INESAP Annual Report 2009

The International Network of Engineers and Scientists Against Proliferation (INESAP) is a non-profit, nongovernmental network organization with participants from all over the world. It is part of the worldwide activities of the International Network of Engineers and Scientists for Global Responsibility (INES). The decision-making body of INESAP is the Coordinating Committee which has seven members from four continents.

The main objectives of INESAP are to promote nuclear disarmament; to strengthen existing arms control and non-proliferation regimes in the nuclear and the missile field; to develop and promote cooperative approaches to curbing the proliferation of nuclear, chemical, and biological weapons and their means of delivery and controlling the transfer of related technology; as well as to support a transformation of the nuclear nonproliferation regime into a nuclear weapons free world regime.

Global Background

A key moment in 2009 was the inauguration of Barack Obama as President of the United States in January. His promises to work with Russia to "make deep cuts in global nuclear stockpiles" and to "extend the essential monitoring and verification provisions of START I prior to its expiration" during his election campaign set high hopes for a vital disarmament process.

In recent years, inter alia the Wall Street Journal published ob-eds by the former US Secretaries of State George Shultz and Henry Kissinger as well as former US Defense Secretary William Perry, and former US Senate Armed Forces Committee Chairman Sam Nunn. The 'Four Horseman' shaped public opinion and political reasoning by calling for a reduction of ‘nuclear’ danger and invoke a vision of eventual nuclear disarmament. Following likeminded policy advices, Obama set off to hold a speech in Prague in April which sparked high hopes for global disarmament. He described nuclear weapons as dangerous relics of the Cold War, devices that represent a tremendous risk to international peace and security. In his view, the risk of nuclear attack has gone up since, due to proliferation. He sees it as the American responsibility to address this threat by strengthening the NPT and addressing nuclear terrorism. Obama envisioned the peace and security of a world free of nuclear weapons but at the same time noted that this world might not be created in his life time and that while nuclear weapons still exist the United States would maintain a credible nuclear force.

Consequently, Obama chaired the UN Security Council Summit in September 2009 and the Council adopted Resolution 1887 on ‘Maintenance of international peace and security: Nuclear non-proliferation and nuclear disarmament’. The right to the peaceful use of nuclear energy was explicitly confirmed. Further, the United States sent Secretary of State Hillary Clinton to the Conference on Facilitating the Entry into Force of the Comprehensive Nuclear-Test-Ban Treaty (CTBT Article XIV Conference). Washington had not sent a representative to this conference in nearly a decade and had never before sent an official of such stature.
Obama’s efforts to normalize relations with Islamic countries were outlined in his widely perceived Speech in Cairo in early June. The President opened talks with Syria, resumed the military dialogue with China and set off an initiative against nuclear proliferation to terrorists. He also expressed the intention for direct talks with Iran and to find a diplomatic solution regarding Iran’s nuclear program. Nevertheless Obama prolonged the sanctions on Iran.

For his achievements on creating a positive climate for negotiations on disarmament, a nuclear free world and between the West and the Islamic countries, Barack Obama received the Nobel Peace Prize on 09. October 2009.

Nevertheless, the President approved the highest military budget ever to be accepted in the history of the US as well as an increase in the nuclear weapons budget. He ordered the modernization of the American nuclear weapons complex and though altering the anti-missile system in Europe he intensified it.

In February 2009, an internal IAEA report concluded that Iran might have reached the nuclear weapons breakout capability for the production of a nuclear bomb. After the extension of US sanctions, Iran decided to temporarily stop negotiations about its nuclear program with the permanent members of the Security Council and Germany (short P5+1). Further tension was sparked in May when Iran successfully tested another ‘Sajil’ missile, a surface-to-surface medium-range solid-fuel missile, with a range that makes it capable of reaching Israel and parts of Europe.

