather than negative security assurances being made only to the members of the zone, the nuclear powers would have to agree not to target any areas within the zone, including the EEZs, and from within the NWFZ." The NWS, France in particular, appear to be particularly challenged by the prohibition against launching weapons from within the region as this limits their capacity for self-defense.[18]

Emerging threats

The UK has expressed concerns regarding the possibility for new threats and developments and developments in the region. This concern is one that is driving NWS reluctance to commit to negative security assurances, the no-use pledge and to any limitations on their capacity to operate and transport weapons in the region.

Procedural rights

The US has also expressed concerns regarding "the procedural rights of the parties to the protocol to be represented before the various executive bodies set up by the treaty to ensure its implementation."[19] Such rights commit the US to the arbitration procedure in accordance with international law, and remove the capacity to take other actions. Additionally there are concerns about the viability, independence and transparency of the Commission and dispute resolution process.

Inclusion of the other nuclear-armed states

Limited attention has been paid to the exclusion of the non-NPT nuclear-armed states, Israel, India or Pakistan, in NWFZ protocols. While this exclusion is predicated on the fact that these states are not recognised by the non-proliferation regime as having legitimate nuclear weapons status, NWS are reluctant to commit to any limitations that are not universally applied.

The likelihood of future ratification

Similarly, ratification of the SEANFWZ protocol will require substantive agreement from most, if not all NWS. Despite indications that the NWS are willing to engage in substantive negotiations and ratify the protocol, it will surprise no-one if the 21st ASEAN Summit in November, 2012 does not produce the signatures either.

While not an impossible task, many of the reservations affect the main body of the text which cannot be modified. The NWS may go ahead and sign the Protocol, as a result of amendments, deleted references, interpretive statements or by recording their reservations. The latter has been done in the past with NWFZ accessions to other NWFZs. France attached reservations to the protocols to the Treaty of Rarotonga including reference to restrictions on the right of self defense, the US has included concerns about limitations to right of passage of its nuclear vessels and aircraft in the region.[20] Additionally, it should be noted that for many NWS, signature, while a necessary first step, is not the same as ratification. In any case, the options above allow NWS to delay the resolution of any other issues indefinitely.

Regardless, accession by the NWS to the SEANWFZ will not reduce the Treaty's current role in South East Asia, but it may increase security by reducing threat perception in a region vulnerable to interference from the great powers.

Persisting issues

The reservations raised by the NWS speak to much larger issues within the nuclear non-proliferation regime, including: regional security and geo-strategic concerns that impact on NWS nuclear decision-making and posturing, limits on NWS' force posture and deployment of nuclear weapons (including negative security assurances), and the role of deterrence and alliance relationships in the East Asian region. As Paul Ingram has commented: "(t)he United States in particular has stipulated that NWFZs should not disturb existing security arrangements to the detriment of regional and international security or otherwise abridge the inherent right of individual or collective self-defense".[21]

Among a number of variables that could determine the future accession of the NWS to the SEANWFZ Protocol, the one that may have the greatest impact on the November ASEAN meeting is the US Presidential election also scheduled for November, 2012. SEANWFZ is recognized as enhancing US security by furthering current global non-proliferation and arms control objectives.[22] However, the potential for future changes to the US nuclear posture (reversion back to the calculated ambiguity of previous Nuclear Posture Reviews) may decrease the likelihood of US commitments.

The current focus on the SEANWFZ Protocol may not be sustained the NWS, particularly in the US, as other pressing nonproliferation and security concerns look likely to dominate future agendas. Senior US Republicans involved in the Senate debate around the ratification of the Pelindaba and Rarotonga Protocols expressed concern that NWFZ were not addressing states such as Iran and Syria, and regions in which nuclear proliferation was a current threat such as the Middle East.[23]

Spotlight on

WORLD INSTITUTE FOR NUCLEAR SECURITY

Achievements and the Academy

Dr Roger Howsley

The World Institute for Nuclear Security (WINS), founded in 2008, provides an international forum in which those accountable for nuclear security can promote, discuss and exchange best security practice and learn from each other. We encourage and promote leadership and commitment at all levels as well as the awareness that best security practices can be discussed and shared without revealing sensitive classified information. During the three year foundation phase, WINS published over 26 Best Practice Guides in 8 different languages and organised and conducted more than 25 international workshops on five continents. WINS has over 1100 members around the globe and provides the only website in the world where nuclear security practitioners, including scientists, technicians and engineers, can access practical and relevant security guidance and best practices. The Institute has achieved broad international and political recognition from governments and industry for its work to improve the security of nuclear and high hazard radioactive materials so that they are secure from unauthorised access, theft, sabotage and diversion and cannot be used for terrorist or other nefarious purposes.

The WINS Academy

WINS has established the WINS Academy to produce a world-wide system of Professional Development materials for people in positions of accountability for nuclear security programmes. We will develop and provide a suite of competency-based training modules that are organised around specific roles amongst security-related practitioners, including non-security personnel. This is a logical extension of the first phase of WINS's work to develop International Best Practices.

As an appetiser to the WINS Academy, a Compendium of Best Practices to Nuclear Security Management with the support of the well-known Italian notebook manufacturer Moleskine was published at the 2012 Nuclear Security Summit in Seoul. The work to share best practice is aligned to the Nuclear Security Summit's work plan and is a tangible contribution to the Nuclear Security Summit process.

Another lesson learned from our efforts is that there are no accredited courses and no structure of required competencies for nuclear security professionals. There is a growing recognition of the demand for "Training and Education" in Nuclear Security and a number of countries are establishing Centres of Excellence (CoE) which focus on nuclear safeguards, safety and security. The IAEA is attempting to coordinate these efforts though two separate networks and WINS is involved with both, as an adviser and Chair of one of the key working groups. This will greatly facilitate the objectives and ensure that the work being done by WINS is in close collaboration with IAEA initiatives.

In addition, WINS' assessment is that these efforts are to be welcomed but that they may not be ideally suited to people in full time jobs. WINS believes that people with accountabilities for nuclear security need professional development (PD) opportunities that are targeted on how they can do their jobs better, to make nuclear security as effective as possible. These PD opportunities should be as short as possible and as long as necessary - in brief, efficient. They should have a high impact, be integrated within the professions themselves and should be sustainable - qualities which are consistent with the WINS' philosophy. Accordingly, the PD materials produced by WINS will be based on a thorough understanding of the security competences required by different professional positions within typical nuclear organisations; so called job-task analysis. Within the task analysis, the PD competencies will be established by surveying nuclear professionals and taking into account, as much as possible, regional and cultural differences that affect the security competency framework.

In developing PD materials, WINS will review materials that are currently being developed, in use, or under consideration for security training in order to establish the best practices and the most relevant content. This will include materials in use at more advanced centres so that as much shared learning and transfer of knowledge can take places as possible.

The security competency framework will be used as the basis for determining the knowledge and skill sets required for the professional accreditation in nuclear security and for the design and production of the PD materials to a high, business school quality. WINS will focus on security-related practitioners, as well as non-security personnel. Example roles include:

- Board Members and the Secretary of the Board
- Senior Management – CEOs/Chief Operating Officers
- Nuclear Security Directors
- Engineer (and Designers) and Scientists engaged in nuclear-security related activities or with nuclear security interfaces
- Nuclear Safety and Emergency Planning Managers
- Off Site Response Force Management
- Guard Force Managers

The PD materials are expected to be delivered to course participants in local languages in the most appropriate format; the local Centre or Institute will be responsible for translation. WINS' role will be to ensure that the Centres of Excellence include the fundamental WINS' materials in their courses in order to achieve and maintain accreditation from WINS. In summary, the WINS Academy's mission will be to provide world-class, accredited, competency-based training for nuclear security professionals. WINS believes that this approach will greatly enhance quality and sustainability and should also lead to significant cost savings for those governments and organisations that currently fund international training efforts.

The Outlook for the Academy

The WINS Academy is scheduled to be established within a two year period. In order to provide accredited training, WINS believes that it should achieve Quality Management certification and is working to achieve ISO 9001 Certification by the end of 2012. Subsequently, WINS will identify partner organisations and Institutes that will work with WINS to internationalise the WINS Academy and set in place the certified training

We believe that the WINS Academy will continue to build the WINS brand as being an effective and innovative organisation that provides effective and efficient materials to help share best practice in security programme management for the benefit of society.

If you wish to join our efforts and make a difference, please join WINS via our website.

www.wins.org

TEN YEARS OF NTI
BUILDING A SAFER WORLD

Groundbreaking.
Interactive.
Comprehensive.

