Developing Practical Cooperation through Science

Bosnia and Herzegovina has been actively engaged within the framework of the NATO Science for Peace and Security (SPS) Programme since 2007.

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 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.

Bosnia AND HERZEGOVINA

National scientists and experts are currently leading three activities with the SPS Programme. At present, the leading areas for cooperation include Counter Terrorism, Unexploded Ordnance Detection and Disposal, and Human and Social Aspects of Security. Bosnia and Herzegovina is currently involved in four SPS activities. Below are some examples of ongoing and completed projects led by scientists and experts from Bosnia and Herzegovina under the framework of the NATO SPS Programme.

Cooperative Activities

ADVANCED REGIONAL CIVIL EMERGENCY COORDINATION PILOT

Large-scale disasters often call for an international emergency response involving thousands of first responders from various jurisdictions and agencies. Effective collaboration during emergency and disaster response translates into saving lives, reducing loss of property and resources, and protecting the environment. This ongoing flagship Multi-Year Project (MYP), launched in 2016 and supported by the SPS Programme and the US Department of Homeland Security – Science & Technology Department, is developing and implementing a system to facilitate coordination amongst responders and improve civil emergency management across the Western Balkans. Once in place, the new technology will allow responders to share all kinds of information about an incident, including GPS locations or images, via mobile devices. This will maximise real-time situational awareness and help find coordinated and appropriate responses to natural or man-made disasters.

This project is led by experts from Bosnia and Herzegovina, the United States, Croatia, the Republic of North Macedonia and Montenegro. [ref. G4968].

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RE-THINKING THE WESTERN BALKANS SECURITY PARADIGM

This Advanced Study Institute (ASI) aimed to provide a high-level tutorial course for young scientists from NATO and partner nations at a doctoral and post-doctoral level. It assessed the security situation of the contemporary Western Balkans, including national, societal and human security issues as a central core of the event. The training also covered several environmental and energy security topics with a particular focus on vulnerability to intentional activities (i.e. terrorism). Overarching themes included the causes and scientific underpinnings of related threats and emerging security challenges, the methods to assess risk and security preparedness, and the consideration and promotion of strategies for the management and prevention of potential regional conflicts and crises. This project, led by scientists from Bulgaria and Bosnia and Herzegovina, took place in Sozopol, Bulgaria, from 10 to 16 September 2019. [ref. G5651].

IMPROVEMENTS IN THE HARMONIZED SEISMIC HAZARD MAPS FOR THE WESTERN BALKAN COUNTRIES

This Multi-Year Project (MYP) is a follow-on to the project “Harmonization of Seismic Hazard Maps for the Western Balkan Countries” [ref. G3054]. Considered an excellent example of regional cooperation within the framework of the SPS Programme, the project aimed to improve the outputs of the previous project, integrate the improved seismic hazard maps with the ongoing seismic hazard studies in Europe and surrounding countries, and encourage collaboration and exchange of information between scientific communities of the participating countries and earthquake professionals around the world. This project, completed in 2016, was led by scientists and experts from Bosnia and Herzegovina, the Republic of North Macedonia, Albania, Croatia, Montenegro, Serbia and Turkey. [ref. G4374].

CYBER DEFENCE STRATEGIES AND POLICIES: ADDRESSING A CONSTANTLY CHANGING THREAT

Building upon a previous activity, this Advanced Training Course (ATC) successfully:

• Provided training on the protection of valuable data from unauthorized users while simultaneously making sure that the information is accurate and available to legitimate users;
• Familiarised the trainees with responsibilities and capabilities of institutions that are involved in national cyber defence when reacting to cyber incidents;
• Presented international administrative challenges regarding cyber defence (definitions, strategies, policies).
This project, led by experts from Bosnia and Herzegovina and Croatia, was held from 17 to 21 October 2016. [ref. G5194].

BIOLOGICAL METHODS FOR EXPLOSIVE DETECTION

This ongoing MYP, launched in November 2017, aims to develop a novel method to detect landmines using an innovative approach: employing honeybees. Honeybees are known for their ability to “sniff” a variety of compounds from drugs to pesticides to CBRN materials, and recent studies have proven that they can also detect explosives. By combining the search and collection of explosives by honeybees with imaging and sensing technologies, the results of the detection process are rapid on a minefield. This new method is expected to reduce the time and the cost of detection and help mine action centres release land for civilian use. The end-users of this project are governmental and demining organisations. This project is led by national scientists and experts from Bosnia and Herzegovina, Croatia and the United Kingdom. [ref. G.5355].