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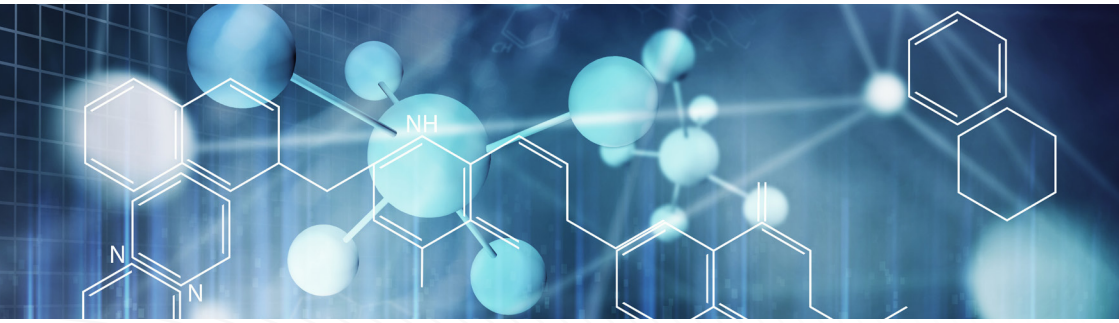

How the Centres of Excellence are combating Biological and Chemical threats globally

2020

CBRN
Centres of Excellence

An initiative of the European Union

Projects focusing on Chemical and Biological risks

Project 35
Pg 22

Project 46
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CABICHEM
Pg 14 also known as **Project 65.**

CoE65 CABICHEM

Biosec
Pg 06
BIOSEC also known as **Project 81.**

Stronglabs
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STRONGLABS also known as **Project 76.**

MediLabSecure
Pg 010
MediLabSecure also known as **Project 75.**

MediPIET III
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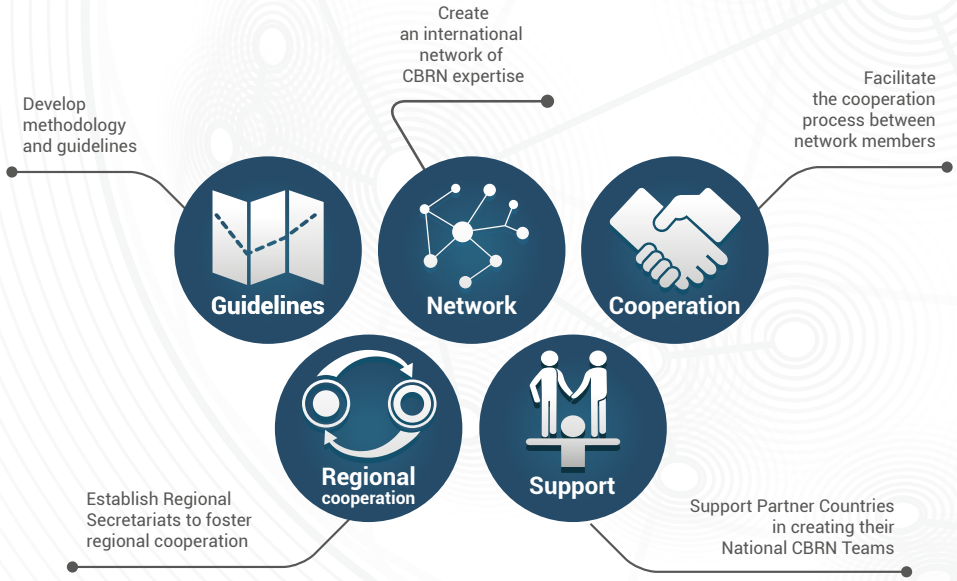
MediPIET III also known as **Project 74.**

About the EU CBRN Centres of Excellence Initiative

The European Union (EU) Chemical, Biological, Radiological and Nuclear (CBRN) Risk Mitigation Centres of Excellence (CoE) Initiative, launched in 2010, is an initiative of the European Union (EU).

