Kazakhstan 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.

Cooperative Activities

VALORIZATION OF BIOMASS WASTE INTO HIGH EFFICIENT MATERIALS FOR CBRN PROTECTION

This ongoing Multi-Year Project (MYP) aims to synthesize low-cost carbon-based nano-porous materials offering sufficient protection from a wide range of toxic chemicals (industrial and military), under severe and wide-range environmental conditions. These materials provide Kazakhstan with the infrastructure and know-how required to fabricate their own respiratory protection filters at an affordable price. It also helps to guarantee a sufficient stock of materials for fast response. This project contributes to the strengthening of the Kazakh R&D sector, further utilizing their resources and/or valorising the wastes from growing industrial activities. This project is led by scientists from Belgium and Kazakhstan [ref. G5636].

NEW DEVICE FOR EARLY DETECTION AND DIAGNOSIS OF EMERGING VIRAL DISEASE THREAT

This ongoing MYP brings experts together to develop a novel, portable apparatus for the early and rapid detection of viruses accidentally or deliberately (i.e. bioterrorist attacks) released, in bodily and environmental fluids. The device is capable of producing virus-specific antibodies in response to engineered avipox (fowlpox) recombinants. The development of portable systems is an extremely effective counteraction, as the rapid identification of biological agents might allow medical countermeasures to limit or block the attack. This project, launched in 2018, is led by scientists from Italy, Kazakhstan and Albania [ref. G5486].
Understanding local cultures, customs, traditions and the geopolitical situation was the focus of this Advanced Research Workshop (ARW) which aimed to strengthen regional cooperation to address security challenges in Central Asia and Afghanistan. Specialists from military institutions, higher education, research institutions and civil society were brought together to set an agenda for research and policy development, including building trust and tolerance between different groups, ethnicities and nations, and to develop a comprehensive approach to conflict management in the region. This workshop, led by experts from Kazakhstan and the United States, was held in Kazakhstan from 19 to 21 November 2014 [ref. G4745].

VIOLENT EXTREMISM IN CENTRAL ASIA: TRENDS, RESPONSES AND POST-2014 SCENARIOS
The rise of terrorism and radicalization is of significant concern to Central Asian countries. This ARW aimed to develop a deeper understanding of the trends and developments in radicalisation leading to violent extremism in Central Asia, and the impact of the end of the International Security Assistance Force (ISAF) mission in Afghanistan. The 45 participants explored the role of counter-productive government policies (e.g. limits on freedom of expression and movement) and discussed local, regional and global policies that could exacerbate or mitigate violent extremism. This workshop, led by experts from Kazakhstan and the Netherlands, took place in Kazakhstan from 2 to 3 December 2014 [ref. G4951].

ASSESSING TRANSBOUNDARY WATER POLLUTION IN CENTRAL ASIA
The Republics of Kazakhstan, Uzbekistan, Kyrgyzstan and Tajikistan jointly utilise the Syr-Darya river basin and share common issues regarding industrial, agricultural and municipal river pollution. The problem is exacerbated by the poor maintenance of closed or still-operating industrial plants, as well as by cities along the river basin. As a result, joint monitoring and management of water pollution in the transboundary area are crucial. Towards this goal, this MYP, initiated in 2011, brought together these Central Asian republics to conduct an in-depth study of contaminants in the Syr-Darya river basin. Ultimately, it aimed to establish a continuous and self-sustainable monitoring activity to be used as a basis for stronger regional cooperation to tackle water pollution. This project, led by scientists from Kazakhstan, Tajikistan, Kyrgyzstan, Uzbekistan and Norway; it was completed in 2015 [ref. G3945].

COUNTERING THE PROLIFERATION OF WEAPONS OF MASS DESTRUCTION THROUGH ENHANCED BORDER SECURITY
The aim of this Advanced Training Course (ATC), carried out with the help of the Kazakhstan Ministry of Internal Affairs, was to explore the role of modern border security to prevent the proliferation of weapons of mass destruction (WMD) with an emphasis on Central Asia. The 30 participants came from four Central Asian states and represented a number of relevant agencies. During the four-day event, the participants discussed the nature of the WMD proliferation threat, the post 9/11 impact on border security regimes, key factors relating to border security as well as cross border and regional cooperation. This training course was led by experts from Kazakhstan and the United States [ref. 983662].