NATO OTAN

N° 70

issue 2

2005

Science, Society, Security

news

Science Committee

Committee on the Challenges of Modern Society

NATO

www.nato.int/science

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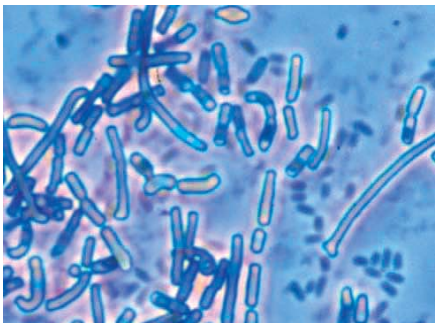
Contributing to NATO's fight against terrorism

Since its launch at the beginning of 2004, the Security through Science (STS) programme has been contributing to the fight against terrorism, one of NATO's key priorities, putting special emphasis on areas of scientific cooperation such as environment and human and societal security. This newsletter will highlight the high-level meetings and increased focus on security-related research of the programme's activities this Spring. The Science Committee gathered in Brussels on 10 and 11 March 2005 to take stock of the first year of the programme's activities. Two new Science for Peace projects illustrate well the successful reorientation of the programme to better respond to NATO's overall objectives, including combating terrorism. These projects aim to develop, respectively, a new technique to detect "dirty bombs" and a biosensor to detect anthrax, responding to heightened concerns over possible terrorist attacks using radiological and biological agents. The STS programme and the Defence Investment Division (DI), have joined forces to organise a series of workshops within the framework of their respective activities on "Defence against Terrorism". NATO-sponsored initiatives continue in other fields. Workshops have taken place on issues as diverse as children in armed conflict and new challenges for defence diplomacy. The STS programme has also allocated funds for the neutralisation and recycling of MELANJ, an environmentally hazardous rocket fuel used in the past by many former Warsaw Pact countries.

Anthrax bacillus



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The Science Committee takes stock

Member states' representatives gathered in Brussels on 10 and 11 March 2005 to take stock of the first year of activities of the Security through Science (STS) programme and discuss the way ahead. A busy agenda included discussion of preparations for the first Science Committee "Security Science Forum", future directions for cooperation with Mediterranean Dialogue countries, and a report on the Reintegration Grant mechanism.

A "Security Science Forum" is to be convened under the chairmanship of the Assistant Secretary General for Public Diplomacy and is intended to serve as a catalyst for advancing the security aspects of the programme and better aligning it with NATO's strategic objectives. The forum would have a role in identifying emerging issues relevant to NATO, helping to define specific topics for security research and for cooperation with Partners, and in soliciting proposals. While policy-setting will continue to rest with the Science Committee, the "Security Science Forum" will operate at the expert level with the contribution of other divisions in NATO. The first of such fora is planned to take place in Brussels on 18 October 2005.

The Science Committee discussed the added value represented by scientific cooperation with the Mediterranean Dialogue countries both in promoting networking among scientists and in enhancing awareness of NATO. During recent visits of the Secretary General to the region, many countries underscored the value they attach to scientific cooperation. Between 2000 and 2004, 332 speakers and 708 students/participants from Mediterranean Dialogue countries took part in Advanced Research Workshops and Advanced Study Institutes. However, the Committee acknowledged that collaboration between Israeli and Arab scientists could be further enhanced.

Sixty-four grants were awarded in 2004 under the Reintegration Grant mechanism, which allows Partner scientists to reintegrate back into their home country after spending a research period in a NATO country. The Committee agreed to increase efforts to further promote the benefits of this support mechanism in reversing the "brain drain" of young researchers from Partner countries.

The Committee also discussed the state of play of cooperation between the STS programme and the Defence Investment Division (DI). Expert meetings were held in March and April to prepare a series of joint workshops in 2005-2006, which will focus on promoting research and developing technology for defence against terrorism. Further on the subject of cooperating with other NATO bodies, the Science Committee considered a food-for-thought paper on possible ways of new arrangements in the future with the Committee on the Challenges of Modern Society (CCMS).