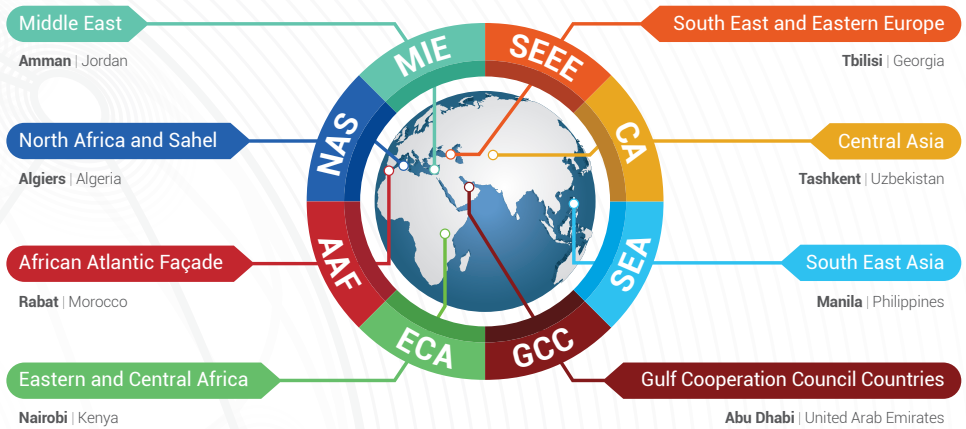
Our Aim

The aim of the Initiative is to mitigate risks and strengthen an all-hazards security governance in Partner Countries of the EU following a voluntary and demand-driven approach. Under the responsibility of CBRN National Focal Points and their inter-ministerial CBRN National Teams, EU support is provided to implement a wide range of CBRN Risk Mitigation activities including Needs and Risk Assessments, National and Regional Action Plans, training, Train-the-Trainer modules, Table-Top and Real Time (including cross-border) Field Exercises, in all Partner Countries (61) and Regional Secretariats (8).



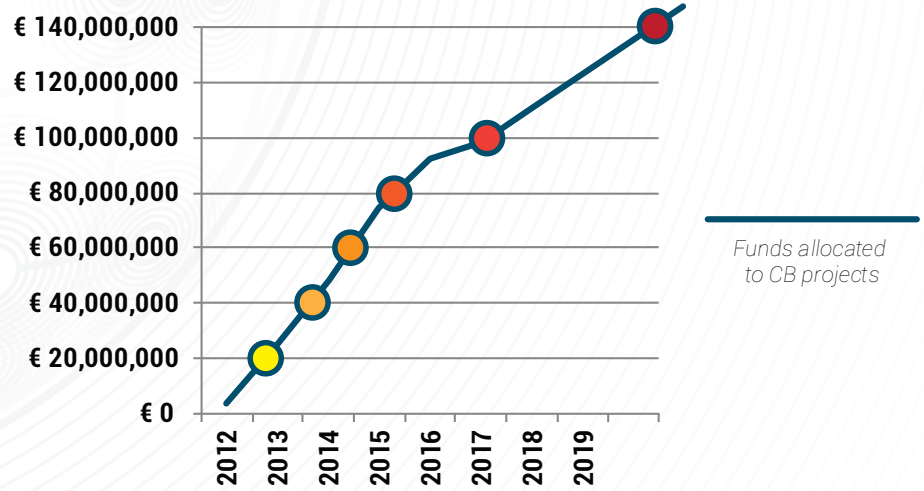
8 Regional Secretariats

The 61 Partner Countries of the Initiative are grouped into 8 regions.



Funds allocated for CB projects

The Initiative is the largest European civilian external security programme, with a budget of €155 million for 2014-2020. It is funded through the Instrument contributing to Stability and Peace (IcSP).



BIOSEC (Project 81, 2019 - Ongoing)

Enhanced Biosecurity in South-East Asia

Developed in the CoE Region:
• **South East Asia**

Background

Global infectious disease outbreaks are of increasing concern for the international community. Reactive surveillance systems with rapid detection capacities, close coordination between human and animal health authorities and efficient reporting to other key sectors are required to ensure a rapid and effective response. Also the potential unauthorised acquisition, theft, transfer or intentional misuse of high-risk biological materials, especially pathogens, pests and biological toxins with dual-use possibilities, whether in relation to illicit trafficking, bioterrorism or agro-terrorism need to be quickly tackled in the region.