NTI's Nuclear Materials Security Index

www.ntiindex.org





Visit www.ntiindex.org and discover a first-of-its-kind public benchmarking project, prepared with the Economist Intelligence Unit, which evaluates nuclear materials security conditions across 176 countries. The NTI Index is sparking an international discussion about priorities required to strengthen security and encouraging governments to take actions to reduce risks.

Next Generation Dialogues

Young Science and Industry Professionals gather for IYNC2012 Conference

Kristin Zaitz

From August 5th through 11th, 2012, young professionals in nuclear science and technology from all over the world gathered in Charlotte, North Carolina, USA for the International Youth Nuclear Congress 2012. This conference aimed to:

- Train and encourage new and future leaders
- Create a platform for career development and networking among young people
- Promote knowledge exchange between the older and younger generations
- Promote science, engineering and communication in fields promoting peaceful uses of nuclear technology

IYNC2012 was co-hosted by the International Youth Nuclear Congress and the North American Young Generation in Nuclear (NAYGN). Both of these organizations believe that the young generation is the future of nuclear science and technology. IYNC is comprised of 42 national delegates across 6 continents. NAYGN boasts over 100 local chapters and 9000 members across the United States, Canada, and Mexico. With the combined efforts of these two groups, IYNC2012 attracted over 600 young nuclear science and technology specialists from 29 countries.

IYNC2012 was an excellent forum to strengthen cooperation and lines of communication within the next generation of nuclear science and technology professionals. The conference's interactive workshops and networking opportunities allowed young people to exchange ideas on technical, social, political, and other issues facing the nuclear industry. "IYNC2012 allowed me to meet people and have conversations that will help me now and in the future," said conference attendee Kyle Millenaar. In one of his technical paper presentations, conference attendee Steve Ward encouraged others to take advantage of the unique knowledge transfer and networking opportunity that the conference presented by giving examples about how the contacts that he'd made in previous conferences and interactions had opened up doors of opportunities to him. With the diverse crowd, large number of attendees, and high caliber of conference content, the groundwork was laid for innovative thinking, lively discussion and lasting relationships.

Content of a typical NAYGN conference is centered on professional development through workshops, while a typical IYNC conference is focused on the presentation of technical papers. The format of IYNC2012 took the best of both organizations and offered both professional development and technical content. The theme of the conference was "Strategic Planning, Opportunity for Innovative Growth." The professional development and technical content aligned with this theme as much as possible to provide continuity throughout the entire week.

IYNC will host their next conference in 2014 in Burgos, Spain. NAYGN will host their next conference on May 12 through the 14th, 2013, in Washington, D.C., USA. For more information, visit **www.iync.org** and **www.naygn.org**



Young nuclear professionals in nuclear science and technology gather for the 2012 IYCN and NAYGN conference

Conference technical tracks included:

- Strategic Planning and Professional Development
- Plant Design, Construction, Operation, Maintenance and Decommissioning
- Nuclear Fuel Cycle and Waste Management
- Nuclear Politics, Economics and Human Resources
- Nuclear Safety, Radiation Protection and Shielding
- Advanced Nuclear Systems
- Radiation Science, Medical Applications and Non-Baseload Nuclear Applications
- Reactor Physics
- Thermal Hydraulics and Fluids
- Materials Science and Technology
- Young Generation Unique Best Practices

In addition to the technical tracks, IYNC2012 offered 11 professional development sessions, 18 small interactive workshops, and six technical tours. Workshops included a BRICS Nuclear Energy Industry session, Media Training, Knowledge Transfer, and Fuel-Cycle Strategy, among others. A nuclear science educational workshop for local teachers was also hosted by conference volunteers on the final day of the conference.

Technical tours were offered to the Electric Power Research Institute, Westinghouse Uranium Fuel Fabrication Facility, a Duke Energy Power Plant and Siemens Turbine Manufacturing Facility, Palmetto Health Radiological Medicine and Surgery, University of South Carolina Engineering Research Laboratories, and South Carolina Electric & Gas Company's new construction sites for V.C. Summer Units 2 and 3. The technical tours presented an opportunity for conference attendees to gain hands-on experience, get out of the normal conference and work environment, and network with each other. At V.C. Summer, tour participants learned firsthand the from SCE&G CNO, Jeff Archie, about project management challenges, integrating regulatory issues, and technical advancements in one of the largest construction projects currently underway in the United States. Regarding the EPRI tour, conference attendee Daniel See shared: "We learned about non-destructive examination equipment to inspect welds and base metal for soundness and eddy-current testing of steam generator tubes for fatigue wear and cracking. We also saw portions of piping that had been removed from service from a running plant, with stress histories that can't be duplicated in a lab. The tour was a worthwhile experience."

The conference plenary sessions provided inspirational messages from top executives, officials, and researchers in the nuclear science and technology field. These sessions included presentations from Atsuyuki Suzuki of the Japan Atomic Energy Agency, Commissioner Magwood of the United States Nuclear Regulatory Commission, Ricardo Perez of Westinghouse, Steve Kuczynski of Southern Nuclear Operating Company, Susan Landahl of Exelon, Marv Fertel of the Nuclear Energy Institute, and many other high caliber speakers.

One of the many complementary activities included in the conference was the opportunity to provide a video testimony for the NAYGN video committee. Understanding the importance of international business and co-operation in today's nuclear industry, the NA-YGN team interviewed young professionals from different countries such as US, Mexico, Russia, Sri Lanka, India and Canada. NAYGN video committee lead Rahul Srinivasan shared, "each participant was asked to talk about his passion for the nuclear industry and why he or she endorsed a peaceful nuclear future. Insightful, international perspectives from young professionals emphasized that the future of the global nuclear industry is in safe hands." NAYGN will review the many testimonials that were given throughout the conference and consider the best for posting onto the group's YouTube channel: **http://www.youtube.com/user/NAYGN.**

An Interview with: Rafael Grossi



The DG's right-hand man discusses the IAEA's activities and implementation of the 2010 NPT Review Conference Action Plan.

How has the IAEA been promoting implementation of the Action Plan adopted at the 2010 NPT Review Conference?

The adoption of the Action Plan was undoubtedly an important accomplishment of the 2010 NPT Review Conference and the Agency stands ready to cooperate on all issues as recommended by the Conference. Many of the activities recommended such as encouraging countries to adopt the Additional Protocol strengthening the efficiency of safeguards or strengthening national regulatory controls of nuclear material in our Member States already build an integral part of our daily work. The Agency will of course continue its efforts and cooperate with its Member States in every possible way to meet the recommendations of the Action Plan.

Action 33 of the NPT Review Conference Action Plan calls upon all NPT state parties to ensure that the IAEA continues to have political, technical and financial support so that it is able to effectively meet its responsibility to apply safeguards as required by article III of the treaty. To what extent is that commitment being fulfilled?

As you can imagine, the likely increase in the number of countries with nuclear programmes will mean an increased work for the IAEA. Tackling this workload and ensuring that we maintain a robust global safeguards system represents a great challenge to the Agency. Action 33 sends a very important signal to the Member States to provide the IAEA all the necessary resources for the Agency to be able to perform our work effectively. In addition, actions 53 and 54, which urge states to make every effort to strengthen and ensure sufficient resources for the IAEA activities under the technical cooperation programme, show the recognition of the importance of our work in peaceful applications of nuclear technologies. The activities under this programme range from assisting countries in developing proper infrastructure for introduction of nuclear power to applying nuclear techniques for producing safe and sufficient food, for example. I believe that our Member States see all the challenges and the need to equip the Agency with adequate financial and technical means.

It is no secret that these are times of budgetary stress for many countries around the world. But we are confident that even in this very tight financial environment there is recognition of the crucial job this Agency does for everybody. On our part we remain austere and reasonable in our estimates.

What progress has been made on exploring and implementing a future verification role of the IAEA in disarmament?

The IAEA's biggest contribution to disarmament is verification of nuclear activities. Since nuclear energy continues to be part of the energy landscape, the IAEA has to strengthen its efforts to ensure that nuclear science and technology are used exclusively for peaceful purposes and that States are fully complying with their non-proliferation obligations. The Agency's ability to provide credible assurance about the absence of undeclared nuclear materials and activities is a highly effective tool. On the other hand, we are helping to build confidence by verifying independently that nuclear materials from dismantled weapons will not be used again for military purposes. This was the case when the Russian Federation and the United States requested Agency to undertake a verification role under their agreement on the disposition of plutonium no longer required for defence purposes.



The IAEA International Remediation Expert Mission examines Reactor Unit 3 during the team's visit to the Fukushima-Daiichi Nuclear Power Plant

The IAEA also strongly supports the creation of new Nuclear-Weapon-Free Zones and helps to implement them. Through prohibiting the development, stationing or testing of nuclear weapons in their respective regions, the zones they are a very effective and relevant means of non-proliferation and disarmament.

