The International Network of Engineers and Scientists Against Proliferation (INESAP) is a non-profit, non-governmental 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 Interdisciplinary Research Group in Science, Technology and Security (IANUS) at Darmstadt University of Technology (Germany), as a member organization of INES, manages most activities in INESAP. The international Coordinating Committee has seven members in four continents. The main objective of INESAP are to promote nuclear disarmament, to tighten existing arms control and non-proliferation regimes, as well as to implement unconventional approaches to curbing the proliferation of weapons of mass destruction and delivery systems and to controlling the transfer of related technology.

In 1995, the International Network of Engineers and Scientists Against Proliferation (INESAP) took part in a number of major events and activities which have improved the conditions for nuclear non-proliferation and disarmament. Above all, the Review and Extension Conference of the Non-Proliferation Treaty (NPT) in New York in April/May 1995 provided an appropriate forum for raising international attention to the abolition of nuclear weapons, both among diplomats and non-governmental organizations (NGOs). Continued Chinese and French testing after the conference led to worldwide protests against the tests, strengthening support for a Comprehensive Test Ban Treaty (CTBT) in 1996. The 50th Anniversaries at Hiroshima and Nagasaki, the foundation of the global network "Abolition 2000!", the hearings at the World Court of Justice on the illegality of nuclear weapons, the initiation of the Canberra Commission on the Elimination of Nuclear Weapons by the Australian government and the Nobel Peace Prize for Pugwash President Joseph Rotblat clearly indicated a growing interest in the abolition of nuclear weapons. INESAP welcomed and supported these developments and played an active role in some of them, together with other NGOs.
Around these major events, INESAP has improved its networking, research and policy-related activities which had been launched in 1993. Most helpful was the financial support provided by the John D. and Catherine T. MacArthur Foundation, the Berghof Foundation and public funds given to IANUS, the Interdisciplinary Research Group in Science, Technology and Security of the Technical University Darmstadt, where the office and staff of INESAP is located. Total funding related to INESAP was around $170,000 in 1995. In the first half of 1995, a scientific coordinator (Wolfgang Baus) worked for INESAP, together with part time work by three senior research associates at IANUS (Martin Kalinowski, Wolfgang Liebert, Jürgen Scheffran). For organizational tasks, post-graduate and under-graduate students were employed. Major decisions were taken by the INESAP Coordinating Committee, consisting of Fernando de-Souza Barros (Brazil), Mike Casper (USA), Anatoli Diakov (Russia), Wolfgang Liebert, Jürgen Scheffran (Germany), Dingli Shen (China) and Johan Swahn (Sweden).

Among the various INESAP activities, the following are especially deserving of mention:

The INESAP Study Group "Beyond the NPT", comprising more than 50 experts from 20 countries, worked out and published its preliminary findings in the report "Beyond the NPT - A Nuclear-Weapon-Free World". This report was essentially prepared and drafted through email communications, discussed at a meeting in London in February 1995 and was presented to a wider audience during a forum at the NPT Conference. The study starts with an intensive discussion of arguments on the Nuclear-Weapons-Free World (NWFW). In its second part, it examines steps towards the ultimate goal of abolition, including deep reductions in the nuclear arsenals, a truly comprehensive nuclear test-ban treaty, cutoff agreements to stop the production and (re-)use of weapon usable nuclear materials, measures to prevent the horizontal and vertical proliferation of delivery systems, and regional approaches to nuclear disarmament. The main intention of the study group, to look beyond the NPT and to outline a transformation process for the existing traditional non-proliferation regime towards a NWFW, was shared by many NGOs. This applies especially to INESAP's call for a Nuclear-Weapons Convention (NWC).

By hiring a conference manager for several months in New York, INESAP co-organized the two-day forum on the abolition of nuclear weapons on April 25/26, in cooperation with other organizations of the International Coalition for Nuclear Non-Proliferation and Disarmament (IPB, IPPNW, IALANA, INES, Nuclear Age Peace Foundation, Peace Action, Fourth Freedom Forum). The members of the Coalition worked together through the preparation process for the NPT Conference, with the intention of focusing interest on the issue of nuclear weapons elimination. At the first day of the forum INESAP presented the preliminary findings of its Study Group. The proposals on how a NWFW could be achieved were presented, among others, by Joseph Rotblat (Pugwash President), Fernando Barros (former President of the Physical Society of Brazil) and Zia Mian (Islamabad University, Pakistan) (see the picture). On the second day, a number of speakers explained their perspectives on a NWFW, and in an open discussion about 100 people from NGOs around the world debated strategies and possibilities for networking to abolish nuclear weapons.

