

CALL FOR PROPOSALS 2022/1

The NATO Science for Peace and Security (SPS) Programme enhances civil science and technology to address emerging security challenges and their impact on international security. It connects scientists, experts and officials from NATO and partner nations to work together to address these challenges, by supporting security-relevant activities in the form of four established grant mechanisms, which are:

1. Multi-Year research and development Projects (MYP)
2. Events, in the following formats:
 - a. Advanced Research Workshops (ARW)
 - b. Advanced Training Courses (ATC)
 - c. Advanced Study Institutes (ASI)

Through the SPS Programme, NATO has demonstrated its longstanding commitment to science, innovation and practical cooperation with partners. The SPS Programme offers funding, expert advice and support to tailor-made, civil security-relevant activities that respond to NATO's strategic objectives. Participation in the SPS Programme enables experts and scientists to develop innovative solutions to today's security challenges, and to build partnerships with their peers in NATO and partner nations.

For more information on the SPS Programme and its activities, please visit the NATO SPS website at www.nato.int/science

THEMES OF THE CALL FOR PROPOSALS

This call for proposals welcomes applications responding to any of the [SPS Programme's Key Priorities](#) outlined in the Annex. Proposals focusing on the convergence and integration of different technologies and disciplines with the purpose of serving a common goal (i.e. integration of engineering, biotechnologies, physical sciences, data science, computation, life sciences, social sciences, etc.) can also be accepted.

Moreover, in preparation to the upcoming 2022 NATO Summit and in line with the [NATO 2030 agenda](#), proposals addressing the topics below are especially encouraged.

1. SECURITY-RELATED ADVANCED TECHNOLOGY

- **Quantum technologies:**
 - Quantum sensing
 - Quantum communications
 - Enablers for quantum technologies
 - Post-quantum cryptography
- **Autonomous systems** in all physical domains (ground, air, space and maritime)
- **Artificial Intelligence:**
 - Security applications and reliability (use cases)
 - Machine vision, image recognition
 - Anomaly detection

- Human-Machine Teaming (how humans and AI can most effectively collaborate to carry out missions)
- Responsible development and use of Artificial Intelligence
- Exploitation of AI in energy management
- Exploitation of AI in the design of environmental security and early warning systems
- AI applications to mitigate the impact and risks of climate change on operations and missions
- AI applications for combatting disinformation
- Using AI for policy compliance checking
- **Data**
 - Information and data analysis
 - Securely registering and sharing data and models/algorithms (e.g. data catalogues, models and algorithms catalogues)
 - Monitoring data quality and decay
 - Technologies for enabling trust in data, platforms and technologies
- **Biotechnology and human enhancement**
 - Medical biotechnology
 - Security applications of biotechnology

2. CLIMATE CHANGE AND SECURITY

- Assessment of current and future increased climate change related bio-security risks and mitigation options
- Climate change interactive scenario modelling – outlook to 2050/60 +
- Exploitation of innovative and low carbon environmental technologies for operations
- Impact of increased variation in maritime salinity, acidity, and temperature on legacy and novel systems and technologies
- Impact of climate change on transboundary security
- Strategic and critical resource management
- Nexus between terrorism and climate change
- Exploitation of innovative sustainable energy systems in off grid and on grid locations
- Exploitation of hydrogen fuel cells

3. DEFENCE AGAINST CBRN AGENTS

- Handheld Standoff Chemical Detection
- Detection of Biological Hazards and medical countermeasures

4. RESILIENCE

- Novel solutions for resilience to man-made, technological and natural hazards employing advanced materials and artificial intelligence / machine learning
- Preparedness against bio hazards and recovery strategies from pandemics (e.g. COVID-19)
- Critical infrastructure resilience against all threat and hazards
- Climate change and supply chain vulnerabilities (e.g. development of an interoperable and live assessment framework)
- Resilience of citizens and societies
- Resilience and measurement/assessment/interdependency mapping tools, modelling, simulation for evaluation and developing guidelines on topics of relevance (for instance to prevent violent extremism conducive to terrorism)

BOUNDARIES OF THE CALL FOR PROPOSALS

This call for proposals welcomes applications for both Multi-Year Projects and Events (Advanced Research Workshops, Advanced Training Courses and Advanced Study Institutes).

Applications must be submitted using the templates and documentation published on the SPS website. Templates and manuals detailing procedures for the development and management of activities in the framework of this call for proposals are available on this page: <https://www.nato.int/cps/en/natohq/172949.htm>

Proposals should consider the evolving circumstances of the coronavirus pandemic, and take into account the risks and limitations posed by potential restrictions on travel and gatherings. In particular, as suitable digital tools are available, the organization of Events with limited in-person presence (hybrid format) or online is encouraged. Moreover, co-directors should be ready to re-consider the format of their activity based on the situation at a local level or upon instruction of the SPS Programme. The SPS office will provide guidance to successful applicants closer to the implementation date, based on the status of the pandemic and the format of the proposed event.