There have been discussions about the IAEA's authority to investigate weaponisation activities. Should the Agency's mandate be clarified in that area?

The Agency's activities under comprehensive safeguards agreements (CSAs) present an extremely important tool in verifying both, the correctness and completeness of a State's declared nuclear material and nuclear-related activities. The inspections and all the Agency does in terms of verification is in full accordance with the mandate and authority entrusted to the Agency by the CSAs, and for those countries that choose to ratify it, by the Additional Protocol (AP).

What is the current status of the IAEA's fuel bank and what are the Agency's plans to approach the nuclear fuel market to procure nuclear materials for the fuel bank?

The Board of Governors approved the establishment of low enriched uranium (LEU) bank owned and managed by the IAEA in December 2010. Kazakhstan was selected as host state. We have already started work on administrative, financial, legal and technical arrangements. This LEU bank will help to ensure that countries using nuclear power have dependable source of fuel supply. The intention is to have enough LEU at any time to meet the fuel needs for two to three years of operation for a 1.000 MWe reactor. The purpose of the LEU should be to serve as a last resort for a Member State if LEU supply is suddenly disrupted and cannot be restored by commercial means. Of course, such a State has to fulfil certain eligibility criteria before it can obtain LEU from the bank.

How can collaboration be strengthened amongst the IAEA, CTBTO and UNODC in terms of nuclear safety and security?

We are working very closely not only with the CTBTO and UNODC, but also many other international organizations on issues related to nuclear safety and security. A common goal for the IAEA and the UNODC is preventing terrorist from acquiring nuclear material or a nuclear weapon. UNODC and the IAEA are both members of the Counter Terrorism Implementation Task Force (CTITF) working group and in cooperation with UNODC we've published nuclear security recommendations that should be seen as guidance on how to ensure that nuclear facilities and nuclear material are properly guarded.

Our collaboration with CTBTO is good. We have well established channels of cooperation, which were used during the crisis following the Fukushima Daiichi accident. Already in the first days after the accident we worked together very closely to determine how serious radioactive emissions from the power plant were. Here, the International Monitoring System designed to detect signs of nuclear explosions played a very important role in collecting radioactive traces. The information provided by CTBTO was important to help assess the consequences of the accident. The IAEA and CTBTO also work closely together in an Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE), which is primary inter-agency coordination mechanism with regard to nuclear and radiological emergencies.

Since the Fukushima incident, in what ways are member states enhancing the IAEA's authority to oversee nuclear safety?

The Fukushima Daiichi accident was a wake-up call for all countries with nuclear power plants and a reminder that nuclear safety can never be taken for granted. A serious, uncompromising safety culture must take root everywhere. In June 2011, the Director General convened the IAEA Ministerial Conference on Nuclear Safety in Vienna to pave the way for an enhanced post-Fukushima global nuclear safety framework. Eventually, in September 2011 the IAEA General Conference took a historical and significant step towards strengthening nuclear safety and adopted the Action Plan on Nuclear Safety. This was the first time in the life of the Agency that its 151 Member States committed themselves to strengthening the global nuclear safety framework at the national, regional and international level. The implementation of all the tools included in this programme opens a new phase in the quest for an enhancement of nuclear safety worldwide. Countries are strengthening nuclear power plant safety, emergency preparedness and response and undertaking extensive measures in areas such as decommissioning, remediation, and radiological protection. One might call it a nuclear safety renaissance.

The IAEA is working closely with its Member States to ensure not only the adequate safety standards but also their implementation throughout the world. Strengthened nuclear safety as well as transparency should help to regain public trust which has been severely damaged after Fukushima. The possibility of accidents at nuclear power plants can never be completely ruled out. But nuclear power does have a good overall safety record. New reactors being built today incorporate much stronger safety features compared with the Fukushima generation of reactors. Future generations of reactors will be safer still.

How is the IAEA working with newcomer countries to strengthen safety and security cultures?

It is always a sovereign decision of each country whether to add nuclear power to its energy mix. The figures after Fukushima show a still great interest in the nuclear power on the part of newcomers and we are actively supporting these countries that decided in favour of nuclear in their endeavours. Each country has specific needs and our assistance at every stage is tailored and timed for newcomers. We provide them with advice on how to put the appropriate legal and regulatory framework in place and how to ensure the highest standards of safety, security and safeguards, as well as with know-how on the construction, commissioning, start-up and operation of nuclear reactors. We hope that with this assistance countries will be able to introduce nuclear power knowledgeably, profitably, safely and securely.

In what ways can the IAEA's role be strengthened in contributing to meeting the UN's Millennium Development Goals?

The IAEA already plays a very important role in contributing to achieving the UN MDG. Nuclear Applications continue to have a great impact in developing countries. For more than fifty years, technical cooperation has been a principal mechanism for implementing the IAEA's basic Atoms for Peace mission. Guided by the priority needs of Member States, the programme focuses on human health, agriculture and rural development and water resource management. It also addresses environmental challenges and helps to develop sustainable energy.

Just to give you a few examples, we help our Member States to develop and improve strategies for sustainable food security by using nuclear techniques. We assist them in development of comprehensive cancer control programmes through our Programme of Action for Cancer Therapy. We also play an important role in facilitating the production of medical radioisotopes. And the IAEA's Environment Laboratories help Member States to assess their water resources and develop policies to ensure the more rational allocation of surface and ground water resources.

We are actively promoting our activities in nuclear applications. Our annual Scientific Forum, which takes place during the IAEA General Conference in September, will focus this year on nuclear applications related to food - especially food production, protection and safety. Last year the main topic of the Forum was water, two years ago the focus was cancer. Our intention through the Scientific Forum is to assist governments in dealing with the problems by making our expertise and assistance available.

We also maintain a very good cooperation with other international organizations such as the World Health Organization (WHO) and the Food and Agriculture Organization (FAO). Only recently, Director General Amano met with the new Director General of the FAO, da Silva and they both committed to further strengthen the long-standing IAEA/FAO partnership, which supports developing countries in using nuclear techniques to improve food security. Director General da Silva also proposed for the IAEA to join the United Nations Secretary-General's High-Level Task Force on the Global Food Security Crisis. So as you see we are trying to bring all these activities into a higher level.

How can organisations like INENS contribute to and promote the work of the IAEA?

It has been widely recognized that one of the problems in nuclear comes from the generational gap between those who were very active in this field in the 70's or 80's and the current generation. We can now see a growing interest in things nuclear among the young

generation and try to attract young people to pursue a career in nuclear field. INENS is a great platform where young professionals working in the nuclear field can meet, discuss, and learn from each other and also from already well-established professionals in the nuclear field. That way you are not only promoting nuclear issues and the work of the IAEA but you also encourage young people to purse career in nuclear field, which will benefit the Agency's work in the future. I believe this is a great achievement and I encourage you to continue your efforts.

What is your favourite part of your job?

Everything I do is very interesting and gratifying from supporting the Director General on his formulation of policies to negotiating on his behalf on critical issues related to our verification activities or supporting his work in area of nuclear applications, where has been putting a lot of emphasis since his first year in office. It is a privilege to be the right hand of someone like Yukiya Amano.

Which living person do you admire most?

I don't really have only one person that I admire in its entirety. But there are many people that I admire for certain things that they've done or achieved in their life and I try to take example on them.

What would you consider as your greatest achievement?

It is really difficult to answer this question as I believe that there is no such thing as a single greatest achievement. As you look back on your career and also your private life you realize that what you believed to be a great achievement was overshadowed by something else. I like to think that everything that we achieve in our lives, sometimes even the smallest things are equally significant for our further growth on both, professional and private levels.

What was the last book (non-nuclear) you read?

"Reset Middle East" by Stephen Kinzer and am rereading "Postwar" by Tony Judt, someone I do admire a lot, to get back to your previous question.

What are your favourite hobbies?

I like sport in general, particularly tennis and scuba diving, something I share with my wife, Cinthia who is incidentally a disarmament expert too, so at home there is a lot of 'talking-shop' too.

Growing up, what did you want to become?

At first, I wanted to be a football player, which was quite obvious growing up in Argentina, but it turned out rather fast that I was not talented enough, so here I am.

Where was the last place you went on holiday?

I went with my family to Egypt, which is a fascinating country.

What advice would you give to anyone wishing to follow a career in international civil service?

It is certainly a career path worth considering. As a national diplomat, having had the chance to cross over to international civil service, I've experienced the magnificent opportunity that international organizations provide. Based on my experience, I would encourage young professionals to appreciate the unique and really global scope that only international organizations can provide you with.



