The NATO Science for Peace and Security Programme

CountryFlyer 2020

January

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 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.

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 by the signature of an Individual Partnership and Cooperation Programme (IPCP) in February 2013. In recent years, Australia has become increasingly involved in the SPS Programme with activities focused on the Key Priorities of **Women, Peace and Security, Advanced Technologies, Counter Terrorism, and Energy Security.** There are currently three ongoing activities with Australia under the framework of the SPS Programme.

Cooperative Activities

TAILOR-MADE GENDER-AWARENESS APPLICATIONS FOR NATO

This Multi-Year Project (MYP), launched in April 2016, aimed to develop 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 NATO partner Australia, and actively involved young researchers and students in a summer school on gender in international security. *This project was led by experts from Australia, Canada and the United States and was completed in 2018.* [ref. G5080].

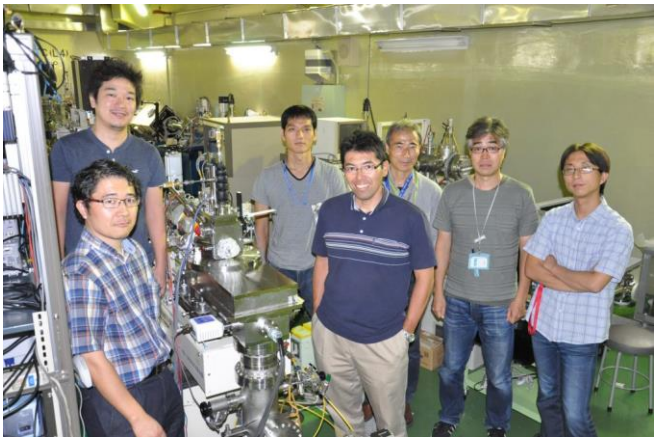
HIGH ALTITUDE BALLOON –BORNE RADAR

This ongoing MYP, launched in 2017, aims to develop and deliver a prototype of a Synthetic Aperture Radar system carried by a High Altitude Platform and Balloon. The new technology will be realised by building a miniaturized radar system mounted on a novel

platform, employing high-altitude balloons. The proposed system will be low-cost and easily deployable without compromising the performance of the system to provide wide surveillance coverage from a safe distance. *This project is led by scientists from Australia and Italy.* [ref. G5322].

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 ongoing E-SICURE MYP is successfully developing and testing a prototype of a state-of-the-art silicon carbide (SiC)-based radiation detector. Due to the global shortage of helium-3 isotopes, SiC was singled out as the most promising semiconductor material for the new-generation detector. It gives the detector enhanced capabilities in responding to thermal and fast neutrons. A follow up MYP has recently been proposed. *This project is led by scientists from Croatia, Australia, Japan, Portugal and Slovenia.* [ref. G5215].



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 impact the design of exit strategies. This MYP 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 in 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, and contributed to an enhanced understanding of military transitions led by a coalition of states. *This project, completed in 2016, was led by experts from the Netherlands and Australia.* [ref. G4855].

HARMONIZED ENERGY MONITORING & CAMP SIMULATION TOOLS FOR ENERGY EFFICIENCY

Launched in 2018, this ongoing MYP aims to reduce fossil fuel consumption in deployable camps. To reach this goal, the project is developing and deploying universal energy monitoring kits and a camp simulation model that will allow the assessment and forecasting of the energy balance of camps in an interoperable way. It will allow nations to make informed decisions to optimise camp equipment and procedures for efficient power production and consumption, as well as for energy storage and 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 important tasks 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 in NATO-led exercises and operations. *This project is led by experts and scientists from Australia and Canada.* [ref. G5525].