Main concern of the P5+1 was the gas-centrifuge-based uranium-enrichment facility which can produce both LEU and highly enriched uranium (HEU). LEU can be used for nuclear power reactors while HEU is one of the two types of missile material used for nuclear weapons (besides plutonium). A heavy-water reactor in Arak was supposed to produce medical isotopes but posed proliferation concerns due to its plutonium containing spent fuel. In October 2009, the group issued a proposal which offered Iran to enrich 75 percent of its low-enriched uranium (LEU) to 20 percent fuel in Russia and France for the Tehran medical research reactor. Iran answered that it accepts the initial elements but emphasized its sovereign right to uranium enrichment. As of the end of 2009, the P5+1 expressed their disappointment with Tehran’s failure to agree to another round of negotiations and their lack of response to the Tehran Research Reactor proposal.

After North Korea launched a ballistic long-range missile in April, the UN Security Council condemned the move. As a reaction North Korea restarted its nuclear facilities and suspended the Six-Party Talks. In May 2009, a second underground nuclear test was successful and provoked further UNSC sanctions. North Korea announced its intention to transform its plutonium stocks into weapons. At the end of the year, US special envoy Stephen Bosworth visited the country. Both sides agreed on the importance of nuclear disarmament and on the positive climate of the meeting.

Later in March, President Medvedew pronounced the modernization of Russia’s strategic nuclear weapons arsenal. As a reason the President stated the expansion of the leading role of the US and NATO together with threats on the borders of his country. However, China and Great Britain also aspired to update their rockets. China was working further on expanding its second-strike capability by developing a new submarine-launched ballistic-missile (SLBM), the Ju-Lang 2, and by constructing nuclear-powered submarines capable of launching it. Thus China has made significant progress in developing a classical nuclear triad (nuclear arsenal composed of ground-, air- and submarine-launched weapons). Furthermore, France strives to modernize its nuclear submarine fleet.

Over the course of the year, Russia and the US engaged in talks about a follow-up agreement of START I. Unfortunately both sides were not able to reach an agreement before the treaty expired in December.

In 2009, France rejoined the integrated chain of command of the North Atlantic Treaty Organization. The country decided, however, not to join NATO’s Nuclear Planning Group.

In January 2009, four former high ranking German politicians issued a statement on a nuclear weapons free world in the German newspaper Frankfurter Allgemeine Zeitung. As their American counterparts, the politicians called on the US and Russia to revitalize the vision of a world free of nuclear threats and link the US deployment of missile defense interceptors and radar at sites in Poland and the Czech Republic to future instability in Europe.
The 65 members of the Conference on Disarmament agreed on a working program for future negotiations which includes the stop of production of fissionable materials for nuclear weapons (FisBan), disarmament of nuclear weapons, negative security guarantees for non-nuclear weapon states and prevention of an arms race in space.

Under the direction of former Secretary of State, Madeleine Albright, a new committee formed to work out proposals for a new Strategic Concept for the NATO to assist the NATO Secretary General in his draft for 2010.

Meanwhile, the conservative-social coalition (CDU/SPD) was replaced in parliamentary election by a conservative-liberal one in Germany. The Liberal Democratic Party (FDP) entered in the governing coalition, demanded and manifested the withdrawal of US nuclear weapons deployed on German soil under the nuclear sharing agreement of NATO in the coalition agreement. Foreign Minister Guido Westerwelle (FDP) attracted supported for his demands from other NATO countries.

INESAP Projects and Activities in 2009

iGSE

In early 2009, members of the Independent Group of Scientific Experts on the detection of clandestine nuclear-weapons-usable material production (iGSE) presented first results of their project ‘Simulation of atmospheric noble gas concentrations to assess sampling procedures for the detection of clandestine reprocessing’ to the IAEA. The iGSE project explores technologies and procedures for remote environmental sampling and other novel methodologies that would allow the detection of clandestine nuclear-weapons-usable material production. This study is part of the “Joint Programme on the Technical Development and Further Improvement of IAEA Safeguards” between the German Federal Ministry for Economics and Technology and the International Atomic Energy Agency.