An IAEA scientist with two interns at the Seibersdorf Plant Breeding Unit checking on banana plants

Dare to Lead

Increasing **Stability** in South Asia

Sadia Tasleem and
S. Sasikumar

Close neighbours and keen rivals, India and Pakistan are engaged in another arms race that has significant implications for Asian and international security. On April 19, 2012 India launched an Agni V Intercontinental Ballistic Missile (ICBM). In response, on April 26, 2012 Pakistan launched an Hatf IV Shaheen-1A intermediate range missile. Pakistan also launched a nuclear capable Nasr tactical missile (Hatf IX) in May 2011.

This recent series of missile tests is a mimic of the arms race that began with Pritivi and Hatf-1/Hatf-2 missile tests by India and Pakistan in the late 1980s. India-Pakistan missile tests are part of the larger security architecture that aims to maintain the strategic balance in South Asia, based on credible nuclear deterrence. The continuing tension in the India-Pakistan relationship, aided and abutted by external powers, has the potential to spark another regional conflagration and result in strategic instability.

A realistic reappraisal of the strategic equation between India and Pakistan concludes that a prudent management of the nuclear force that can mutually benefit both these nations and the region as a whole.

The lingering prospect of an arms race in South Asia has several worrying constituents. Firstly, it is important to understand whether the two nuclear armed rivals have fallen prey to a self-consuming, destructive yet inescapable belief in the power of their weapons. Instead of perpetually expanding their arsenals, the example to follow is of China – who managed its limited nuclear arsenal well to protect its vital interests against the USSR and the US during the Cold War. This can serve as a poignant lesson for two South Asian countries seeking to change the dynamics of their security competition.

Secondly, we must consider the consequences of India's rivalry with China on the military relationship of India and Pakistan. India has been deeply conscious for a long time of a growing power gap with China. India's efforts to increase its military capabilities to close (or at the very least slow the widening of) this gap have led to a second, resultant power gap developing between India and Pakistan. This, in turn, causes Pakistan to increase and diversify its own nuclear and missile inventory to avoid being overwhelmed by India's growing military strength.

Yet in the changing power dynamics of Asia this classical 'security dilemma' argument is meaningless. The geopolitical reality of India and Pakistan as sovereign nation-states dispels any fear of subjugation. India is neither interested in, nor capable of, conquering Pakistan; and Pakistan is neither politically nor militarily weak enough to be overwhelmed in a hard power struggle. Genuine concerns on 'Kashmir' can be assuaged through comprehensive negotiations without being influenced by historically inculcated fears that "India may launch an aggressive venture against Pakistan" or "Hatred and suspicion of India (being) whipped up (in Pakistan) to maintain those in power and to divert the Pakistani people's attention from their demands."[24, 25]

Finally, in both India and Pakistan, nuclear weapons and their sophisticated delivery systems are considered crown jewels in their mutual quests for security and prestige. In the absence of universal nuclear disarmament or the success of regional arms control talks, both

nations perceive missile tests as indicators of greatness and signals to each other on the robustness of their nuclear deterrence. Such behaviour risks short term destabilisation as the price for longer term stability as tests increase the credibility of a nations' deterrent and – according to theories of deterrence – make a large conflict less likely. A strong overarching political framework in both India and Pakistan must guide such behaviour, ensuring that reactions are both rational and proportional, as well as being based on an thorough understanding of such tests' long term aims.

Shifts in global power dynamics, the diminishing utility of nuclear weapons as deterrent, as well as the region's own tragic realities of conflict, insurgency and poverty make the case of India and Pakistan a much different one than the Cold War. It is therefore all the more important to prevent an arms race, yet traditional approaches to arms control may not work in South Asia. Conventional approaches largely apply to either bilateral nuclear interactions (as was evident in the Cold War) or multilateral regimes (as is the case of Post Cold War cooperative security model); in either case some degree of co-operation has always been a precondition.

Bilateral as well as multilateral co-operation entails at least a degree of common understanding of the shared interests between adversaries. Leaders in India and Pakistan value military signals more than genuine political communication (except during India-Pakistan cricket matches or during South Asian Association for Regional Cooperation summits).

Also, any initiative that depends on mutual cooperation could be easily sabotaged by terror incidents, such as the 2008 Mumbai Attacks, which undermine trust and feed incendiary rhetoric. Although the designers of an institutionalized framework can incorporate safety valves to prevent the derailing of all bilateral processes, it will always possess some degree of fragility.

Secondly, a more serious challenge is the asymmetry in almost every facet of both countries' composition. India's size in South Asia, coupled with its buoyant economy, technological capacity and development since the end of the Cold War has created a condescending attitude in its relations with neighbours. It is yet to embark on a strategic program to integrate South Asia. Efforts to prevent an arms race in South Asia would therefore have to transcend traditional approaches and embark on innovative coordinated multi-tiered process at the systemic, bilateral and individual levels.

Clearly South Asia is an impressive region for economic growth and development, yet it remains one of the least integrated regions of the world. That tensions between India and Pakistan could ignite into a regional (nuclear) conflagration precludes genuine cooperation between nations in South Asia. Therefore at the systemic level both India and Pakistan have to re-evaluate the utility of nuclear weapons. This requires an ideational revolution on the indicators of power in South Asia. India's Agni-V has cost more than US$480 million and been praised as one of the country's most sophisticated weapons, yet great areas of the country still struggle with poverty. In the foreseeable future India is determined to invest in yet more sophisticated weapons, driven by a need to confront China's military challenge against India. This would inevitably lead to the widening of the disparity with Pakistan yet not guarantee closing the power gap with China.

Rational calculations of material indicators of power during the Cold War did not yield an acceptable baseline to the US or USSR. This baseline must, instead, be found elsewhere. An ideational revolution on the indicators of power on the part of India would not only promote stability between India and Pakistan but also reduce the risk of Sino-Indian Cold War. Ideational revolution can take the form of Sino-Indian boundary dispute resolution, unilaterally capping the range of India's missiles and negotiating an Asiatic arms control treaty with India, Pakistan and China as important players.

In case of Pakistan in particular, there is a dire need to re-examine what nuclear weapons could help achieve. Case-studies like the disintegration of Soviet Union offer important lessons for states with fragile economies to adapt despite having nuclear inventories. The false, or at best superficial, sense of security provided by nuclear weapons needs to be re-evaluated especially in the wake of more pressing regional security challenges – challenges against which such weapons are next to useless.

At the bilateral level, India and Pakistan have to sign a treaty of friendship and cooperation before progress can be made. Cordial relations between both nations can establish an atmosphere for security negotiations. In addition to providing a stable foundation for addressing concerns on arms growth, nuclear proliferation and terrorism, such a treaty would bring a sense of responsibility to the entire subcontinent.

Not all security issues between India and Pakistan can be addressed at a stroke, of course. Nevertheless, institutionalized engagement between both the nations can quell security predicaments. Clearly the idea of India-Pakistan treaty system will generate great scepticism among hawkish analysts in both the countries, basing their logic on the historical record between both countries. However, the scope for progress must not be subjected to selective reading of history from both sides. An institutionalized bilateral relationship between both the countries is possible – and much overdue in South Asia.

Last but not least, dedicated efforts of scholars and academicians in Track II and Track III diplomacy can lay the groundwork for an ideational revolution between both the countries. People to people contact can foster recognition, so conspicuously absent in past debate, of the commonalities between the two countries. Students from India and Pakistan are much better friends when outside the pressuring, divisive borders of South Asia. Track II and Track III diplomacy can help bring forth the fruits of this spirit of co-operation. There are many reasons to be optimistic about co-operation in South Asia - once India and Pakistan dare to lead.

An Interview with: Angela Kane



Appointed in March 2012, as the UN's High Representative for Disarmament Affairs, Angela Kane talks to INENS about the NPT, education, and her experience at the United Nations.

What are your impressions of the atmosphere within NPT state parties during the first phase of the treaty's review cycle?

Overall, the atmosphere was positive and business-like, as States parties began their work of reviewing implementation of the action plan agreed at the 2010 Review Conference. There were of course some differences, such as over the balance of priorities between disarmament and non-proliferation, and the scope of the inalienable right to peaceful uses of nuclear energy. A key development that contributed to the successful meeting was the well-received status report provided by Mr. Jaakko Laajava of Finland, the facilitator for the 2012 Conference on establishing a Middle East zone free of nuclear weapons and all other weapons of mass destruction.

What steps should the state parties undertake over the coming review cycle to ensure that 2015 is successful?

