



The NATO Science for Peace and Security Programme

SPS e-flier – E.Maduike / S. Michaelis

May 2010

ESTONIA

Cooperative Activities under the SPS Programme

Since NATO began offering science cooperation to partners in 1992, **Estonian** scientists and experts have had leading roles in 52 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 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 Activities

The malicious contamination of food and water by terrorist acts is a real and current threat that was addressed by the Advanced Research Workshop on “**Threats to Food and Water Chain Infrastructure**” that took place in December 2008. An expert from the Ministry of Agriculture of Estonia participated at the reviewing of the characteristics of biological, chemical and radiological agents that could be used by terrorists and the events that occurred in the past. The challenge for those who aim at protecting the food chain is to narrow down the list of potential threat agents, apply strict control and promote local production and food processing. [ref. 983420]

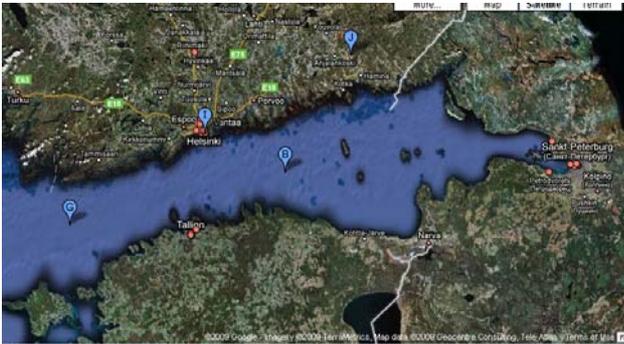
Estonian experts from the Archimedes Foundation located in Tartu (www.archimedes.ee) helped Georgia to organise in June/July 2008 an Advanced Training Course on “**Science and Technology (S&T) Policy to enhance Security** “. This 5-day course introduced 45 participants from Armenia, Azerbaijan and Georgia to international S&T best practice in order to enhance the resolution of internal conflicts and to reduce the tension between countries of this region. It is believed that, in the long run, the countries will benefit from the integration into the political, economical and scientific structures of the Euro-Atlantic security environment. [ref. 983212]



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© Google Earth Map
Satellite image of the Gulf of Finland, Baltic Sea.

Within a 3-year applied SPS project, investigators from Estonia, Canada and Russia have examined the “**Risk of flooding from the Gulf of Finland and the Baltic Sea**” with the aim to improve the accuracy of the Flood Forecasting. Statistical models have been developed for the sea level trends and their year-to-year variability. The most dangerous combinations of weather conditions have been determined. Extremes of water levels in the Gulf of Finland and in the Gulf of Riga have been modeled. A model of Neva Bay has been developed to assess the effect of the existing Flood Protection Barrier. During the coming months a sea-level database of the Eastern Baltic Sea will be finalized and, as a first step, the Flood Forecasting System for St. Petersburg will be modernized. [ref. 981382]

Following a series of cyber attacks that hit Estonia in April 2007, the SPS Programme supported an Advanced Research Workshop “**Responses to Cyber terrorism**” that took place in October the same year. The workshop focussed on systems that control physical processes in places prone to disaster,

such as chemical factories. It brought together experts from a range of disciplines, including researchers on information technology, law, security and terrorism. Sessions included the analysis of the cyber attacks and discussions about practical solutions and the legal framework. A list of recommendations was prepared and the proceeding published. Estonia provided key speakers from their Cyber Defence Centre of Excellence. [ref. 982919]

In addition to NATO-funded activities, the SPS Programme facilitates the development of nationally funded activities. Estonia provided experts from the Environmental Protection Department in Tallinn for the pilot study “**Defense Environmental Expectations**”,

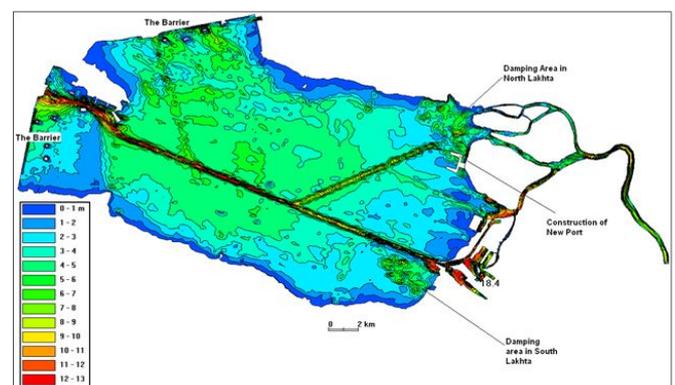


Image courtesy of the Co-Directors.
Updated depth contours of the new coastline in the Neva Bay model.

which has been successfully completed. The final report included an evaluation of environmental regulatory requirements and a catalogue of information regarding environmental trends across NATO member states. The report has led to the “NATO Code of behavior” and several STANAG applications that are implemented by NATO. [ref 951106]