Furthermore, Martin Kalinowski, the iGSE chair, gave a presentation via video conference to the Verification Study Workshop One of the American Physical Society Panel On Public Affairs (Subcommittee on National Security). The aim of this workshop was to produce an unclassified report examining verification technology that would support substantial nuclear arsenal downsizing.

Also papers were contributed to the Bulletin of the European Safeguards Research and Development Association about the ‘Workshop on Environmental Monitoring’, the ‘Global Fissile Material Report 2009’ of the International Panel of Fissile Material (Appendix 7A: Verification of a Ban on Tritium Production for Weapons) and the ‘Update of the global krypton-85 emission inventory’ by the Weizsäcker-Centre for Science and Peace Research.

On November 2-4, 2009, the iGSE held a workshop on ‘Matching analytical sensitivities with proliferation signature concentrations in the environment’ in Vienna. It was the final workshop of the initial four year project phase, bringing together experts on all iGSE topics, ranging from environmental sampling and signatures to atmospheric transport and measurement technologies. The iGSE and associates presented their findings directly to representatives of the IAEA Novel Technologies Program. The workshop was hosted by the University of Natural Resources and Applied Life Sciences (BOKU), Vienna, organized by the Carl Friedrich von Weizsäcker Centre for Science and Peace Research (ZNF), University Hamburg, and funded by the German Ministry of Foreign Affairs.

As one result of the meeting, an edited book on environmental sampling is being planned. The main reason for authoring a book is that no comparable compilation exists yet, and the availability of such a work would aid outreach and would provide a textbook for the education of scientists new to the topic.

The ZNF collected a complete krypton-85 emission inventory beginning with 1945. This isotope is the primary indicator for reprocessing to separate plutonium from spent fuel or breeder targets. The iGSE homepage hosts that database and makes it available for the public. It shows the location of all 28 nuclear complexes with their historic krypton-85 emissions.
In 2009, the MacArthur grant that the iGSE was operating on was almost run out, and the four-year phase of collecting, advancing and spreading relevant knowledge achieved its goals. A small amount was carried over to 2010 to be used for a presentation of the findings at the NPT RevConf in New York. The termination of its funding made it necessary to discuss the future role and possible activities of the iGSE. The IAEA Novel Technologies Program has repeatedly voiced interest in having systematic support to aid the search for new technologies which are financed and available, and to provide a forum of contact with academia and young scientists, who will be the next generation of experts and inspectors. The iGSE could continue to work as a mediator between the IAEA and academia, thus promoting these topics at universities to inspire additional research and enlarge the pool of recruitment. At the end of 2009, ESARDA planned to establish a novel technologies working group which might assist in such an endeavor. iGSE and ESARDA could also cooperate regarding the verification of the FMCT. Another idea is to use iGSE in order to re-establish international dialogue on these topics and to invite countries to fund iGSE activities, as long as it does not compromise iGSE independence.

In any case, a redefinition of the iGSE’s goals and methods is appropriate and new funds need to be raised.

Nuclear Weapons Convention

On May 11-12 2009, under guidance of the INESAP Coordinator 30 students gathered for the second simulated negotiation of the model Nuclear Weapons Convention (mNWC) at the NPT PrepCom in New York. In cooperation with Technische Universität Darmstadt and the Carl Friedrich von Weizsäcker-Centre for Science and Peace Research of the University of Hamburg, INESAP continued its project of promoting and evaluating the prospects of a nuclear weapon free world by putting the mNWC on test.

After a first round of simulated negotiations of Article I, Obligations, at the NPT PrepCom meeting 2008 in Geneva, the students evaluated the feasibility of Article IV, Phases for Implementation, in New York this year. Article IV proposes a comprehensive timetable that can be understood as a phased approach that ultimately leads to complete nuclear disarmament within 15 years.