Objectives

• Biosecurity awareness raised
• Legislation and guidelines enhanced
• Enforcement improved
• Threats from high-risk biological materials and facilities reduced
• Microbial forensics strengthened
• Physical and information security frameworks for facilities developed
• Information exchange enhanced

Achievements

This project was launched at the end of 2019 and its activities have been influenced by the measures to prevent the dissemination of the new coronavirus: a series of webinars and online trainings have been organised in collaboration with the EU CBRN CoE South East Asia Regional Secretariat and other institutions, to support the response to the crisis caused by the virus.

A new work package has been added to strengthen the health emergency management capabilities during pandemics (e. g. COVID-19), through training in the methodologies for the development of surge capacity in diagnosis and intensive care. That concerns rapid testing and the validation of tests, the selection of PPE for key workers and waste management requirements as part of infection and material control – including the analysis of public health legislation applied and its contribution to the successful management of future outbreaks."

For more information: https://www.cbrn-project81.com/

STRONGLABS (Project 76, Ongoing)

Preventing biological risks increased by environmental and climate change by strengthening Public Health Laboratories

Actually developed in these CoE Regions:
- **Central Asia**
- **Middle East**
- **North Africa and Sahel**

Background

A revised version of the International Health Regulations (IHR) was agreed by the World Health Organization (WHO) Member States during the 2005 World Health Assembly. Under these regulations, countries are required to develop and maintain the capacity to detect, investigate and report to the international community, through WHO, potential public health events of potential international concern.

Despite the significant progress made by resource-limited countries in the implementation of the IHR, national public health laboratory systems remain weak in many aspects, not well prepared to detect and respond not only to outbreaks, but to the public health emergencies. A number of vulnerable states suffer from a combined series of risks, such as natural disasters or conflicts which amplify the risk of epidemic outbreaks and threaten global health security.

Objectives

Minimize potential biological risks related to climate change by improving the detection of, response to, and recovery from outbreaks and health emergencies. The project intends to strengthen preparedness to common health threats and biosafety risks at national and regional levels.

Achievements

1) Develop national laboratory policies and strategies
2) Build institutional and individual capacities
3) Enhance laboratory networks.

The project is part of a group of three biosafety and biosecurity projects (with MediPIET III and STRONGLABS) that were funded under the 2018 AAP (Annual Action Programme) partly from the budget allocated to CBRN activities, and, in part, on the IcSP climate change action.

The three projects have been directed towards taking into account the effects of climate change on infectious diseases, on the migration of potential vectors and to the alert capacity of laboratories and institutions in charge of field epidemiology to strengthen their capacity to detect early the occurrence of new types of epidemics.

Medilabsecure II (Project 75, Ongoing)

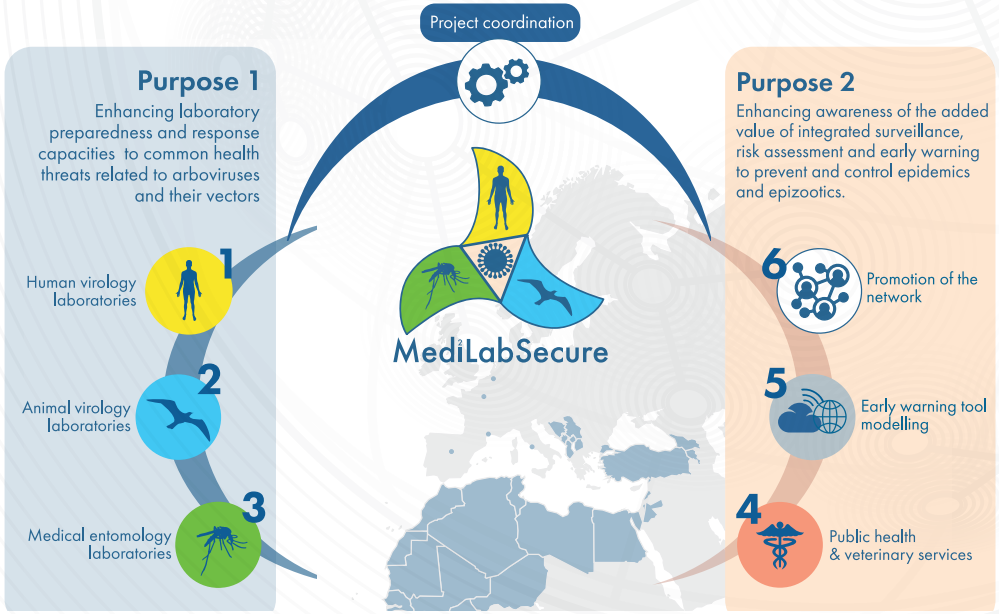
Preventing biological risks increased by environmental and climate change in the Mediterranean, Black Sea and Sahel regions by strengthening institutional capacities in the context of the One Health Triad.