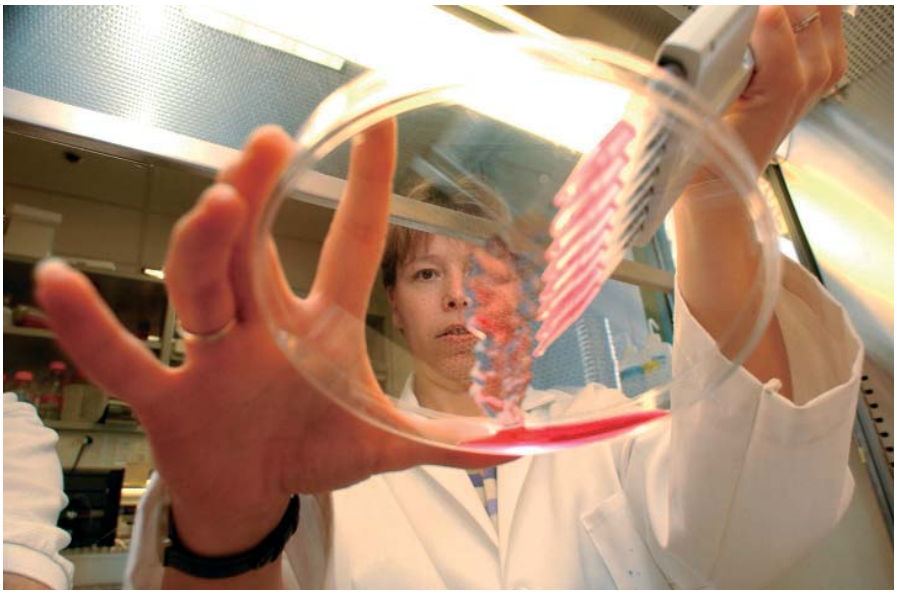
A forward-looking exchange of views was held with Herbert Von Bose, Head of Unit for Preparatory Action for Security Research at the Directorate General Enterprise and Industry of the European Commission. The European Union is implementing a Preparatory Action for Security, which will run from 2004 to 2006, to prepare the ground for the "European Security Research Programme", which will be launched in 2007 under the next Framework Programme 7. Under the first call for proposals in 2004, projects have been selected according to "priority missions", such as remote detection of hidden weapons and explosives, integration of European chemical, biological, radiological and nuclear technological capabilities, and protection of critical infrastructure. The EU plans to set aside half a billion euros per year for the Framework Programme for the 2007 to 2013 period. The EU's programme differs from NATO's STS programme mainly because it is addressed to industry. The Science Committee will continue to follow developments on the EU side with interest and further information exchanges will be organised.

NATO Secretary General Jaap de Hoop Scheffer with Algerian President Abdelaziz Bouteflika during his visit to Algeria on 25 November 2004

Through the support of a NATO Reintegration Grant, Prof Dr Suzanna Badalyan is currently working on a project on biotechnologies at Yerevan State University

A new method for rapid detection of anthrax

The "anthrax letters" attacks in the United States in 2001, which led to 23 people being contaminated and five deaths according to the US Centre for Disease Control and Prevention, are still fresh in people's minds. Anthrax infection can be of three types: cutaneous, intestinal and inhalational. Early diagnosis is vital to ensure timely response from health care workers and prevent fatal outcomes. In response, at the beginning of 2005, the STS programme approved a Science for Peace project on a "New biosensor for rapid detection of the anthrax lethal toxin".