INESAP also joined the daily meetings of the NGO Nuclear Abolition Caucus at the NPT Conference which was successful in finding common ground in a statement which was finally signed by more than 200 NGOs at the conference (later the number increased to 350). The central demand was a call for negotiations on a convention for the abolition of nuclear weapons that requires the phased elimination of all nuclear weapons within a timebound framework, followed by ten single steps towards that goal. After the NPT Conference, the organizations involved in the International Coalition, the NGO Abolition Caucus and the World Court Project formed the core of the global network Abolition 2000, which was founded in The Hague in November 1995. INESAP is playing an active role in this network, e.g. by initiating a Working Group on the NWC.
A Workshop entitled "Fissile Materials and Tritium: How to Verify a Comprehensive Production Cut-off and Safeguard all Stocks" took place at the Palais des Nations in Geneva on 29/30 June 1995. The workshop was jointly organised by IANUS, INESAP and UNIDIR (United Nations Institute for Disarmament Research), and was sponsored by the Volkswagen Foundation. During the first part of the workshop ambassadors (or delegates) of China, Japan and Pakistan presented their respective national view. Further invited contributions from scientists were focused on the scope of a possible cutoff agreement and related verification issues. This conference, as part of a research project, is intended to be closely related to current political developments as well as being at the top level of international scientific research on this problem. The cooperation with UNIDIR ensures that the results of the workshop and the related research project gain visibility within the United Nations and national delegations to the Conference on Disarmament at Geneva.

Another INESAP Study Group on "Delivery systems and missile defense" was under preparation in 1995. As an initial activity, an input to the work of the Study Group "Beyond the NPT" was provided by writing a chapter on the control of delivery systems. Further steps were undertaken for extending this work towards an assessment of the missile threat and possible options to respond to this threat from the perspective of various countries.

Four issues (No.4-7) of the quarterly INESAP Information Bulletin were published and disseminated freely in 1995, especially during the above-mentioned events, and served as a major platform for distributing science-based information and policy debate on non-proliferation and disarmament, both inside and outside of the network. In terms of the relevance of the topics, the competence of the authors and the quality of the articles, the INESAP Information Bulletin experienced a breakthrough in 1995, which resulted in spontaneous positive feedbacks from authors and readers.

The INESAP e-mail discussion list became hot during the NPT Review and Extension Process. Participants around the world could follow what was going on in New York through daily information that was collected from various sources and distributed by Johan Swahn. In October 1995 INESAP opened its homepage on the World Wide Web.

The INESAP-supported project on "Nuclear weapons in the India-Pakistan conflict" continued. One outcome was a proposal on tritium control in South Asia (with Pervez Hoodbhoy of Islamabad University). Some further results were collected in a book on "Pakistan's Atomic Bomb and the Search for Security", edited by Zia Mian and partly distributed by INESAP.

Working at the science-policy interface, INESAP participants actively joined the fourth NPT PrepCom in New York and the NPT Conference, where INESAP represented one of the largest NGO delegations. This included distributing press releases, talking directly with delegations and speaking at official briefings organized by the NGO Committee on Disarmament. Besides supporting the formation and work of Abolition 2000, several INESAP participants joined the Pugwash Conference in Hiroshima and several other events around the anniversaries (conferences in Japan, Atomic Mirror Pilgrimage).

The German branch of INESAP continued its participation in the national campaign to abolish nuclear weapons. Strategy meetings were held around the major events, to plan various activities, e.g. publications and newspaper supplements, public statements on the NPT and the testing issue, press releases and press conferences. In particular, German INESAP participants initiated a workshop on non-proliferation at the German Physical Society in Berlin, an expert meeting on controlling nuclear weapons 50 years after Hiroshima in Göttingen, a review of past and present German nuclear weapons options and a public debate on the planned German HEU-fueled research reactor. The latter included international efforts, e.g. open letters to the heads of several states and to
delegations at the NPT Conference. German INESAP participants also improved their contacts to the German Ministry for Foreign Affairs and the German Parliament. They took part in a project of the German Bureau for Technology Assessment on the control of emerging military technologies.

Most of the IANUS research activities for INESAP and publications during 1995 were related to the above-mentioned study groups and projects. Major topics of research were a Comprehensive Cutoff Convention, the control of tritium, transmutation of plutonium, new research reactors using HEU, technologies to circumvent a Comprehensive Test Ban, measures to control ballistic missiles and verification of biological weapons. On these topics, IANUS members participated in several conferences.

**Major publications**


4. INESAP Information Bulletin, 4 issues