A successful outcome in 2015 will depend less on the words found in statements made during the review process than on the deeds of the parties in implementing the action plan. On nuclear disarmament, the nuclear-weapon States will be expected to have made substantial progress on the steps leading to nuclear disarmament, particularly as specified in action 5 which requires the five States to engage with each other. On nuclear non-proliferation, the peaceful and diplomatic resolution of outstanding regional cases of concerns would undoubtedly help restore confidence in the integrity of the Treaty. For many States, ensuring a positive outcome to the 2012 Conference on establishing a Middle East zone free of nuclear weapons and all other weapons of mass destruction will largely determine if there can be a successful outcome in 2015.

According to you, what have been the main accomplishments in implementing the 2010 Review Conference Action plan? And how can the remaining obstacles be addressed in order for full implementation?

There have been some initial steps forward: the Russian Federation and the United States are implementing reductions in deployed strategic nuclear forces under the New START Treaty. They have maintained a dialogue with the other nuclear-weapon States concerning the implementation of their NPT disarmament undertakings. These discussions have reportedly made some progress in the area of transparency, particularly in developing common standards for reporting information on their nuclear programmes.

However, the number of nuclear weapons in the world is widely estimated at about 20,000, with hundreds of warheads available for immediate use. All the nuclear armed States are either modernizing their nuclear arsenals or actively developing new types of weapons. Worldwide, tens of billions of dollars are spent annually on nuclear weapons, despite so many pressing economic, human security, development and environmental needs that remain to be adequately addressed. There are long-term plans for modernization, but not for achieving disarmament.

One way to address these challenges facing nuclear disarmament efforts is to reduce the perceived legitimacy of nuclear weapons. In this connection, I was pleased by the formation of a new group of 16 countries interested in addressing the humanitarian dimensions of nuclear disarmament. Norway has undertaken to convene a conference in March 2013 to build a better understanding of the humanitarian consequences of any use of nuclear weapons. I believe this work is

important for both the nuclear disarmament process and in strengthening the norms reflected in the NPT. These efforts are strongly backed by groups in civil society.

What do you believe are the short term opportunities and challenges for the conference on the Middle East WMD Free Zone?

The 2012 Conference on the establishment of a Middle East zone free of nuclear weapons and all other weapons of mass destruction will for the first time in decades provide a real and unique opportunity for all the States of the region to constructively address common security problems on an equal level. As was the case with nuclear-weapon-free zones in other regions, such a zone will likely take several years to establish. But this long journey can and must begin sometime and now is better than later, given the security benefits from establishing such a zone and the grave dangers of deadly arms races from failing to do so.

The biggest short term challenge is for all States in the region to build confidence amongst themselves that they will, at the Conference and during any follow-on steps that may be agreed, work in good faith to establish this zone. All States should also refrain from any action that would jeopardize the achievement of this goal. This assurance should pave the way for all States in the region to participate in the Conference and to encourage a positive outcome. The zone can only be achieved on the basis of arrangements freely arrived at by the States of the region.

The Secretary-General of the United Nations, together with the Russian Federation, the United Kingdom and the United States, are doing everything possible to support the work of the facilitator in the preparations for the convening of the 2012 Conference.

The prolonged deadlock at the Conference on Disarmament in Geneva has prevented negotiations on the FMCT to take place. What short term and medium term approaches and alternatives do you think should be explored? Should a time limit be imposed on state parties at the CD to agree on a programme of work?

The international community fully supports the commencement of the negotiations on fissile material treaty as an important and logical step towards reaching the objective of a world free of nuclear weapons.

Yet some significant differences remain among States overthe proper scope of such a treaty. The "Shannon mandate" of 24 March 1995 is very clear in terms of keeping the door open for considering both the future and the past production of fissile materials and even their management. In the course of the 2012 session of the CD, the various Presidents and in particular the Egyptian Presidency worked diligently but unsuccessfully to accommodate different approaches in a new draft of the Programme of Work.

The reasons for the difficulties faced by the CD are largely external and political. They can not be resolved within the CD but rather in the capitals of the key stake holders. Therefore, responding to your question, I would consider the following options:

Given the overwhelming importance of nuclear non-proliferation and disarmament in maintaining international peace and security, the nuclear-weapon States and other States possessing such weapons may wish to consider conducting three-, five-, or seven-party consultations aimed at producing concrete guidance for pursuing nuclear disarmament negotiations on the entire scope of issues, including fissile material treaty. The United Nations Secretariat stands ready to provide every support to such consultations as required. It is up to the membership of the CD to decide on a time limit to agree on a programme of work.

How can the stalemate in nuclear disarmament be addressed? What can be done to strengthen the political will of UN member states?

I share the view of those who have concluded that the stalemate in disarmament is due far more to a lack of political will than to any fundamental flaw in the UN disarmament machinery. In the past, when the international community has widely recognized the risks posed by certain weapons that cause indiscriminate effects, it has taken certain steps to eliminate such weaponry. Yet I believe too many States today view the development and production of weapons as the sole basis of their security. This situation can lead to arms races that both erode security and hinder progress in sustainable economic and social development.

It is therefore important to for States to enhance their security by confidence-building measures (CBMs) that promote peaceful resolution of disputes and expanded mutual cooperation in addressing common security ends. This will offer far greater prospects for genuine security than unending competition in armaments.

The creation of a roster of CBMs at the regional, sub-regional levels might be beneficial here. For example, we could recall the positive history of European CBMs, which paved the way to the end of the Cold War and facilitated negotiations of several disarmament treaties. Today, we are witnessing the beginning of such a process to ensure outer space security. The Group of Governmental Experts (GGE) on Transparency and



Angela Kane addresses the Global Forum on Disarmament and Non-Proliferation Education

Confidence-building Measures in Outer Space Activities in outer space activities conducted its first session in July 2012.

What measures can and should the 5 nuclear weapon states undertake that would demonstrate their willingness and progress towards disarmament? How can India, Israel, Pakistan and the DPRK be brought into the multilateral disarmament process without undermining the NPT?

The benchmarks for progress reflected in Action 5 of the 2010 NPT action plan represent the yardstick by which the disarmament progress of the nuclear-weapon States will be measured in the coming years. The expectations of the international community are set forth in the 2010 NPT final document and include concrete progress on steps leading to nuclear disarmament, such as: a reduction in the overall stockpile of nuclear weapons, including non-strategic and non-deployed weapons; further diminishing the role of nuclear weapons in security doctrines; and implementing transparency and confidence-building measures.

With respect to countries that do not presently adhere to the NPT, there is no "one-size-fits-all" solution. In some instances, regional tension and ongoing political conflicts have slowed the progress of advancing disarmament norms. In these cases, bilateral and regional approaches to disarmament and non-proliferation could greatly improve security and advance disarmament objectives. This is particularly true in the Middle East, South Asia and Northeast Asia.

Continued consultations and confidence building remain key with regard to the possible engagement of NPT non-parties in the multilateral disarmament process, in particular in order to commence negotiations on a fissile material treaty.

What can be done to encourage more outreach and education on nuclear issues in newcomer countries and in developing countries?

The United Nations Office for Disarmament Affairs (UNODA) promotes disarmament and non-proliferation education activities with Member States, non-governmental organizations and the general public. Much of what my office does with respect to education is targeted to the diplomatic community, non-governmental organizations and the general public.

This year is the 10th anniversary of an important United Nations Study on disarmament and non-proliferation education which came up with 34 recommendations for immediate and long-term implementation. It was welcomed by the General Assembly and thus its recommendations have been a guide to our work in this area. Our education activities include the dissemination of information that we produce and make available on our websites, authoring books and book chapters, giving public lectures, holding media events, drafting newspaper opinion pieces, and organizing contests on themes related to nuclear disarmament. Speaking of contests, I would like to mention two in particular that we recently concluded.

The 'Poetry for Peace Contest' in collaboration with the Government of Japan and UN Department of Public Information (DPI), and the 'Art for Peace Contest' in collaboration with the Harmony for Peace Foundation and DPI, were disarmament education programmes launched in 2011 and 2012 respectively via the internet. They were addressed to children, teens and young adults worldwide to make them better acquainted with nuclear disarmament issues. The first exposed individuals the world over to the testimonies of the atomic bomb survivors. Surprisingly, most of these testimonies have until recently only been available in Japanese. However, at the direction of the Secretary-General, after he met several atomic bomb survivors and was so deeply moved by their stories, my office has embarked on an effort to make these stories available in many other languages.

The second contest asked children and teens the world over to use their creative and artistic talents to imagine a world free of nuclear weapons. In both contests, social media tools including Facebook and Twitter were widely used to disseminate information and allowed us to reach a worldwide audience. We saw through our analytics that a large number of participants came from the developing world and the global South.

What can be done to encourage more young professionals to work on nuclear issues? What role can women play in disarmament and non-proliferation issues?