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Researcher performs in vitro culturing of cells sensitive to Anthrax

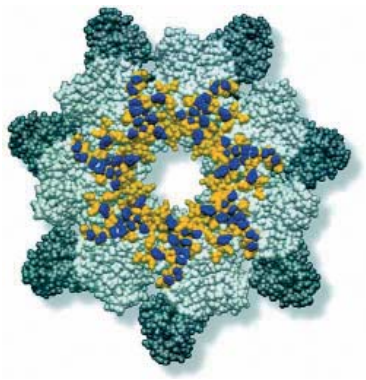
The project is co-directed by Dr Eric A. E. Garber from the US Food and Drug Administration and Dr Alexander Kolesnikov of the Laboratory of Biocatalysis, Shemyakin and Ovchinnikov Institute of Bio-organic Chemistry, in Moscow, Russia. It is expected to run over 36 months with a total budget of 258 000 euros to cover scientific equipment, travel and training of project participants. The project will lead to the development of a sensitive procedure for the detection of small amounts of Lethal Factor, the critical component of the deadly toxin produced by anthrax (Bacillus anthracis). Treatment of individuals infected with anthrax requires the administration of antibiotics before the concentration of Lethal Factor in the blood becomes too high. The new detection strategy will detect very low levels of active anthrax toxin much quicker than the animal tests currently employed. This would enable earlier medical intervention and help save lives.

This new method will also be more specific than the molecular method currently employed, which often leads to false positive and negative results. This will help address the problem of hoaxes, which use powders, bacteria and chemicals to mimic an anthrax attack, and will thereby reduce both waste associated with the unnecessary mobilisation of response teams and distress to the population due to false alarms.

The results of this project will be used to produce a new commercial Lethal Factor detection kit. A Moscow-based company and provider of services for the biotech and pharmaceutical industries, Asinex Ltd, has indicated an interest in commercialising the test kit and will provide technical guidance in the area of computational and organic chemistry and mass spectrometry.

The project's scientific team believes this new technology will improve bioterrorism preparedness not only in Russia but also worldwide. The same technology could also be adapted to detect other toxins, such as botulism (Botulinum toxin), which could be used in a bioterrorist attack.

Anthrax molecular model



© Seeing science

Example of an "Anthrax letter" sent in 2001

Cooperation with the Conference of National Armaments Directors

➪ A series of upcoming workshops jointly organised by the STS programme and NATO's Conference on National Armaments Directors (CNAD) will identify avenues for joint projects and exchange current knowledge and experience. "Defence against Terrorism" is both one of the priority research areas of the STS Programme and a major CNAD initiative, and the workshops are aimed at creating synergies between the two.

General view of the CNAD exhibition held at NATO HQ, 27-28 April 2005, on "Safe Horizons: Shielding NATO aircraft"

CNAD, the senior advisory committee to the North Atlantic Council on armaments issues, is responsible for identifying opportunities for collaborative research, development and production of military equipment. Its "Defence against Terrorism" initiative, launched in the wake of the terrorist attacks on Madrid of 11 March 2004, aims to develop new and advanced technologies. In October 2004, a few key areas were identified in which basic science could contribute to the CNAD initiative. These include developing sensors for detection of explosives, chemical, biological, radiological and nuclear (CBRN) agents and man-portable air-defence systems; computer science; and automated information systems. CNAD and STS experts and staff as well as WMD and Civil Emergency Planning staff have since met to plan a series of "kick-off" workshops within the following general topics: explosives detection, munitions and explosives disposal, CBRN detection, sensors for harbour protection, and intelligence/surveillance/reconnaissance. Experts have been contacted and solicited to present proposals. Five workshops will be organised between spring 2005 and February 2006 involving scientists and CNAD experts:

➪ "Terrorism and communications" (to discuss the terrorist communications cycle, for instance in terms of how terrorists circulate their message and recruit people);

➪ "Data fusion technologies for harbour protection" (to consider the application of technologies, such as increasingly sophisticated sensors, to better monitor any entity approaching a harbour on the sea surface, underwater, by air or from land);

➪ "Detection and disposal of improvised explosives" (to review state-of-the-art techniques developed by the scientific community in this area and bridge the gap between research results and industrial development and application);

➪ "Elements of WMD terrorism defence - a NATO country perspective" (to discuss both response and consequence-management procedures in case of the threat of a terrorist attack using a weapon of mass destruction);

➪ "Emergency management after a major terror attack: The new challenges for first responders and civil protection" (to assess the level of civil protection of the current disaster-management infrastructure in NATO member states and identify possible improvements in terms of training and organisational reforms).

