

*Developing Practical  
Cooperation through  
Science*

**Egypt has been engaged with NATO since March 2000 through the Mediterranean Dialogue (MD).**

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 forecast 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 engaged with the Science for Peace and Security (SPS) Programme and NATO through the Mediterranean Dialogue (MD). At present, the leading areas for cooperation are **Counter-Terrorism, Mine and Unexploded Ordnance Detection and Clearance** as well as **CBRN defence**. Below are some examples of ongoing and completed SPS activities led by scientists and experts from Egypt and NATO countries.

*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 project aims to provide Egypt with an



enhanced operational detection and clearance capability. The project is composed of two phases – detection and access. The first phase includes the use of enhanced Ground Penetrating Radar detection systems capable of identifying anomalies buried at greater depths. In the second phase, the use of suitable excavation and associated equipment will enable safe access to the exposed ERWs. Provision of this enhanced capability will greatly enhance the safety of Egyptian deminers, reducing the number of casualties from ERW clearance, and improving individual confidence and credibility of the Egyptian 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 [ref. G4899]. *This project brings together experts from Egypt and the Netherlands.*

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

A radiological or nuclear emergency may lead to large numbers of casualties. This project aims 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 countermeasures and treatments. The insights gained through the project will be integrated in the emergency management strategy of the participating countries and possibly other NATO countries. [ref. G4815] *This project is led by scientists from Italy and Egypt.*

## **CBRN RISK IN LAND AND MARITIME CONTAINER TRANSPORT**

In today's globalized world, containers are the basic unity for the carriage of international goods. The movement of containers has revolutionized the world of logistics and reduced the cost of transport. However, there is a growing awareness for the risk of hazardous materials being shipped around the world. The aim of this workshop held in Rome on 25-27 May 2016, was to establish an expert platform to share best practices in the field of border and port security, in particular in the context of moving containers at seaports and logistic centres, where the risk of illicit trafficking as well as CBRN threats persist. Experts discussed ways to improve container security in particular to prevent the transportation of CBRN materials and weapons that could be used for terrorist attacks [ref. G4988]. *This Advanced Research Workshop was led by Italy and Egypt.*

## **COUNTERING TERRORISM IN THE MIDDLE EAST AND NORTH AFRICA**

Following recent changes in government in many countries in Middle East and North Africa (MENA), terrorism in the region has acquired new dimensions. Held in October 2015, this workshop provided a forum for debate and discussion among academics, counter-

terrorism 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 the past few years, mapped potential future developments, and discussed and recommended efforts to combat them. The conference produced several policy briefs and recommendation papers to be circulated to government and military policy makers in the region and NATO countries [ref. G4790]. *This workshop was led by experts from the Netherlands and Egypt.*



The SPS Programme engages Egypt in activities to fight the threat of terrorism.

## **ULTRASENSITIVE AND HIGHLY MINATURISED ELECTROCHEMICAL APTASENSORS FOR BIOLOGICAL WARFARE AGENTS DETECTION**

The safety of water resources is an issue of paramount importance to all societies and the detection of toxins in water sources is essential. This project developed a novel sensing platform for the detection of dangerous bacterial toxins present in water. The scientists involved in the project focused on the development of a miniaturized, real-time detection tool targeting cyanobacteria (a blue-green algae) toxins in water that have the high potential for widespread human exposure. The detection system is a rapid, easy to use, portable and low-cost tool which offers superior sensitivity and specificity compared to systems currently available. [ref. G4538] *This project that was led by experts from the UK, Tunisia and Egypt was completed in November 2015.*



The NATO Science for Peace  
and Security Programme