

### Developing Practical Cooperation through Science

**Uzbekistan 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 and Port Security;
- Human and Social Aspects of Security.

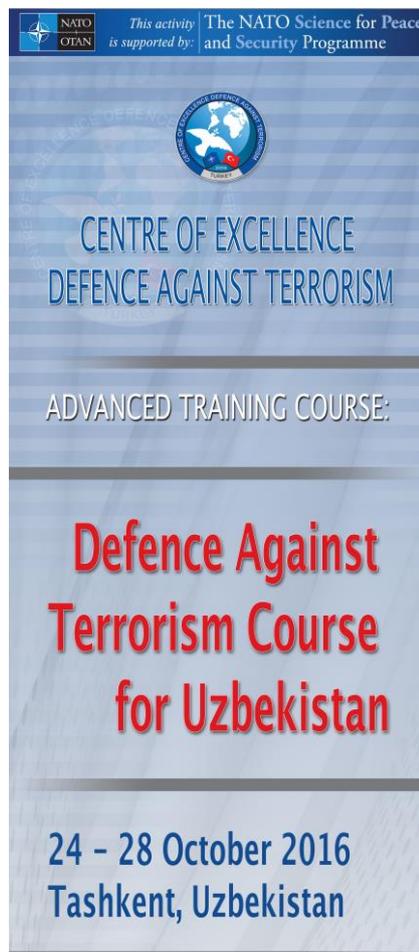
Additionally, the SPS Programme helps to promote *regional security* through scientific cooperation among partners. The Programme also helps to *prepare* interested eligible nations for NATO membership. SPS activities often have a high *public diplomacy* value.

# UZBEKISTAN

Uzbekistan is an active partner within the framework of the SPS Programme. The country has cooperated with SPS in the Key Priority areas of **Counter-Terrorism and Environmental Security**. Below are some examples of projects led by Uzbekistan and NATO Allies under the framework of the NATO SPS Programme.

### Cooperative Activities

#### DEFENCE AGAINST TERRORISM COURSE FOR UZBEKISTAN



Uzbekistan and Central Asia as a whole face serious threats from terrorism. Following a request from the Uzbek Government, an introductory Defence against Terrorism Course brought together international researchers, academics and practitioners with the Uzbek military and government to share experiences and know-how in the fight against terrorism, and to pave the way for a common approach to countering threats. Participants applied the knowledge they acquired to specific, relevant case studies.

At the end of the course, participants returned to their posts with increased knowledge about terrorism, and increased capabilities to participate in, plan, and execute counter-terror activities. *This Advanced Training Course (ATC) was led by Uzbekistan and Turkey. It was held in Tashkent, Uzbekistan, in October 2016.* [ref. G5181].

## FROM ADVANCED DEVICES TO SECURITY APPLICATIONS

Over the past several decades, optics and photonics have undergone rapid development, both in their basic science and practical applications, i.e. in information and communication technologies, optoelectronics, and quantum optics. The goal of this Advanced Study Institute (ASI) is to provide a high-level tutorial course on the latest advances, challenges and practical applications of advanced optics, particularly in security-related aspects of optoelectronics, photonics, lasers, optomechanics, and quantum and atom optics. The audience will include students, young and post-doctoral researchers from universities in Uzbekistan, neighbouring countries of Central Asia, and other NATO partners. *This activity is led by Uzbekistan and Germany, and is expected to take place in 2021.* [ref. G5728].

## DISASTER FORECASTING, CRISIS MODELLING AND SUSTAINABLE DEVELOPMENT

On 20-24 May 2013, an SPS workshop took place in Samarkand, Uzbekistan. The main focus of the workshop was to discuss complex system physics and its potential future application in crises and conflicts. One of the most important applications of nonlinear dynamics and statistical physics is in the exploration of complex networks that can be used as models for different natural and social systems. For example, studying complex phenomena in social systems using the complex network could allow experts to predict conflicts and other critical events in society and social systems. The event was organised by project directors from Boston University and the Polytechnic University in Tashkent. *This project was led by scientists and experts from Uzbekistan and the United States.* [ref. 984491]

## ASSESSING TRANSBOUNDARY WATER POLLUTION IN CENTRAL ASIA

Uzbekistan, Kazakhstan, the Kyrgyz Republic and Tajikistan jointly utilise the Syr-Darya River basin and they share common issues with regards to industrial, agricultural and municipal river pollution. The problem is further complicated by the poor maintenance of closed or still-existing industrial plants and cities along the river basin. As a result, monitoring and managing the transboundary area is of crucial importance to the social and economic well-being of populations in the region. This Multi-Year Project (MYP) brought together these Central Asian republics to conduct an in-depth study of contaminants selected by the participating countries in the basin of the Syr-Darya River. It is hoped that the project will become a continuous and self-sustainable monitoring activity within Central Asian. *This project was led by scientists and experts from Uzbekistan, Tajikistan, Kyrgyz Republic, Kazakhstan and Norway.* [ref. 983945].



## THE SPS PROGRAMME IS OPEN TO COOPERATION WITH UZBEKISTAN

The SPS Programme is open to all activities with Uzbekistan, in line with the political guidance from Allies in the form of the 2012 SPS Key Priorities and the 2013 Overarching Guidelines, as well as Uzbekistan's national priorities.



The NATO Science for Peace  
and Security Programme

[www.nato.int/science](http://www.nato.int/science)