



# The NATO Science for Peace and Security Programme

SPS e-flier – N.Casey / S.Michaelis

September 2009

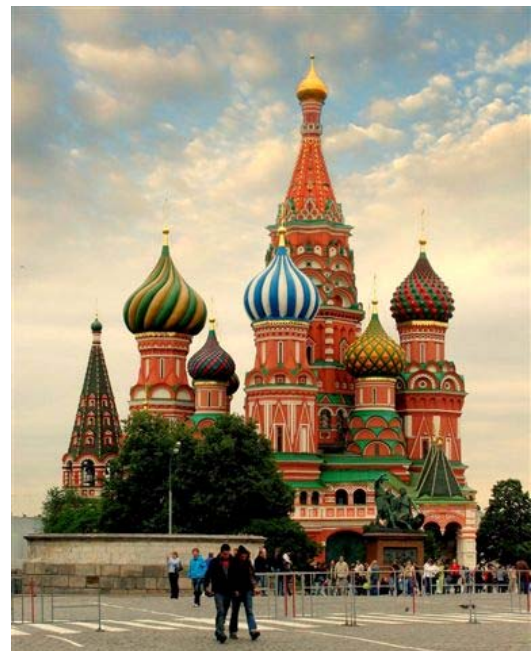
## RUSSIAN FEDERATION

### Cooperative Activities under the SPS Programme

Since NATO began offering science cooperation to partners in 1992, Russian scientists and experts have had leading roles in around 2,200 activities, and more have joined various cooperative activities as participants and key speakers.

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.

In parallel, the NATO-Russia Council has established the NRC(SPS) Committee as a special arrangement for cooperation between the Russian Federation and NATO nations in security-related science.



---

### Examples of Activities

A workshop in St. Petersburg on 29 June-2 July 2009 examined “**Advanced Materials and Technologies for Micro/Nano-Devices, Sensors and Actuators**”. The main goal was to examine scientific and technological issues pertaining to the use of micro- and nano-electomechanical systems and devices in next-generation commercial and defence-related applications. It brought together a diverse, international group of scientists and engineers from academic, industrial and government labs, with a wide variety of backgrounds in basic and applied physics, chemistry,

engineering, and surface and materials science.

A new project in the field of defence against terrorism involving Russian experts could lead to a breakthrough in the “**Stand-off Detection of Explosives**”. The objective is to design and engineer a system composed of multiple technologies for the detection of suicide bombers and improvised explosive devices (IEDs) and, in addition, to demonstrate the effectiveness of the system on-site, e.g. in a subway system. The Explosives Detection Expert Group, established by the SPS Committee in



# The NATO Science for Peace and Security Programme

SPS e-flier – N.Casey / S.Michaelis

September 2009

2006, selected the four techniques of laser interrogation, microwave active imaging, millimeter (terahertz) passive imaging and video imaging as capable of performing stand-off detection in different circumstances and at different ranges, as well as suitable for data collection into the system. The project, which also involves experts from Germany, the Netherlands, France and the United States, has been approved by the NATO Research and Technology Organization (RTO).



Oil spill rail disaster, June 2005

Researchers in the Russia Federation and Italy are working to develop the “**Prototype for an International Situational Centre (ISC) in Case of Ecoterrorism**”. The centre will be equipped with a Decision Support System and Geographic Information System to monitor relevant agro-environment and municipal water resources. The experts envision a facility to be linked with corresponding organisations in other countries, for the acquisition, storage and retrieval of unclassified data useful in counteracting ecoterrorism. The Situational Centre of the Russian Academy of Public Administration has provided a model for the ISC.

Beginning in April 2007, scientists from the Russian Federation, Germany and the United States have cooperated on the establishment of an “**Oil Pollution Science Centre**”. The participants intend to integrate a research and training component into the overall oil spill response capability in the Tver Region of Russia, as well as to develop a model for oil spill risk assessment and response throughout the country. The Oil Pollution

Science Centre will provide training for authorities, industrial enterprises and other institutions, and will disseminate information about the best available technologies for oil spill prevention and liquidation.

In addition to NATO-funded activities, the SPS Programme facilitates the development of nationally funded activities, such as pilot study on “**Risk Assessment of Chernobyl Accident Consequences: Lessons Learned for the Future**”. Although the Chernobyl accident had triggered a considerable improvement in procedures for nuclear emergency preparedness and international information exchange, the project organisers recognised that there was still room for improvement, in coordinating the response to nuclear accidents and in decision-making during the initial and later phases after an accident. The pilot study gathered experts from the Russian Federation and several other countries for a number of meetings focused on the lessons learned from the Chernobyl accident and formulated recommendations for future research and response measures.