Actually developed in these CoE Regions:

- **African Atlantic Façade**
- **Middle East**
- **North Africa and Sahel**
- **South East and Eastern Europe**

Background

The Mediterranean region, the Sahel and the Black Sea region, which include important routes of human migrations, are close neighbours of the European Union and are particularly exposed to health risks (epidemic, pandemic) and disasters (man-made or natural). These can have a serious impact on populations, resources and infrastructures and could undermine the regions' efforts for sustainable development and increase the instability of the area.



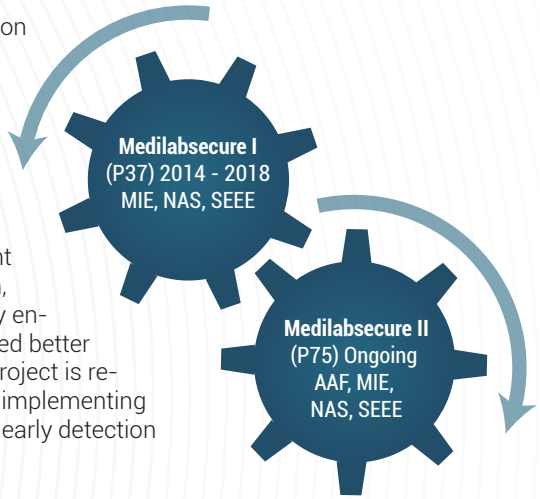
Objectives

Through the strengthening of the network of laboratories and public health institutions, previously created by MediLabSecure I, providing capacity building and networking activities, the purpose of this project is to:

- strengthen and harmonise preparedness and response capacities on health threats related to (arbo)zoonotic viruses and their vectors in the target regions;
- enhance awareness of the added value of integrated surveillance, risk assessment and early warning to prevent and control epidemics and epizootics.

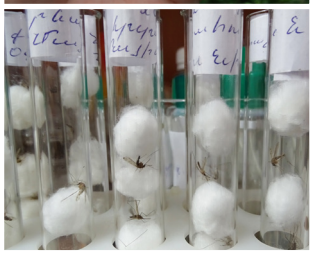
Achievements

After the first successful implementation of MediLabSecure I, (project 37, 2014-2018), which established several networks of virology laboratories and medical entomology, MediLab-Secure has been extended to the African Atlantic Façade.



Within the project network, the different working groups involved (public health, animal virology, medical and veterinary entomology, and human virology) achieved better results working together. In fact, this project is reflecting the "One Health" approach, by implementing joint activities to accelerate efforts for early detection of health threats.

For more information: https://www.medilabsecure.com/home.html



MEDIPIET III (Project 74, 2018 - Ongoing)

Mediterranean and Black Sea field epidemiology training programme network to increase security in the EU neighbourhood

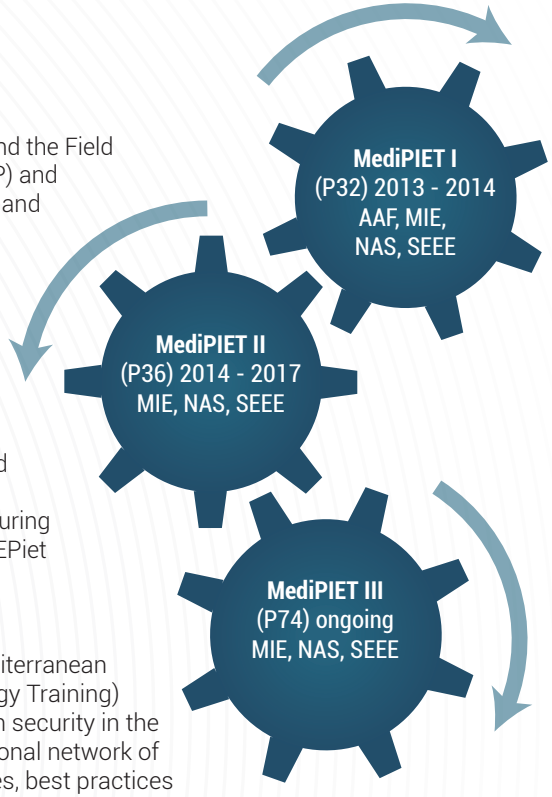
Actually developed in these CoE Regions:
- **Middle East**
- **North Africa and Sahel**
- **South East and Eastern Europe**