These joint STS-CNAD workshops will be covered in future issues of this newsletter or through updates on the web at: ***http://www.nato.int/science/index.html***

Detecting “dirty bombs”

NATO is increasingly concerned about the risk of possible terrorist attacks using a radiological dispersion device, or “dirty bomb”, made up of a combination of conventional explosives and radioactive material. A civil emergency planning exercise, “Dacia 2003”, has already been organised with Partner countries to improve consequence-management procedures in the event of such an attack. It would be better still to be able to prevent the use of a “dirty bomb” through detection. However, detecting a “dirty bomb” is difficult for several reasons: the wide variety of radioactive materials that can be used; the different masking techniques that terrorists can employ; and, the different ways that can be used for storage and transportation. Moreover, the task of detecting explosives and radioactive materials is currently carried out through different, stand-alone techniques, meaning that different detectors are needed according to the nature of the suspicious material at hand.

Exercise "Dacia 2003", Romania, 7-10 October 2003 : Decontamination at the disaster site in the aftermath of a "dirty bomb" explosion

A solution may be found thanks to a new device for the simultaneous detection of explosives and radioactive materials using nanosecond neutron analysis, which is the expected end-result of a Science for Peace project that started in April 2005. The project, co-directed by C.J. De Ruiter of the Netherlands and Dr A. Kuznetsov of Russia, combines three detection methods (for explosives, radioactive material and fissile material, the latter being the material used in nuclear reactors and bombs) into a single, man-portable device. Such a device, weighing less than fifty kilograms, would be used within a safe distance of about seven metres from the operator and would be activated through a remote control.

Possible uses could include analysis of suspicious luggage after x-ray screening at airports and analysis at checkpoints of critical infrastructure facilities, such as nuclear and conventional power plants. According to preliminary findings, the dose the general public could be exposed to during a single measurement cycle will meet public safety requirements. Upon successful completion of the project, the Federal Customs Service of the Russian Federation has expressed an interest in introducing the new system in its facilities to help detect and prevent illicit trafficking of hazardous material through the state's borders. The device will use a novel method for the detection of explosives, based on gamma radiation produced by incoming fast neutrons to determine the elemental composition and density of the explosive material in the suspicious object. Simultaneously, the device will use a gamma radiation detector to detect radioactive material and will shoot neutrons to the suspicious object, measuring the resulting radiation to detect fissile material. Combining these techniques into a single device is the challenge faced by the scientists involved.

The project should take two years with a total budget of 275 000 euros. The device prototype is expected to attract investment from industry for its commercialisation.

News from CCMS

Ecoterrorism

A short-term project on Ecoterrorism, jointly led by Italy and Russia, held its first workshop in Moscow, Russia, on 19 and 20 May 2005. The meeting was hosted by the Russian Ministry of Natural Resources and jointly organised by the Academy for Geopolitical Problems together with the State Research Institution "Council for the Study of Productive Forces", the Russian Ministry of Economic Development, the Russian Academy of Science and the non-commercial foundation "Economics and Security". The Ecoterrorism project focuses on the development of a database for gathering, organising and evaluating readily available and non-sensitive information in the event of a terrorist attack against environmental resources. Initial discussion of different aspects of this topic was generated by presentations by experts from the Czech Republic, Italy, Latvia, Romania, Russia, and Turkey, which included issues such as ways of countering ecological terrorism; food products and safety; and, assessing the risk of terrorist attacks and legal support.

During the meeting the members of the Executive Group, who will co-ordinate the activities of the four different working groups, were appointed. A Secretariat was also established. Experts from all participating nations are represented in the working groups, whose research activities will include risk analysis, the definition of the system prototype, counteractive measures, and the implementation of the project. The next meeting has been tentatively planned for September or October 2005 either in Belgium or Luxembourg.