I would like here to mention the United Nations Programme of Fellowships on Disarmament run by my Office. Started in 1978, the Programme trains young professionals of Member States, particularly in developing countries, to enable them to participate more effectively in international deliberating and negotiating fora. Twenty-five fellowships are awarded every year. Women have made up more than 50% of the participants in each of the past three years. And the trend continues.

I believe it's true that fewer people, especially young people, are turning to careers in the nuclear field and those with direct knowledge of building and testing nuclear weapons or verification issues are retiring. That's why at the international level there have been new programmes by organisations such as the IAEA and the CTBTO PrepCom specifically trying to attract and train the next generation of young professionals.

Organisations such as INENS, which are encouraging dialogue on nuclear issues for young professionals, also have an important role to play.

Turning to the second part of your question, yes, women definitely have a role to play in what has traditionally been a man's world. Gender perspectives are important in our work and we have been trying to ensure that gender mainstreaming is part of what we do.

There are many resolutions that address the role of women in the promotion of peace and security. Most notably is the UN Security Council resolution 1325 (2000) on women, peace and security which provided an important framework and context for raising gender awareness in all aspects of security and defence. It also brought into light a focus on the contribution of women as stakeholders in peace and disarmament, and the role of women in decision-making as a necessary element for promoting the prevention of conflicts.

My Office continues to support States in the preparation and adoption of their National Action Plans on the implementation of UNSCR 1325 (2000) and the establishment of national women networks within the context of wider security sector governance programmes. Additionally, resolution 65/69 on "Women, disarmament, non-proliferation and arms control" was adopted by the General Assembly in 2010 which calls for the promotion of the equitable representation of women in all-decision-making processes with regard to matters related to disarmament, non-proliferation and arms control and supports the strengthening and the effective participation of women in organizations in the field of disarmament at the local, national, regional and sub-regional levels.

What attracted you most to the job and what is your favourite part of your job?

For me, working at the United Nations is not a job - it's a way of life. Working to make the world a better place, a bit at a time, and often without much hope of definitive progress - that is what has always inspired me. One must try, always. Growing up in a small provincial town in Germany, I always wanted to see what was beyond the



The Conference on Disarmament meetings in Geneva

boundaries of my rather confined world - and I have. Working with people of different nationalities, different cultures and backgrounds, trying to see things from their point of view and trying to make a difference - that is what inspires me.

Disarmament issues have moved very slowly in recent years and progress has been uneven or absent in many cases. This is a challenge, but being a person with a positive outlook I believe one must always try and do one's best to advance the agenda. Our Secretary-General, Mr. Ban Ki-moon, is an ardent advocate for disarmament and he has been putting forward concrete suggestions and Ideas to the international community. I am heartened by his strong interest and support for disarmament.

Having recently visited Hiroshima and Nagasaki for the commemoration of the atomic bombings 67 years ago has strengthened my resolve. The horror of a nuclear bomb explosion and the suffering of the innocent population should never be forgotten and serve as a stark reminder that nuclear weapons should not exist in a civilized world. I realize that change must come from the States that possess nuclear weapons and that my role is limited to support, to advocate, to nudge, but I will continue to do so with passion and perseverance!

"A career in international civil service is such a privilege. I have had many different assignments, both at Headquarters and in the field, and each has widened my horizon and experience."

What was the last (non-disarmament related) book you read? What are your favourite hobbies?

I don't have much time now for reading books and material not related to disarmament. The book I read most recently (and tremendously enjoyed) was by the former Special Representative of the Secretary-General to Afghanistan, Tom Koenigs. It was published late last year and he writes about his assignment there. The rough translation of the German title is 'Are We Having Peace or Are We Making War'.

To wind down from the lofty perches of international affairs, I often spend time outdoors in the countryside. It is good to contemplate nature, to weed the garden, to mutter complaints about the damage that the deer have wrought on flowers and bushes. It clears one's mind and helps restore balance.

What advice would you give to anyone wishing to follow a career in international civil service?

A career in international civil service is such a privilege. I have had many different assignments, both at Headquarters and in the field, and each has widened my horizon and experience. Where else can you have such fascinating work? The advice I would give to anyone wishing to work at the UN is the following: first, be humble. Second, keep an open mind and learn from others. Third, work incredibly hard, and do so with passion and dedication. Fourth, be adventurous, volunteer for assignments even if they may seem daunting at first. And fifth, improve your language skills - conversing with others in their own language adds a powerful dimension to your understanding and engagement with them.



2013

CARNEGIE INTERNATIONAL NUCLEAR POLICY CONFERENCE

APRIL 8–9, 2013

Ronald Reagan International Trade Center
Washington, D.C.

Join over 800 experts and officials from around the world to discuss emerging trends in nuclear non-proliferation, strategic stability, deterrence, disarmament, and nuclear energy.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE

THE GLOBAL THINK TANK

WASHINGTON DC ▪ MOSCOW ▪ BEIJING ▪ BEIRUT ▪ BRUSSELS

About INENS

The International Network of Emerging Nuclear Specialists (INENS) is a London-based organisation for professionals pursuing a career in the nuclear field. It was launched in November 2010 with the aim of bringing together nuclear professionals in the early/mid stages of their career into a forum for discussion of key pressing and emerging nuclear issues.

INENS is all-encompassing and cross-discipline, and addresses all aspects of the nuclear field, including policy, science, technology, energy, media, research, industry, advocacy and any other relevant fields.

INENS is an independent organisation, and unaffiliated to any governmental or non-govermental organisation. As a network focused on developing practical solutions for policy implementation, INENS works with various organisation around the world to develop new insights.

INENS is run by a Steering Committee of emerging specialists based around the world and is supported by a London-based team who manage the day-to-day operations. The network also has an Advisory Board of established experts who guide the network's development.

Our Objectives

- To bring together emerging nuclear professionals from across the globe;
- To develop new insights in nulear issues;
- To develop the next generation of experts with interdisciplinary knowledge;
- To build working relations among young specialists through international and regional dialogue;
- To facilitate dialogue between emerging specialists and established experts;
- To promote dialogue with emerging specialists from developing countries.

Join Us

Our members can participate in our events, publications, working groups and other activities. Full members also benefit from being listed in the Global Members' Directory online.

Membership of INENS is free of charge and is split into two categories: Full and Affiliate Membership.

For more information and to join, please visit our website at **www.inens.org**

Full Members

Full membership is open to any 'emerging specialist' who is over the age of 23, in entry ot mid-career level positions in a nuclear-related field, and has between one and ten years' experience behind them.

Benefits

- Contact details listing in the Global Members Directory;
- Partial/ full funding towards hotel and flights for conferences and other events;
- Eligibility to join the INENS Steering Committee;
- Listing of latest publications on the INENS website;
- Invitation to speak or present papers at events.
- Free participation in INENS events;
- Monthly newsletter;

Affiliate Members

Affiliate membership is open to those who do not meet the criteria for Full membership including experts and university students.

Benefits

- Invitation to participate in INENS events;
- Access to the Global Members Directory and Global Organisations Directory;
- Monthly Newsletter

OUR Activities

Research

Policy research and analysis is central to our activities aimed at generating new dialogue on nuclear issues.

'Developing Countries in the Global Nuclear Regime' Project

Our project, launched in mid-2012 and funded by the Royal Norwegian Ministry of Foreign Affairs, focuses on the role and impact of developing countries in Africa, Latin America and the Caribbean, and South Asia on the broader nuclear regime.

The project includes:

- Regional conferences in the three regions;
- Online videoconference meetings;
- Roundtable discussion meetings;
- Quarterly briefs;
- Feature articles in INENS Insights.

Working Groups

INENS launched three working groups in March 2012 on:

- Africa in the Global Nuclear Regime
- Multilateral Policy and Institutions
- Nuclear Security

The aims of the working groups:

- To develop new insights on key current and emerging issues on the topics;
- To provide a forum for regular and continuous dialogue among our members;
- To provide a regular forum for members to meet each other.

Main Activities

- Regular online videoconference meetings;
- Regular roundtable events;
- Regular briefs and insights published.

Joining the working group and participating in its activities are free of charge. However, only INENS members are eligible to join the working groups.

Events

INENS hosts interdisciplinary conferences, workshops, and panel events. These events provide an environment conducive to "off the record" dialogue and a forum for participants to develop new ideas on both pressing and longer-term issues.

They provide a forum for participants frm various specialist areas to share their views and provide concrete recommendations to the issues discussed.

Conferences

INENS hosts international and regional conferences in major cities around the world. These are usually held over 2 to 3 days and focus on particular themes and include a series of working sessions, break-out groups and panel discussions. The final recommendations of the events are published in the form of a conference report which are disseminated to various governments, industry and non-governmental organisations.

