

Developing Practical Cooperation through Science

Morocco has been actively engaged within the framework of the NATO Science for Peace and Security (SPS) Programme since 1999.

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;*
- *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.

MOROCCO

Morocco is an active partner in the SPS Programme, and has several ongoing activities. A SPS Information Day took place in Rabat in May 2014. At present, the leading areas for cooperation include **CBRN defence, counter terrorism and cyber defence**. Below are some examples of ongoing and completed activities led by scientists and experts from Morocco and NATO countries under the framework of the NATO SPS Programme.

Cooperative Activities

NETWORK VULNERABILITY ASSESSMENT & RISK MITIGATION COURSE AND NETWORK TRAFFIC ANALYSIS COURSE

This Network Vulnerability Assessment and Risk Mitigation Course, part of a broader Cyber Security Certificate Programme, was offered together by the NATO School and the Naval Postgraduate School with the contribution of the SPS Programme. The aim of the course was to involve students directly with the methodologies and techniques used for vulnerability assessments and mitigation. This ten-week course, held in Rabat was a mix of lectures, classroom seminars, online discussions, online labs and quizzes. In total, 34 members of the Ministry of National Defence of Morocco were trained. They received the award from the United States National Security Agency (NSA) and the Committee on National Security Systems (CNSS) National Information Assurance Training Standard Certification for System Administrators. A second course, part of the same Cyber Security Programme on the topic of Network Traffic Analysis took place in June 2016 with the support of the SPS Programme [ref. G4966 and G5139].



CBRN RISKS IN LAND AND MARITIME CONTAINER TRANSPORT

The aim of this Advanced Research Workshop (ARW) was to set up a 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 persists. As the containers are sealed, there is growing awareness for the risk of hazardous materials being shipped around the world. Therefore, the focus of this workshop was 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 workshop took place in Rome between 25 – 27 May 2016 and was co-organised by Italy and Egypt.*

RESPONSES TO FEMALE MIGRATION TO ISIS

The current flow of foreigners to Syria and Iraq is striking not only due to its scale, but also because of the large proportion of women it includes, and the effect it has on Allied and Partner nations around the globe. This ARW responds to this challenge by raising awareness about the issue and developing practical, concrete measures to help prevent women from travelling to join ISIS or other similar groups. This workshop will conduct an evidence-based review of the reasons why women consider joining ISIS, and their experiences along the way. It will also look at the best methods to fight the recruitment of women into ISIS or other similar groups, with the goal of deterring, dissuading, denying, and defending women from doing so through tools such as diplomacy and international networks [ref. G5044]. *This workshop co-organised by experts from the United States and Morocco took place in April 2016.*

ANALYSIS AND ASSURANCE USING CLOUD-BASED SECURITY MEASUREMENT SYSTEM

Morocco is presently playing a leading role in this multi-year research project which aims at producing a new tool for the quantification and improvement of security operations in virtual and physical networking

environments. Scientists and cyber experts involved in the project hope to accomplish this goal by developing quantifiable security metrics, models, tools and evaluation methods used to assess and enhance cloud-computing security using a cloud-based security measurement system. This work represents an excellent opportunity to bring together young IT experts from Morocco and develop an in-depth understanding of cyber threats [ref. G4425]. *This multi-year project is led by experts from the United States and Morocco.*

IMPROVEMENTS IN RADIATION PROTECTION PROCEDURES: IMPLEMENTATION OF BEST PRACTICE

The main goal of this training course is to disseminate advanced methods, techniques and best practices for an enhanced response to radiation protection challenges. To this end, the course will provide an overview of the international regulatory framework on the issue, foster the exchange of knowledge and experience on radiation risk awareness and management among the participants, and raise knowledge about best practices in the field of radiation measurement. The training which includes young experts from Morocco, Algeria and Tunisia will also have an important regional impact [ref. G4960]. *This training course is led by scientists from Italy and Morocco.*

NON-PROLIFERATION FROM AN INTERNATIONAL PERSPECTIVE

This training course provided students with advanced political and legal concepts of nuclear security, as well as elements to apply such concepts in practical situations. The course looked at international agreements and treaties, as well as the theoretical and political base of nuclear security as an answer to the nuclear threat. Taking place in December 2014, the course strengthened the expertise of the trainees in the field of nuclear security [ref. G4713]. *This course involved experts from Portugal and Morocco.*



The NATO Science for Peace
and Security Programme

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