NATO-Russia disaster response exercise and seminar, Kaliningrad, Russia, 22-25 June 2004: Terrorist attack against an oil platform leading to a high number of casualities and a major oil spill threatening coastal areas

Environmental impact assessment at Krivolak

A short-term project on "Analysis of the environmental impact assessment from the military training ground in Krivolak and its management", co-directed by Slovenia and the former Yugoslav Republic of Macedonia*, was launched at the CCMS plenary meeting on 7 and 8 April 2005. Focusing on the wider area of the military training ground in the Krivolak region, the project will prepare two studies: one on environmental impact assessment, the other on management of the training ground. Special attention will be paid to the biodiversity of the training ground, since the Krivolak region is considered unique in

the country precisely for its biodiversity characteristics. This will be first time that a study of this kind is carried out in the former Yugoslav Republic of Macedonia*.

* Turkey recognises the former Yugoslav Republic of Macedonia with its constitutional name.

Environmental decision-making in Central Asia

At the CCMS plenary meeting, Prof J. Moerlins of the United States and Prof E. Rodina from the Kyrgyz Republic presented the results of a completed pilot study on environmental decision-making processes in Central Asia. The transition from a centralised decision-making structure during the Soviet era has been a relatively difficult process for most countries in this region. The importance of environmentally sustainable development has been recognised as a critical issue for long-term social, economic and political prosperity. The pilot study analysed the environmental decision-making processes in Central Asian countries and, on the basis of shared experiences, identified what kind of assistance NATO countries can provide in this regard, in particular in public participation.

If you are interested in participating in ongoing CCMS studies or projects, please contact the CCMS Secretariat (see back cover). Further information on ongoing and recently completed studies and projects may be found at: ***http://www.nato.int/ccms***

Editorial

Flying transatlantic and thinking

Recently I was flying transatlantic to participate in a debate on security issues. I was struck by an article from a very famous US columnist. He stated that a few years ago his daughter participated in a National History Day Programme. Schoolchildren across the US were invited to submit a research project that illuminated any turning point in history. His daughter's project was "How Sputnik led to the Internet". It traced how Americans reacted to the Russian launch of Sputnik by better networking their research centres and how those early crude networks spread and eventually were woven into the Internet.

And I thought of a parallel project that would have read: "How Sputnik led to the NATO STS programme", since the very rationale of the Science Programme and its genesis was precisely: first, to better network West European and North American scientists, then NATO and Partner and Mediterranean Dialogue countries' scientists; second, by teaming people from different cultures, backgrounds and skills, to address new common threats and challenges and provide answers that are relevant to our security.

Networking scientists is and remains a major contribution by NATO to building a more secure world.

Taking forward the Mediterranean Dialogue

In the post-9/11 security environment, the Alliance has sharpened its focus on cooperation with the seven countries participating in the Mediterranean Dialogue (Algeria, Egypt, Israel, Jordan, Mauritania, Morocco and Tunisia). The Dialogue was enhanced at the Istanbul Summit, in June 2004, with a view to enhancing its political dimension, achieving interoperability, assisting in defence reform and contributing to the fight against terrorism.

Moroccan military officers listening to a fictitional media scenario given during the first-ever training on Civil-Military Cooperation (CIMIC) held in Morocco on 9 April 2005 in the framework of the Mediterranean Dialogue

A key question is how the experience of working with countries through the Partnership for Peace (PfP) could benefit the Mediterranean Dialogue countries. This was the theme explored by an Advanced Research Workshop held in Varaždin, Croatia, on 10 and 13 March 2005, on "New challenges for defence diplomacy : from South Eastern Europe to the Mediterranean".

