The NATO Science for Peace and Security Programme

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Developing Practical Cooperation through Science

Egypt has been engaged with NATO through the Mediterranean Dialogue (MD) since 1994.

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;*
- *Mine & UXO Detection/Clearance*
- *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.

EGYPT

Egypt is actively participating in the Science for Peace and Security (SPS) Programme, and engages with NATO through the Mediterranean Dialogue (MD) partnership framework. Recent areas for cooperation under the framework of the SPS Programme include **Counter-Terrorism**, **Mine and Unexploded Ordnance Detection and Clearance,** as well as **CBRN Defence**. Below are some examples of SPS activities led by scientists and experts from Egypt.

Cooperative Activities

ENHANCED EXPLOSIVE REMNANTS OF WAR (ERW) DETECTION AND ACCESS CAPABILITY IN EGYPT

Building on the successful implementation of the top-down SPS project: *"Advanced Detection Equipment for Demining and UXO Clearance in Egypt"* [ref. G4444], this completed Multi-Year Project (MYP) aimed to provide Egypt with an enhanced operational detection and clearance capability for ERW. The project was composed of two phases: detection, and access. The first phase included the use of enhanced Ground Penetrating Radar detection systems capable of identifying anomalies buried at greater-than-usual depths. In the second phase, the use of suitable excavation and associated equipment enabled safe access to the exposed ERWs. Provision of this enhanced capability will greatly increase the safety of Egyptian deminers, reducing the number of casualties from ERW clearance, and improving the individual confidence and credibility of the deminers. This will have an immediate effect on the safety and security of the local population, reducing the threat from ERW and releasing land for economic development. *This activity was led by Egypt and the Netherlands.* [ref. G4899].

A PANEL OF BIOMARKERS AS A NOVEL TOOL FOR EARLY DETECTION OF RADIATION EXPOSURE

A radiological or nuclear emergency may lead to a high number of casualties. This MYP aimed to develop a novel, fast, accurate and user-friendly tool for detecting the absorbed radiation dose within the first hours after exposure. An early assessment helps to put in place more effective counter-measures and treatments. The insights gained through this project will be integrated into the emergency management strategy of the participating countries, and possibly other NATO countries. *This activity, completed in 2019, was led by Egypt and Italy.* [ref. G4815].

CBRN RISKS IN LAND AND MARITIME CONTAINER TRANSPORT

In today's globalized world, containers are the basic method for the carriage of international goods. However, there is a growing awareness of the risks caused by hazardous materials being shipped around the world via containers. The aim of this Advanced Research Workshop (ARW), held in Rome from 25-27 May 2016, was to establish an expert platform to share best practices in the field of border and port security, particularly in the context of moving containers at seaports and logistic centres, where the risk of CBRN threats and illicit trafficking persists. Experts discussed ways to improve container security to prevent the transportation of CBRN materials and weapons that could be used in terrorist attacks. *This activity was led by Egypt and Italy.* [ref. G4988].

COUNTERING TERRORISM IN THE MIDDLE EAST AND NORTH AFRICA

Following recent changes in government in many countries in the Middle East and North Africa (MENA), terrorism in the region has acquired new dimensions. Held in October 2015, this ARW provided a forum for debate and discussion among academics, counter-terror practitioners, and representatives of civil society organizations from the region and from NATO countries. Together, they assessed the status of terrorism and counter-terrorism in the MENA region over recent years, mapped potential future developments, and discussed and recommended efforts to combat threats. The conference produced several policy briefs and recommendation papers that were circulated to government and military policy-makers in the region and in NATO countries. *This activity was led by Egypt and the Netherlands.* [ref. G4790].

TRAINING TO COUNTER IMPROVISED EXPLOSIVE DEVICES (C-IED) FOR THE EGYPTIAN ARMED FORCES

In November 2017, the Egyptian Armed Forces took part in basic field exploitation training (BIFEC) at the NATO C-IED Centre of Excellence in Madrid, Spain. Participants enhanced their skills in collecting, assessing and disseminating information and intelligence on improvised explosive devices that kill both soldiers and civilians. Overall, this SPS-supported course helped to fill a critical capacity gap for the Egyptian Armed Forces in the area of explosive ordnance disposal. At the end of this training, 15 experts were equipped with IED recovery and processing skills. *This activity was led by Egypt and Spain.* [ref. G5397].