

Developing Practical Cooperation through Science

Austria has been actively engaged within the framework of the NATO Science for Peace and Security (SPS) Programme since 1991.

The NATO SPS Programme enables close collaboration on issues of common interest to enhance the security of NATO and partner nations by facilitating international efforts to meet emerging security challenges, supporting NATO-led operations and missions, and advancing early warning and forecasting for the prevention of disasters and crises.

The current SPS Key Priorities include:

- *Counter-Terrorism;*
- *Energy Security;*
- *Cyber Defence;*
- *Defence against CBRN Agents;*
- *Environmental Security;*
- *Security-related Advanced Technology;*
- *Border and Port Security;*
- *Human and Social Aspects of Security.*

Additionally, the SPS Programme helps to promote *regional security* through scientific cooperation among partners. The Programme also helps to *prepare* interested eligible nations for NATO membership. SPS activities often have a high *public diplomacy* value.

AUSTRIA

NATO-Austria relations are conducted through the Partnership for Peace framework, which welcomed Austria as a member in 1995. Over the past years, Austria has been engaged in several activities with the SPS Programme, primarily in the areas of **Counter-Terrorism, Security-related Advanced Technologies, and Energy Security**. Through the SPS Programme, scientists and experts from Austria have participated in numerous workshops, seminars, and activities on a wide range of topics.

Cooperative Activities

SMART ENERGY IN CAPABLE LOGISTICIAN 2015: FROM OBSERVATION TO RECOMMENDATION

During a three-day Advanced Research Workshop (ARW) held at the Bacyony Combat Training Area in Hungary, 30 experts observed live exercises involving over 50 pieces of smart energy technology.



Two camps with 'micro grids' integrated a number of technologies for smart energy production, storage, distribution and consumption, as well as wearable and portable power systems. The goal of this workshop was to test interoperability within and between Smart Energy Multinational Integrated Logistics Units (MILU), and to assess the standardization of smart energy for the operational environment. This workshop concluded the 'Exercise Capable Logistician 2015' programme held in Hungary from 8 to 19 June 2015. *This activity, led by scientists and experts from Austria and Lithuania, took place from 14 to 17 June 2015 in Hungary.* [ref. G5018].

PHOTONIC NANO PARTICLE SENSORS FOR DETECTING CBRN EVENTS

This Multi-Year Project (MYP) responds to the increasing awareness of the impact of aerosols on security and safety in relation to human health and the environment. It aims to develop and design a miniature fully dielectric photonic sensor that can be remotely operated in an electromagnetically “quiet” way to detect chemical, biological, radiological, and nuclear (CBRN) agents in order to protect critical infrastructure, supplies and personnel. The project proposes to develop a sensor technology for environmentally relevant gases and aerosols, to assess the air quality and detect CBRN agents. This project will provide security and safety to responders and the population. This sensor technology will also be relevant for predicting climate change and natural disaster events, and will have beneficial impact in the field of energy security as this system will contribute to monitoring a variety of combustion processes in military and civil systems. *This project is led by scientists from Austria and Slovenia.* [ref. G5766].

NOVEL TERAHERTZ SOURCES (NOTES)

This MYP aimed to develop, demonstrate and optimize novel materials and devices, to design powerful, compact, and portable terahertz (THz) sources. THz is already used in defense and security applications to detect chemicals and to identify concealed objects. The main objective of this project was to address issues related to the use of THz and to pave the way for a future portable fiber-coupled and fiber-integrated THz source. It also aimed to test different THz sources providing different potential advantages (e.g. increased efficiency or ruggedness). This project represents a major step in making THz technology practical for deployment by military and security forces. *This project, which concluded in 2017, was led by scientists and experts from Austria and Slovakia.* [ref. G4698].

SARS-CoV-2 MULTI-MESSENGER MONITORING FOR OCCUPATIONAL HEALTH

The SARS-CoV-2 pandemic has caused a devastating global health crisis, which created and revealed many challenges, including the need to ensure an adequate and accurate individual protection against risk exposure in the transports and workspaces. This MYP was kicked off in June 2021 and aims to develop rapid and innovative nanotechnology-based biosensors to detect and monitor the presence of the SARS-CoV-2 virus and other toxic bio-agents in workplaces. *The project is led by scientists and experts from Austria and Italy.* [ref. G5889].

THE SPS PROGRAMME IS OPEN TO ACTIVITIES WITH AUSTRIA

The SPS programme welcomes future cooperation with Austrian scientists and experts.

The SPS Programme is open to all activities with Austria, in line with the political guidance from Allies in the form of the SPS Key Priorities and the Overarching Guidelines, as well as Austria’s national priorities.