<http://inesap.org/publications/nuclear-weapons-convention>

For their preparation, the students attended the NPT PrepCom, where they interviewed the diplomats of the 13 countries they simulated about their commitment towards nuclear disarmament and were briefed by NGO experts to make the simulated negotiations as realistic as possible. As a result, the simulated negotiations were characterized by a high level of professionalism. Especially disputed were the beginning and duration of the specific phases, the role of the nuclear stockpiles of India, Israel, Pakistan, and North Korea in the disarmament process, the Middle East, and the use of highly enriched uranium for research purposes. The negotiations were chaired by Ambassador Alfredo Labbe Villa from Chile. After two days and 16 proposals for amendments, the student diplomats achieved a consensus and showed that a comprehensive phased approach towards complete nuclear disarmament is accomplishable.

NPT PrepCom 2009

A young participant of INESAP’s simulated negotiations of the mNWC helped to draft the Youth Speech of Ban All Nukes generation (BANg) and was one of the Speakers who held it at the plenary meeting of the NPT PrepCom 2009.  

<http://www.reachingcriticalwill.org/legal/npt/prepcom09/ngostatements/Youth.pdf>

Middle Powers Initiative

The Middle Powers Initiative combines the efforts of eight international non-governmental organizations in a Forum. It is dedicated to encourage and educate the nuclear weapons states to take immediate and practical steps towards a reduction and elimination of nuclear weapons by working primarily with ‘middle powers’.

In January 2009, MPI held its Sixth Meeting of the Article IV Forum in Berlin. Under the heading ‘New Imperatives and Openings for a Nuclear Weapons-Free World’ the initiative gathered politicians, scientists and activists to stimulate talks on the Article VI of the NPT in which the nuclear states commit themselves to the elimination of their nuclear weapons. INESAP-Coordinator Regina Hagen spoke on
the topic of ‘The Path to a Nuclear-Weapon Free World’ at the public gathering in the beginning of the conference. Moreover, Jürgen Scheffran represented INESAP at the meeting and spoke on the topic of ‘Openings for a Nuclear-Weapons Convention’. In 2009, he also took over as INESAP’s representative in the MPI Steering Committee
<http://www.middlepowers.org/mpi/index.shtml

Various

In October 2009, INESAP was represented by its coordinator Regina Hagen at the 4ème Journée du Désarmement Nucléaire in Caen, France. The event was organized by ICAN - the International Campaign to Abolish Nuclear Weapons - and Abolition 2000 of which INESAP is a founding member.

Furthermore, the INESAP-Coordinator attended the International Conference ‘Reaching Nuclear Disarmament – the Role of Civil Society in Strengthening the NPT’ in Stockholm in November 2009. Regina Hagen presented the Model Nuclear Weapons Convention at the occasion as well as in Kassel, Germany at the ‘Friedensratschlag 2009’ in December. There she also chaired a workshop on ‘Nuclear Weapons and Missile Defense – In good hands with Obama and Westerwelle?’ in which she passed on her knowledge about campaigning political parties and leaders.

Organizational Matters in 2009

INESAP Coordinator

The Coordinator manages most INESAP activities. The INESAP office is located in Darmstadt and hosted by the Interdisciplinary Research Group in Science, Technology and Security (IANUS) of Technische Universität Darmstadt (Germany) <http://www.ianus.tu-darmstadt.de>.

In autumn 2008, INESAP Coordinator Regina Hagen went on sick leave until June 2009 – interrupted only by her participation in the NPT PrepCom in New York. Due to a lack of funding, the INESAP Coordinator position could no longer be maintained from August 2009. Since then, the INESAP office is only provisionally operated with the help of student assistants and volunteer work. Therefore, no INESAP Information Bulletin could be published in 2009.

Funding and Support

INESAP funding from the Nuclear Age Peace Foundation ended February 2009. The IANUS group of Technische Universität Darmstadt continues to provide facilities and infrastructure and salary for students assistance. Discussions about means to find new INESAP funding are going on.

INESAP E-Mail Discussion List

Since 1994, Johan Swahn has facilitated an e-mail discussion list for information exchange and networking among INESAP participants. To subscribe to the list, go to <http://lists.chalmers.se/mailman/listinfo/inesap>. 