



SLOVAK REPUBLIC

Cooperative Activities under the SPS Programme

Since NATO began offering science cooperation to partners in 1992, Slovak scientists and experts have had leading roles in 176 activities, and more joined various cooperative activities as participants.

Today, NATO science activities enable close collaboration on the two key priorities of **defence against terrorism** and **countering other threats to security** and are managed under the Science for Peace and Security (SPS) Programme. SPS activities contribute to NATO's strategic objective of partnership, helping to connect scientists and experts from NATO countries with their counterparts from Partner and Mediterranean Dialogue countries through workshops, training courses, team collaborations and multi-year projects.



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All activities supported by the SPS Programme are approved by NATO nations on the basis of consensus.

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Examples of Ongoing Activities

An Advanced Research Workshop on **“Water Treatment Technologies for the Removal of High-Toxicity Pollutants”** brought together 42 experts in Kosice, Slovak Republic, in September 2008. They discussed the growing need for the development of water purification systems and the possible techniques for the effective removal of organics, inorganic and fission fragments from drinking water and industrial effluents. One underlying challenge identified was the need for sustainable water consumption. Furthermore, the simulation and modelling

as a planning tool for water purification was proposed. [ref 983181]

A recently initiated project involving scientists from the Slovak Republic, Kyrgyz Republic, Russian Federation and Belgium has the goal of **“Prevention of Landslide Dam Disasters in the Tien Shan”**. This mountainous region in the Kyrgyz Republic is prone to major earthquakes and at the same time contains nuclear waste storage areas, which are vulnerable to the resulting landslides. Seismic ground motions also severely damage the stability of both

natural and man-made dams. The work to mitigate the damage caused by landslides will involve regional mapping, field investigations, and 3D-modelling of the hazards and resulting risk scenarios. These tools will facilitate greater collaboration between scientists and governmental authorities, and the work will be pursued in close collaboration with the Kyrgyz Ministry of Emergency Situations. [ref 983289]

the reduced thickness also allows for a less distorted view. In March 2009, the transparent armour material was tested at a shooting demonstration in Slavcin, Czech Republic. The successful demonstration earned a STANAG certificate for protection against sniper rifles, including armour-piercing ammunition. The company St Gobain, located in the Czech Republic, is the commercial end-user of this new technology. [ref 981770]



(photo: SMic / NATO)

Experts from the Institute for Inorganic Chemistry, Bratislava, are leading a project to develop a new composition for lightweight and transparent armoured windows, to be used on military and security personnel vehicles.

In a project entitled “**Lightweight and Transparent Armours**”, scientists from the Czech Republic, Slovak Republic, Russia and Ukraine have worked together to develop a new sapphire-based material composition which enables the production of armoured windows that are 40% thinner, lighter and at a reasonable price compared with the protective windows currently used on military and security personnel vehicles. Besides the obvious advantage in mobility of lighter windows,

The SPS programme also facilitates the development of nationally funded activities, such as the pilot study on “**Clean Products and Processes**”. Through their participation in this pilot study, Slovak scientists connected with those from 30 other NATO and Partner countries with the goal of creating an international forum to share knowledge on the methods, tools and technologies for making cleaner industrial process applications and production. Such methods include improved “house-keeping” in process plants in order to reduce emissions and pollutant discharges; modifications of existing technologies; and new process designs that consider environmental impacts. By discussing and debating current trends and developments, and sharing expertise in the use of cleaner technologies and production of cleaner products, the participants aimed to stimulate effective technology transfer. The final meeting was held on 4-9 May 2008 in Berlin. [ref 981928]