Roundtable Discussions

INENS also hosts regular roundtable discussions around the world as part of the work of the various working groups, and at side events of major international conferences. Some events are also held as videoconference calls between two locations and for events held on the record, videos are available on our website. The working groups also meet online on a regular basis.

Participation

INENS relies on external funding for its events. There is no registration fee for participation. Subject to funds, INENS provides a stipend to cover the cost of travel and accommodation for participants.

Directories

INENS also has two directories: The Global Members' Directory and The Global Organisations Directory. The members' directory lists our members who agree to share their professional details publicly and provides them with the opportunity to communicate with each other outside of our event-based activities. The organisations directory provides a comprehensive listing of nuclear-related organisations worldwide. Both directories are available free of charge on our website.

Publications

INENS has numerous opportunities for disseminatiom of our members' recommendations to stimulate debate.

The network actively promotes the recommendations from our publications to the policy community and hosts consultations with our members.

INENS' publications include:

- Regular members' newletters
- Annual Magazine
- Conference reports
- Working Group Briefs

Get Involved

There are numerous ways to get involved with INENS:

- Steering Committee Liaisons (full members only)
- Advisory Board (established/ senior experts)
- Collaborative partners
- Funding partners

Contact

meena-singelee@inens.org

Previous Events

Over the past year, INENS has hosted a number of events



Participants at the roundtable discussion



INENS hosted a drinks reception after the meeting

6 June 2012

Vienna, Austria

INENS hosted a panel discussion on strengthening inter-agency cooperation between the CTBTO, IAEA and UNODC on issues of nuclear safety and security. The event, held as part of the INENS Multilateral Policy and Institutions Working Group was attended by a number of diplomats, academics, and NGOs.



Delegates of the PrepCom attend INENS side event discuss verification limitations in Vienna

8 May 2012

Vienna, Austria

INENS hosted a roundtable discussion on the 'status of the implementation of the Treaty of Pelindaba' with Dr Atnatiwos Zeleke Meshesha, Commissioner of the African Commission on Nuclear Energy (AFCONE) and Noel Stott, Senior Fellow at the Institute of Security Studies (Pretoria, South Africa). The event was attended by delegates to the 2012 NPT PrepCom.



Ambassador Tibor Tóth addresses guests during the reception

3 May 2012

Vienna, Austria

INENS hosted a reception for delegates attending the 2012 NPT PrepCom, staff of the IAEA and CTBTO and INENS members in Vienna on the margins of the conference. Ambassador Tibor Tóth, Secretary of the CTBTO was the special guest for the evening. In his remarks, Ambassador Tóth spoke of the role and importance of training the next generation of nuclear experts and announced the launch of the CTBTO's iTunesU application.



Guests at the reception hosted during the PrepCom



Participants at the London roundtable

12 April 2012

London, UK and Washington D.C, US

INENS hosted a half-day roundtable discussion for emerging nuclear specialists in the UK on the implementation of the 2010 NPT Review Conference action plan at the US Embassy in London as part of the INENS Multilateral Policy and Institutions Working Group. INENS also co-hosted a discussion meeting with Ambassador Susan Burk, Special Representative of the US President on nuclear non-proliferation. This event was co-hosted with the Carnegie Endowment for International Peace and participants at the London event joined in the discussions in Washington C via live videolink.

Referencing and Copyrights

Articles

Page 10

[1] "ASEAN postpones all signings on SE Asia Nuke-Free Zone documents this week", Xinhua News Agency, 9 July 2012, http://news.xinhuanet.com/english/world/2012-07/09/c_131703795.htm

[2] Cambodia Urges Superpower Countries to Sign Protocol on SEA Nuclear Weapon Free Zone Treaty, http://www.cambodiaun.org/news/54-jan-2012/252-cambodia-urges-superpower-countries-to-sign-protocol-on-sea-nuclear-weapon-free-zone-treaty.html

[3] Ambassador Susan F. Burk, Address at the OPANAL Commemoration of 45th Anniversary of the Treaty of Tlatelolco, Mexico City, Mexico, 14 February 2012, http://www.state.gov/t/isn/rls/rm/187535.htm

[4] Southeast Asian Nuclear-Weapon-Free-Zone (SEANWFZ) Treaty (Bangkok Treaty), Nuclear Threat Initiative, http://www.nti.org/treaties-and-regimes/southeast-asian-nuclear-weapon-free-zone-seanwfz-treaty-bangkok-treaty/

[5] The Protocols to the Treaty of Pelindaba and Rarotonga have been before the Senate since May 2011

[6] Yuki Zaitsu, "Nuclear-Weapon-Free Zone in ASEAN" Nuclear Age Peace Foundation, 10 July 2012, http://wagingpeacetoday.blogspot.co.nz/2012/07/nuclear-weapon-free-zone-in-asean.html

[7] http://www.un.org/disarmament/WMD/Nuclear/NWFZ.shtml Nuclear-Weapon-Free Zones

[8] Peter Crail and Xiaodon Liang, Southeast Asia Nuclear Weapon-Free Zone and the Nuclear Weapon- States, Asia Pacific Bulletin, 148, 7, February 2012, http://www.eastwestcenter.org/publications/southeast-asia-nuclear-weapon-free-zone-and-nuclear-weapon-states

[9] Lionel Yee Woon Chin, Nuclear Weapons free zones- a comparative analysis of the basic undertakings in the SEANWFZ Treaty and their geographical scope of application, Singapore Journal of International & Comparative Law, 175, 1998, p175

Page 11

[10] Ibid, Crail and Liang

[11] Southeast Asian Nuclear-Weapon-Free-Zone (SEANWFZ) Treaty (Bangkok Treaty), Nuclear Threat Initiative, http://www.nti.org/treaties-and-regimes/southeast-asian-nuclear-weapon-free-zone-seanwfz-treaty-bangkok-treaty/

[12] Ibid, Nuclear Threat Initiative

[13] Paul Ingram, "Will the NWS fail to support the NWFZ...again?", British American Security Information Council (BASIC), 9 July 2012, http://www.basicint.org/news/2012/will-nws-fail-support-nwfzagain

[14] Ibid, Xinhua News Agency

[15] Ibid, Crail and Liang

[16] Ibid, Nuclear Threat Initiative. The US has indicated an effort to endorse the protocols of other nuclear-weapon free zones in the South Pacific and Africa, see Crail and Liang

Page 12

[17] Foreign Ministry Spokesperson Liu Weimin's Remarks on the Protocol to the Southeast Asia Nuclear-Weapon Free Zone Treaty 20 November, http://www.chinaembassy.org.nz/eng/zt/mfasr/t880452.htm

[18] Ibid, Crail and Liang

[19] Ibid, Nuclear Threat Initiative

[20] "South Pacific Nuclear-Free Zone Treaty", Inventory of International Nonproliferation Organizations and Regimes, Center for Nonproliferation Studies Centre, http://cns.miis.edu/inventory/pdfs/spnfz.pdf

[21] Ibid, BASIC

[22] See the two White House releases at http://www.whitehouse.gov/the-press-office/2011/05/02/statement-nuclear-free-zones-asia-and-africa

[23] Gaukhar Mukhatzhanova and Miles Pomper, "Obama Seeks Senate OK for Protocols to Two Nuclear-Weapon-Free Zone Treaties" Centre for Non-Proliferation Studies, 6 May 2011, http://cns.miis.edu/stories/110506_obama_nwfz.htm#fnB4

Page 21

[24] Mohammed Ayub Khan, "The Pakistan-American Alliance: Stresses and Strains," Foreign Affairs 42, no. 2 (January 1, 1964): 205

[25] Indira Gandhi, "India and the World," Foreign Affairs 51, no. 1 (October 1, 1972): 70