ELIGIBILITY

Proposals should be developed jointly by scientists or experts from at least one NATO and one partner nation. To be eligible for funding, applications submitted to the SPS Programme must:

- contribute towards NATO's strategic objectives and have a clear link to security;
- address at least one of the SPS Key Priorities;
- be led by a co-director who is a national of, resident and employed in a NATO member country (NATO country Co-Director), and a co-director who is a national of, resident and employed in an eligible partner nation (Partner country Co-Director) (*see list below*);
- be developed and implemented by co-directors affiliated with a government, academic, or other non-profit institutions. For-profit private companies are not eligible for SPS funding;
- include realistic plans and budgets;
- be developed and managed in alignment with rules and regulations outlined in the SPS handbooks. Only applications developed using the templates and manuals pertaining to this call will be taken into consideration.

Eligible countries are:

NATO member countries: Albania, Belgium, Bulgaria, Canada, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Greece, Hungary, Iceland, Italy, Latvia, Lithuania, Luxembourg, Montenegro, Netherlands, the Republic of North Macedonia, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Turkey, United Kingdom, United States.

Eligible NATO partner nations: Afghanistan, Algeria, Armenia, Australia, Austria, Azerbaijan, Bahrain, Belarus, Bosnia and Herzegovina, Colombia, Egypt, Finland, Georgia, Iraq, Ireland, Israel, Japan, Jordan, Kazakhstan, the Republic of Korea, Kuwait, Kyrgyz Republic, Malta, Mauritania, the Republic of Moldova, Mongolia, Morocco, New Zealand, Pakistan, Qatar, ~~Russian Federation~~¹, Serbia, Sweden, Switzerland, Tajikistan, Tunisia, Turkmenistan, Ukraine, United Arab Emirates, Uzbekistan.

¹ Due to the 1 April 2014 decision of NATO foreign ministers to suspend all practical civilian and military cooperation between NATO and Russia, no Russian participation in SPS activities is allowed until further notice.

DEADLINE FOR APPLICATIONS

Applications must be submitted **by 31 May 2022 (23:59 CET)** to the address sps.applications@hq.nato.int. When submitting your application, please mention in the subject line "Call for Proposals 2022/1"

All relevant enquiries prior to application submission should be addressed to sps.info@hq.nato.int.

The NATO SPS Programme is committed to diversity and inclusion, and welcomes eligible applicants from all NATO and eligible partner countries, independent of gender, age, nationality, ethnicity, religion or belief, cultural background, sexual orientation, and disability.

SPS KEY PRIORITIES

All activities funded by the SPS Programme must address at least one of the SPS Key Priorities, which are based on NATO's Strategic Concept agreed by Allies at the Lisbon Summit in November 2010, and the strategic objectives of NATO's relations with partners agreed in Berlin in April 2011. The current SPS key priorities are:

1. Facilitate mutually beneficial cooperation on issues of common interest, including international efforts to meet emerging security challenges

a. Counter-Terrorism

- i. Methods for the protection of critical infrastructure, supplies and personnel;
- ii. Human factors in the defence against terrorism;
- iii. Detection technologies against the terrorist threat of explosive devices and other illicit activities;
- iv. Risk management, best practices and technologies in response to terrorism.

b. Energy Security

- i. Innovative energy solutions for the military; battlefield energy solutions; renewable energy solutions with military applications;
- ii. Energy infrastructure security;
- iii. Maritime aspects of energy security;
- iv. Technological aspects of energy security.

c. Cyber Defence

- i. Critical infrastructure protection, including sharing of best practices, capacity building and policies;
- ii. Support in developing cyber defence capabilities, including new technologies and support to the construction of information technology infrastructure;
- iii. Cyber defence situation awareness.

d. Defence against Chemical, Biological, Radiological, and Nuclear (CBRN) Agents

- i. Methods and technology to protect against, diagnose effects of, detect, decontaminate, destruct, dispose and contain CBRN agents;
- ii. Risk management and recovery strategies and technologies;
- iii. Medical countermeasures against CBRN agents.

e. Environmental Security

- i. Security issues arising from key environmental and resource constraints, including health risks, climate change, water scarcity and increasing energy needs, which have the potential to significantly affect NATO's planning and operations;
- ii. Disaster forecasting and prevention of natural catastrophes;
- iii. Defence-related environmental issues.

2. Enhance support for NATO-led operations and missions

- i. Provision of civilian support through SPS Key Priorities;
- ii. Provision of access to information through internet connectivity as in the SILK-Afghanistan Programme;
- iii. Cultural and social aspects in military operations and missions;
- iv. Enhancing cooperation with other international actors.

- 3. Enhance awareness of security developments including through early warning, with a view to preventing crises**
 - a. Security-related Advanced Technology**
 - i. Emerging technologies including nanotechnology, optical technology, micro satellites, metallurgy and the development of Unmanned Aerial Vehicle (UAV) platforms.
 - b. Border and Port Security**
 - i. Border and port security technology;
 - ii. Cross-border communication systems and data fusion;
 - iii. Expert advice and assessments of border security needs and best practices.
 - c. Mine and Unexploded Ordnance (UXO) Detection and Clearance**
 - i. Development and provision of advanced technologies, methodologies and best practices;
 - ii. Solutions to counter improvised explosive devices (IED).
 - d. Human and Social Aspects of Security related to NATO's Strategic Objectives**
- 4. Any project clearly linked to a threat to security not otherwise defined in these priorities may also be considered for funding under the SPS Programme**

Such proposals will be examined for links to NATO's Strategic Objectives (e.g. in the field of hybrid challenges).