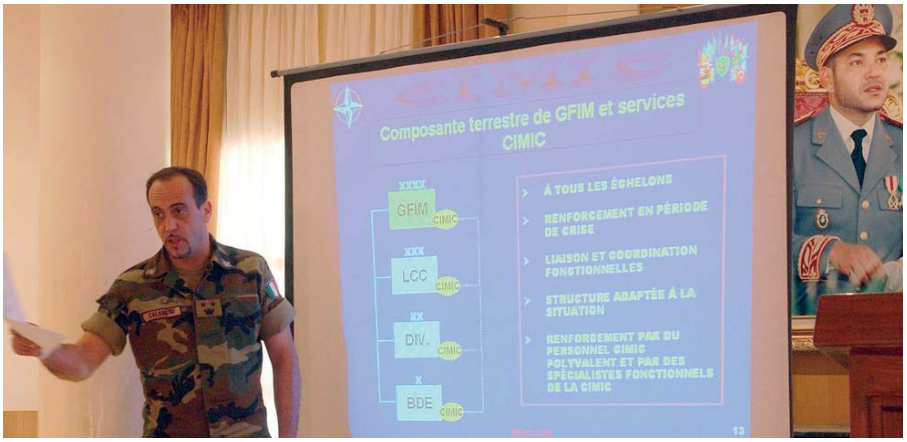
The aim of the British and Croatian organisers (Dr Amadeo Watkins and Prof Radovan Vukadinovic, respectively) was twofold: firstly, to explore the nature of changes in defence diplomacy in the past decade; secondly, to examine how the experience gained in Central and Eastern Europe and in the Balkans with PfP mechanisms (such as defence cooperation activities aimed at promoting interoperability, democratic control of the armed forces and transparency in national defence planning and budgeting) could be used to advance the Mediterranean Dialogue process.

The workshop concluded that there is scope to selectively employ some aspects of the PfP model in the Mediterranean region, while taking into account the specificity of each Mediterranean country.

Many Mediterranean Dialogue Countries participants stressed that initiatives must be offered to all of them on an equal basis and that the Dialogue is a "two-way street", that is initiatives should not be imposed. These are in fact guiding principles of the Mediterranean Dialogue. Additionally, there was also agreement on the importance of creating synergies between the respective work of NATO and the European Union in this region.

At the Varaždin workshop special attention was given to examining the PfP model and its modalities in the Balkans, which share many similarities with the Mediterranean region. A previous NATO-sponsored workshop in April 2004 on "Security problems in the Mediterranean Basin" also discussed civil-military relations and democratic control of the armed forces.

Building on the initial exchange of views at this workshop, a follow-up event will probably be organised to look in closer detail at the practical side of how the Mediterranean Dialogue could benefit from the PfP experience.



Protecting children in armed conflict

One of today's most disturbing human security issues is the precarious situation of children in armed conflicts. Over two million children lost their lives in armed conflicts in the last decade alone and at least 300 000 child soldiers are currently involved in armed conflicts. An Advanced Research Workshop in Cairo, Egypt, on 17 and 19 April 2005, gave experts from NATO and Mediterranean Dialogue countries the opportunity to address key issues such as how to uphold child protection in peacekeeping operations and in demobilisation and reintegration programmes, and what role children should have in post-conflict truth and justice mechanisms.

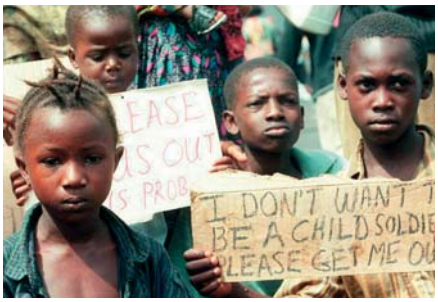
©UNICEF

Adolescent boys wearing civilian clothes walk away from the weapons they once carried as child soldiers, during a demobilisation ceremony in a transit camp near the town of Rumbek, capital of the province of Lakes in southern Sudan, after being evacuated by UNICEF from a combat zone in a nearby province

This workshop, organised by the University of Verona, Italy, and the Arab Council for Childhood and Development in Cairo, brought together government and parliamentary officials as well representatives from non-governmental organisations and international institutions such as UNICEF (the United Nations Children's Funds) and the World Bank.