Images

Page 6/7
All images © Image Courtesy of CTBTO Preparatory Commission

Page 16
© North America Young Generation Network

Page 18/20
© Giovanni Verlini / IAEA, © Dean Calma / IAEA

Page 23/25
© United Nations

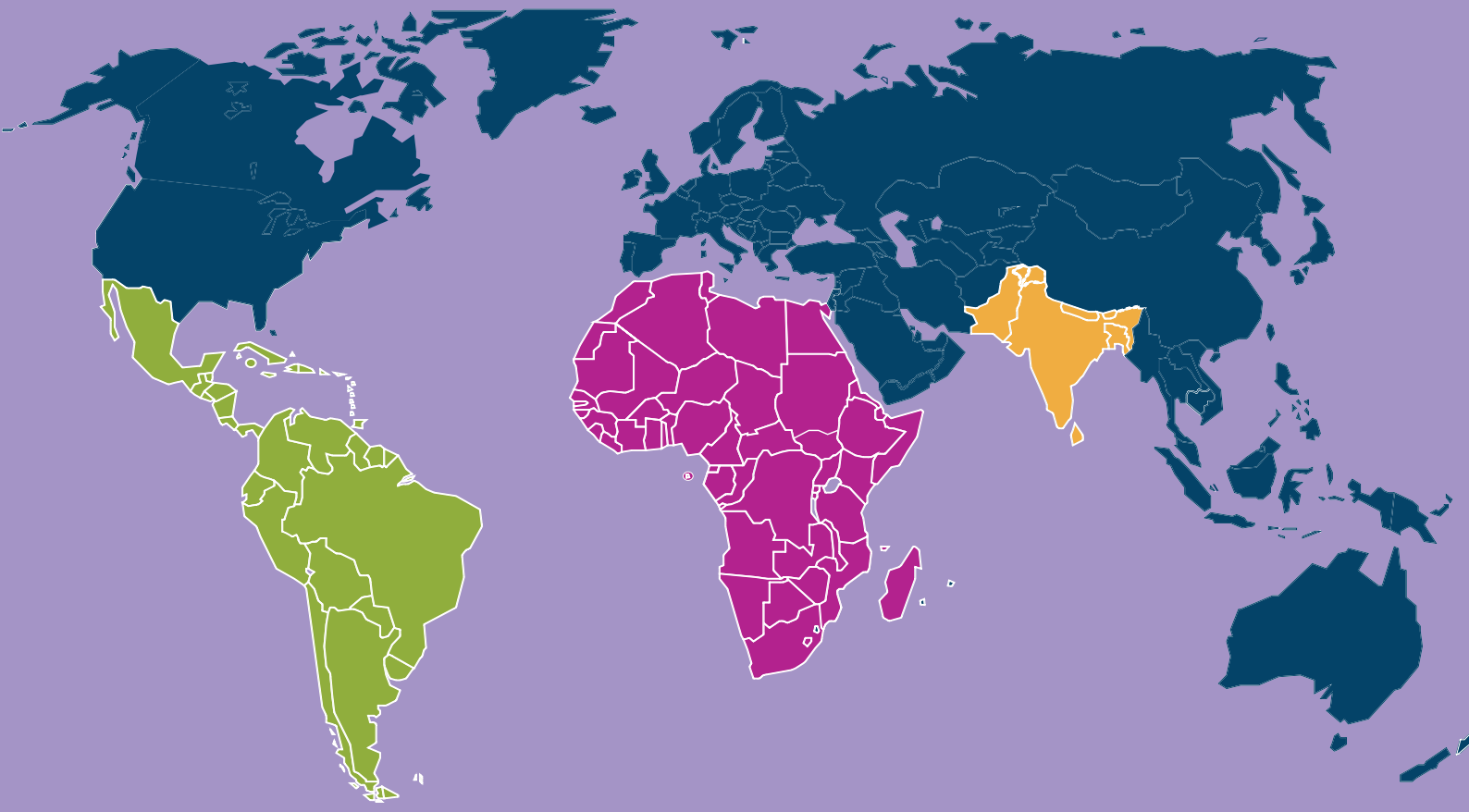
Page 27
© US Mission Geneva by Eric Bridiers

Page 31/32
All images © INENS

The International Network of Emerging Nuclear Specialists

Next generation dialogue on nuclear issues

Developing Countries in the Global Nuclear Regime Project



New two-year project launched in 2012 focusing on Africa, Latin America & Caribbean, and South Asia

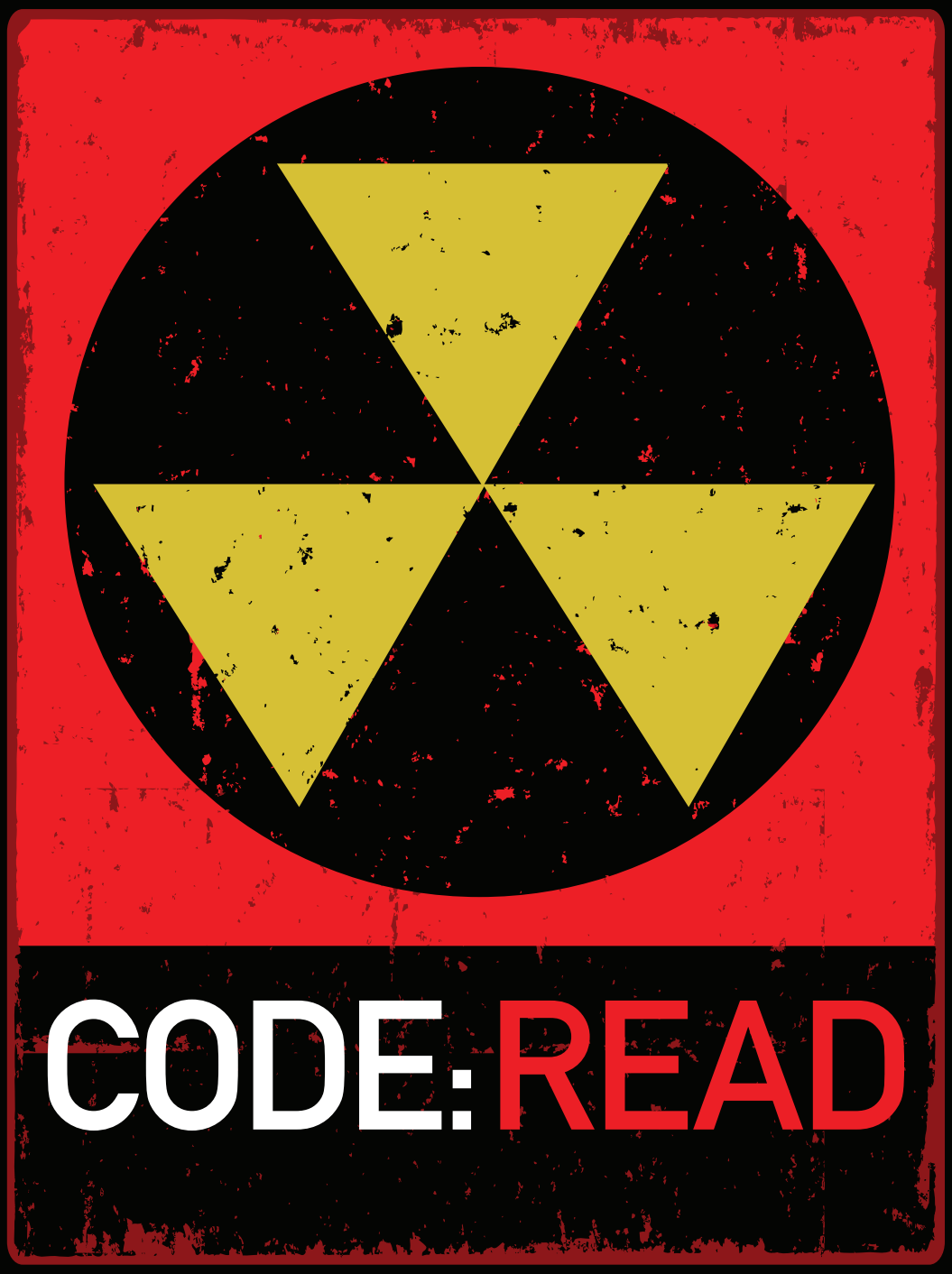
Project includes:

- Annual conference in each region
- Policy research and analysis
- Regular online discussion meetings
- Quarterly briefs

For more information, please visit our website.

Funded by the Norwegian Ministry of Foreign Affairs

e: devco-project@inens.org
w: www.inens.org



Track the latest developments in terrorism and nuclear, biological, and chemical weapons with the most authoritative daily news source available.

UNDERWRITTEN BY:

TEN YEARS OF NTI BUILDING A SAFER WORLD

GLOBAL SECURITY NEWSWIRE

produced independently by NationalJournal

Free and available online. Sign up today for daily email updates at NTI.ORG/GSN.

WORLD INSTITUTE FOR NUCLEAR SECURITY

WE BELIEVE THAT NUCLEAR SECURITY MATTERS FOR EVERYONE. DO YOU?

Whether you are a designer, engineer, technologist or safety specialist: Join our worldwide network of over 1000 organisations & professionals.

Join us and make a difference to the effective management of nuclear security – we want to know your views!

Get involved: www.wins.org

THE WINS ACADEMY

THE WINS ACADEMY

THE WINS ACADEMY VISION

To enhance nuclear security leadership and professional development, worldwide.

THE WINS ACADEMY MISSION

To provide world-class, accredited, competency-based training materials for those managers with nuclear security responsibilities.