

Developing Practical Cooperation through Science

The Kyrgyz Republic has been actively engaged within the framework of the NATO Science for Peace and Security (SPS) Programme since 1993.

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.

KYRGYZ REPUBLIC

The Kyrgyz Republic has been involved in several SPS activities. Leading areas for cooperation have included **Environmental Security, Cyber Defence, and Counter-Terrorism**. Below are some examples of activities led by scientists and experts from the Kyrgyz Republic and NATO countries under the framework of the NATO SPS Programme.

Cooperative Activities

EARTHQUAKE HAZARD AND ENVIRONMENTAL SECURITY IN THE KYRGYZ REPUBLIC AND KAZAKHSTAN

This ongoing Multi-Year Project (MYP) aims to produce a standard active fault map and gather paleo-seismic information across the Tien Shan region of Kazakhstan and the Kyrgyz Republic. For effective hazard assessment and in order to build critical local capacity, the project team will create up-to-date active fault maps through forensic field and satellite-based geological investigation. *This project is led by scientists and experts from the Kyrgyz Republic, Kazakhstan, the United Kingdom, the United States, Germany, and France.* [ref. G5690].

COUNTERING TERRORIST RECRUITMENT IN THE CONTEXT OF ARMED COUNTER-TERRORISM OPERATIONS

A prerequisite to avoiding constant combat situations with terrorist groups is to break the recruitment process. This Advanced Research Workshop (ARW) aimed to examine the different recruitment methods used by violent non-state actors and to consider possible counter-measures. Inputs from the 28 participating counter-terrorism experts explored the appeal of joining terrorist cells for local populations, and how to create safer environments during military campaigns and enhance local stability once military campaigns have been completed. *This activity, led by scientists and experts from the Kyrgyz Republic and Turkey, took place in Antalya, Turkey, from 9 to 10 May 2015.* [ref. G4858].

MICROBIOLOGICAL SAFETY OF DRINKING WATER IN UZBEKISTAN AND KYRGYZ REPUBLIC

This MYP aimed to enhance knowledge in the Kyrgyz Republic and Uzbekistan about quality assurance for microbiological tests of drinking water. The project compared regulatory documents on microbiological analysis of drinking water quality in the Kyrgyz Republic and Uzbekistan with international standards and requirements. It also included training and evaluation of researchers' knowledge regarding sampling and microbiological analysis of water, as well as the provision of laboratory equipment. *This project, completed in 2015, was led by scientists from France, the Kyrgyz Republic and Uzbekistan.* [ref. 2811].

ASSESSING TRANS-BOUNDARY WATER POLLUTION IN CENTRAL ASIA

The Kyrgyz Republic jointly utilises the Syr-Darya river basin with the Republics of Kazakhstan, Uzbekistan, and Tajikistan. These nations therefore share common issues regarding water pollution in the region. As a result, joint monitoring and management of water pollution in the transboundary area is crucial. This Multi-Year Project (MYP) brought together NATO's partners in the region to conduct an in-depth study of contaminants in the Syr-Darya river basin. Ultimately, it aimed to establish a continuous and self-sustaining monitoring activity through regional cooperation to tackle water pollution in the long-term. *This project, led by scientists from the Kyrgyz Republic, Kazakhstan, Tajikistan, Uzbekistan and Norway, was completed in 2015.* [ref. G3945].

NETWORK AND INTERNET SECURITY ASSURANCE FOR NATION-WIDE COMMUNITY CONNECTIVITY

During this Advanced Training Course (ATC), networking engineers from Afghan universities and governmental institutions were offered extensive hands-on lab work and practical exercises to ensure the successful operation of university networks and their security management. Practitioners from the Kyrgyz Research and Education Network (KREN) conducted two-week courses at basic and advanced levels respectively for their colleagues from Afghanistan. The training course was part of a broader effort aiming to improve all levels of education in Afghanistan through the 'SILK Afghanistan' Programme. *This activity was led by experts from the Kyrgyz Republic and Turkey.* [Ref. 984468].

GEO-ENVIRONMENTAL SECURITY OF THE TOKTOGUL HYDROELECTRIC POWER STATION REGION

The Toktogul region lies at the centre of the largest hydroelectric irrigation area in Central Asia. The aim of this MYP was to evaluate the seismic security of the region, formulate threat scenarios, develop recommendations for risk mitigation measures, and disseminate information on the potential hazards of using a GIS database. Another principal objective was to identify the threats arising from earthquake-related disturbances to dumps of uranium tailings. The end-users of the results and recommendations of this study included relevant ministries in the Kyrgyz Republic and Uzbekistan, as well as the Kyrgyzenergo Holding Company which runs the Toktogul operation. *This project was led by scientists and experts from the Kyrgyz Republic, Italy, the United Kingdom, and Uzbekistan.* [ref. G3142].



The NATO Science for Peace
and Security Programme