The starting-point for the debate was the annual discussion of the UN Security Council on this topic, held on 23 February 2005, and UN Secretary General Kofi Annan's latest report. This report addressed the issue of implementing the rights of war-affected children and assessed the various political, social and legal challenges facing the international community in addressing the impact of war on children. A few positive developments were identified such as child protection being increasingly reflected in the mandates, training and reports of UN peacekeeping operations and as well as in peace negotiations. However, the report acknowledged that more remains to be done to bridge the gap between the international normative framework and the reality on the ground, which is still alarming in many conflict situations. More energy should be directed to the so-called "era of application" campaign. This campaign, launched by Mr Olara A. Otunnu, Kofi Annan's Special Representative for Children and Armed Conflict, aims to ensure the enforcement of international standards and stop the abuse of children in armed conflict through advocacy, monitoring and reporting, and by serving as a catalyst for broad consultations among stakeholders.

The workshop made a series of recommendations for future action to relevant governmental and non-governmental actors in the following areas: child protection; awareness-raising; capacity-building; legal and procedural standards; and child participation. Examples include the need to invest more resources in education as the main tool to guarantee the child's integration in the society; to guarantee security measures to make sure children can go to school without being abducted; and to increase advocacy efforts for the ratification of international covenants regarding child rights, such as the 1989 Convention on the Rights of the Child. More emphasis should be put on child rights training for those who deal professionally with children involved in armed conflict. From a legal perspective, children's protection should be upheld in the conduct of trials, whether the child is a witness or an offender.



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Liberian child soldiers at the port of Freeport, 5 km from Monrovia, hope to board one of the ships leaving the country

Neutralising and recycling rocket fuel

MELANJ, a rocket fuel formerly used by Warsaw Pact countries, represents a serious threat to the environment and public health. The NATO Security through Science programme and the NATO Maintenance and Supply Agency (NAMSA) have combined efforts to find ways to neutralise this rocket fuel and produce either non-hazardous reusable compounds (for example, fertiliser) or environmentally benign waste.

SA5 anti-aircraft missile containing Melanj

Melanj bulk storage tanks

It is estimated that 100 000 tonnes of MELANJ are stored in many former Warsaw Pact nations. It is mostly held in steel bulk-storage containers, many dating from the 1950s and virtually all predating 1990, and there has been serious deterioration of storage tanks due to the highly corrosive properties of MELANJ. Significant uncontrolled leaks have been reported and more can be expected. The dangerous nature of such leaks is caused by the chemical composition of MELANJ, which includes components such as nitric acid and nitrogen dioxide.

The STS programme has allocated funding for the development and construction of a mobile pilot MELANJ treatment plant with a capacity to treat five tonnes in 24 hours. In a demonstration phase, 100 tonnes will be treated. NAMSA, acting as the contracting agency, has issued a call for bids for the development and construction of such a mobile treatment plant.

The plant's activities are expected to have limited environmental impact and the safety of operators as well as of the general public will be assured. The initial treatment of MELANJ is foreseen to take place in one of the following NATO Partner countries: Azerbaijan, Belarus, Kazakhstan, Ukraine or Uzbekistan.

Melanj fumes escaping from a storage tank

Further information related to the call for bids can be found at: ***www.namsa.nato.int***

NATO-Algeria joint efforts to promote earthquake safety

➪ "Improving the earthquake safety of public buildings in the Maghreb region" was the topic of the Advanced Research Workshop that took place in Algiers, Algeria, from 22 to 24 May 2005. Proposed by the NATO Public Diplomacy Division to the Algerian Ministry of Land Planning and Environment and jointly organised, this workshop is an example of civil cooperation between NATO and Algeria, which is a member of NATO's Mediterranean Dialogue. Given the devastating earthquake that hit the country on 21 May 2003, earthquake safety is a crucial issue for Algeria.

From left to right, the Italian Ambassador to Algiers H. E. G. B. Verderame (NATO contact point in Algeria), Dr Fausto Pedrazzini (Programme Director, NATO Public Diplomacy Division), Mr Hanesh (Director General, Europe, Algerian Ministry of Foreign Affairs) and Mr Benhadjudja (Chief of Staff of the Algerian Minister of Land Planning and Environment)

As pointed out by Dr Fausto Pedrazzini (Programme Director at the NATO Public Diplomacy Division) in his opening remarks at the workshop, NATO's role was to bring together experts and governments' representatives and to act as catalyst of future activities on an issue which is of concern for a great number of countries, including Allies such as Greece, Italy and Turkey. Additionally, NATO's Security through Science programme has developed over time a considerable experience on seismic evaluation and risk assessment, thanks to several Science for Peace projects on this issue.

