

*Developing Practical
Cooperation through
Science*

The NATO Science for Peace and Security (SPS) Programme is open to scientists and experts from Australia.

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 forecast 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.

AUSTRALIA

Building on dialogue and cooperation that has been developed since 2005, NATO and Australia signaled their commitment to strengthen cooperation in a joint political declaration in June 2012. This was followed with the signature of an Individual Partnership and Cooperation Programme in February 2013. Australia has recently been increasingly involved in the SPS Programme with cooperation focusing on the Women, Peace and Security agenda, advanced technologies with security applications, counter terrorism and energy security.

Cooperative Activities

TAILOR-MADE GENDER-AWARENESS APPLICATIONS FOR NATO

This multi-year project, launched in April 2016 aimed at developing gender-awareness applications tailored for the NATO community. In two pilot courses, the project proposed ways to integrate a gender perspective into NATO-relevant work and provided evidence-based policy recommendations drawn from scientific research. The project also included valuable lessons from the NATO partner Australia and actively involved young researchers and students in a summer school on gender in international security [ref. G5080]. *This multi-year project led by experts from Australia, Canada & the United States, was completed in 2018.*

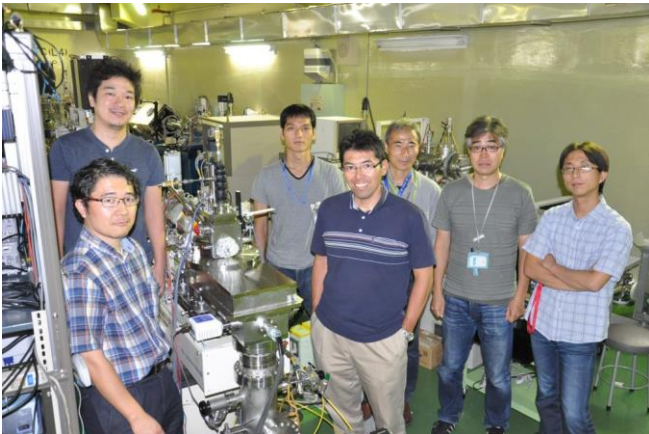


HIGH ALTITUDE BALLOON –BORNE RADAR

This project, launched in 2017, intends to develop a demonstrator of a Synthetic Aperture Radar system carried by a High Altitude Platform, more specifically a high altitude balloon. The new technology will be realised by building a miniaturised radar system that will be mounted on a novel platform employing high altitude balloons. The proposed system will be low-cost and easily deployable while not compromising the performance of the system [ref. 5322]. *This project is led by scientists from Australia and Italy.*

ENGINEERING SILICON CARBIDE FOR ENHANCED BORDER AND PORT SECURITY (E-SiCure)

Developing swift and effective methods to detect the illicit trafficking of nuclear materials has become an issue of increasing importance for national and regional security. The main objective of this project is to enhance border and port security through state-of-the-art silicon carbide (SiC)- based radiation detectors. Due to the global shortage of helium-3 isotopes, which is the gas of choice for most existing neutron detection systems, SiC is singled out as the most promising semiconductor material for the new generation of detectors. SiC is non-toxic and non-hazardous and can be produced at low cost. The developed device will be able to detect special nuclear materials at ports of entry, along borders, for in-transit monitoring of cargo and crowds, for mounted and mobile surveillance tools as well as for personal and distributed detector networks. The project is also actively involving many young researchers. [ref. G5215] *This Multi-Year Project is led by experts from Croatia, Portugal, Australia, Japan & Slovenia.*



TRANSITIONING FROM MILITARY INTERVENTIONS TO LONG-TERM COUNTER-TERRORISM POLICIES

In the current geo-political environment, military interventions are led by multi-state and multi-party coalitions, which inevitably impacts on the design of exit strategies. This research project investigated how counter-terrorism planning has been incorporated into these exit strategies and how effective they have

been. The specific focus was on three recent operations - two NATO-led, Afghanistan and Libya, and one under a national lead, Mali – for which key success factors and best practices were identified. The project results were presented at NATO HQ contributed to an enhanced understanding of military transitions led by a coalition of states. [ref. G4855] *This SPS Multi-Year Project, completed in 2016, was led by experts from the Netherlands and Australia.*



HARMONIZED ENERGY MONITORING & CAMP SIMULATION TOOLS FOR ENERGY EFFICIENCY

The project's overall goal is to reduce the fossil fuel consumption in deployable camps. To reach this goal, the project will develop and deploy universal energy monitoring kits and a camp simulation model that will allow the assessment and forecast of the energy balance of camps in an interoperable way. It will provide nations to make informed decisions to optimise camp equipment and procedures for efficient power production & consumption, as well as for energy storage & management. To measure and collect energy data of various camps in a harmonised way, five standard energy monitoring kits will be assembled. The standardization of measurements and harmonisation of data sheets - to be agreed upon during the project - are an important task to ensure that the energy monitoring as well as the data collection will be interoperable among systems and nations. This is especially important for the planning and implementation of multinational deployed camps, such as those build-up in NATO-led exercises and operations [ref. G5525]. *This Multi-Year Project will be launched in September 2018 and is led by Project Directors from Australia and Canada.*



The NATO Science for Peace and Security Programme

www.nato.int/science