The workshop included both discussions in plenary sessions and through working groups. How to protect public buildings, such as schools, hospitals and government and administrative structures, was the topic at stake. Plenary sessions focused on presentations given by experts from NATO and Maghreb countries as well as on the experience of the three Maghreb countries (Algeria, Morocco and Tunisia) under the risk of seismic activities. The working groups focused on earthquake hazard assessment, earthquake resistant design, earthquake performance assessment and earthquake retrofit (that is, interventions to repair and reinforce structures damaged by an earthquake). Foreign participants had also the opportunity to visit the region of Boumerdès which was devastated by the May 2003 earthquake.

Cherif Rahmani, Algeria's Minister of Land Planning and Environment

Several points were made during the debate. Prof A. Chelgoum from the University of Bab-Ezzouar in Algiers stressed that the construction of earthquake resistant buildings "can make the difference between life and death". Dr P. Yelles-Chaouche, Director General of the Algerian Research Centre on Astronomy, Astrophysics and Geophysics, pointed out that the Boumerdès tragedy underscored shortcomings in the field of seismic risk reduction and referred to a new plan to reduce such risks. This plan recommends further actions in the domain of earthquake hazard assessment and land planning as well as in the organisation of response teams and in raising the awareness of the population.

This NATO initiative to convene a workshop in the wake of the tragic May 2003 earthquake was deeply appreciated by the Algerian government, as declared both by the Algerian ministers for Land Planning and Environment (Mr Cherif Rahmani) and for Housing and Urban Development (Mr Mohamed Nadir Hamimid) in their statements at the workshop. The workshop also gave the opportunity to the Algerian scientific community to strengthen cooperation and dialogue with high level experts coming from abroad on a topic of great concern for Algeria.

NRC Science Committee
upcoming activities

NATO and Russian officials and experts proposed a series of workshops to advance scientific cooperation with Russia, during meetings in Moscow, Russia, on 26 and 27 April 2005, hosted by the Russian Ministry of Education and Science and the Ministry of Foreign Affairs. The NATO delegation was also invited to visit the Ministry of Interior's training academy at Domodedovo, a facility for advanced training of anti-drug and anti-terrorism agents from Russia and other countries.

Advanced Research Workshops often provide the best means to connect experts and create networks while also examining key current security issues. On the basis of the NATO-Russia Council (NRC) Science Committee Action Plan for 2005-2006, the following Advanced Research Workshop topics were identified:

- Cybersecurity (focusing on issues such as communication infrastructure security and information security) and,
- Chemical, biological, radiological and nuclear protection (this could include exploring aspects such as modern antidotes to chemical agents, modelling sociological consequences of terrorist attacks with chemical weapons, and early detection of enemy chemical weapon attacks).

Transport security could be another possible area of cooperation, but this will require further discussion with NATO's Research and Technology Organisation and the NRC working groups on terrorism, defence reform and civil emergency planning.

These events are expected to take place later in 2005 and early in 2006.

Upcoming events

- **Advanced Research Workshop on "Scientific networking and the global health network supercourse for the prevention of man-made and natural disasters",**
  8-12 August 2005,
  Kaunas, Lithuania

- **Advanced Study Institute on "Advanced science and technology for biological decontamination of sites affected by chemical and radiological nuclear agents",**
  17-28 August 2005,
  Zhitomir, Ukraine.

- **Advanced Research Workshop on "Earthquake monitoring and seismic hazard mitigation in Balkan countries",**
  11-18 September 2005,
  Borovetz, Bulgaria

- **Advanced Research Workshop on "Psychology and terrorism",**
  14-17 September 2005,
  Castelvecchio Pascoli, Italy

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SCNEWSENG70/05

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