Background

The wide circulation of goods, people and animals increases the risk of spreading communicable diseases. In order to enhance global health security with respect to biological - but also chemical, radiological and nuclear - threats, countries need to continuously monitor their population's health and efficiently manage health risks. Medical practitioners, public-health nurses, microbiologists, veterinarians and other public health practitioners normally do not train in field epidemiology during their studies, because of the very nature of the subject. Therefore there is a need to provide these categories with the necessary hands-on experience allowing them to competently intervene when public health emergencies (such as pandemics) occur.

Objectives

The aim of MediPIET III is to further extend the Field Epidemiology Training Programme (FETP) and other training activities in Mediterranean and Black Sea countries after the successfull networks established through the activities of MediPIET I (P32) and its follow up MediPIET II (P36). Another important objective is to disseminate experience, knowledge and skills on methodologies related to "on-the-job training" between non-EU countries, EU partners and other key actors in the field, during national and regional field epidemiology training programs, workshops or events as well as during relevant European activities such as the EPiet and EUPhem programs.



Achievements

Since its foundation, the MediPIET (Mediterranean Programme for Intervention Epidemiology Training) CoE project aimed to enhance the health security in the Mediterranean region, by creating a regional network of field epidemiologists sharing experiences, best practices and who are easily mobilised in case of cross-border outbreaks and other health threats.

Network initiatives to support the response to COVID-19

MediPIET is interconnected with MediLabSecure and STRONGLABS to take into account the effects of climate change on infectious diseases, the migration of potential vectors and the alert capacity of laboratories and institutions in charge of field epidemiology to prevent novel epidemics. They strengthen the capacities of Partner Countries in terms of awareness, risk assessment, monitoring and control of these vector borne diseases. These projects also prepare scientists (human and veterinary virologists, entomologists, medical staff, field epidemiologist, laboratory technicians) to analyze the major risks accordingly. By reinforcing an international network of laboratories (human virology, animal virology, entomology) and public health institutions, the projects have clearly contributed to prepare the Partner Countries to face the SARS-CoV-2 pandemic, and the work has been easily and immediately reoriented towards a new concrete action plan for the new coronavirus.

For more information: medipiet.org

CABICHEM (Project 65, 2017 - ongoing)

Strengthening chemical and biological waste management in Central Asia countries for improved security and safety risk mitigation.

Developed in the CoE Region:
• **Central Asia**

Background

Central Asia has been affected by a rapid urbanization in the big centres, a globally boosted motorization, and a considerable development in the industrial production, together with the urban-rural migration and population growth: all these factors contributed to change its waste situation. Project 65, also known as "Cabichem" has been set up to respond to the region's biological and chemical waste management needs..

Objectives

The overall objective of this project is to consolidate the existing chemical and biological waste management capabilities, to ensure safe and secure collection, transportation, separation, processing, storage, disposal and inventory of hazardous CB waste originated by local activities.

Project 65 seeks to support national and regional bodies involved in the main issues surrounding waste management as well as to assist countries in reviewing and evaluating their legislative provisions on the matter.
The project aims further to raise awareness of the issues associated with chemical and biological waste management as well as to provide training activities, including the Train the Trainer approach also based on a tailored e-learning instrument.

Main Achievements

Our multidisciplinary and cross-cultural team organised awareness raising activities on chemical and biological waste management, as well as a sustainable on-site training system for lifelong learning, focused on facilities management and labs personnel needs.

The experts sent by the EU also conducted different feasibility studies for deploying a possible remediation/management of problematic sites.
Regarding the legislative framework, the existing legislation and regulations on management of chemical and biological waste in Partner Countries have been reviewed and improved.

A regional technical consultation group has also been established, to better respond to the immediate requests.

For more information: http://www.cabichem.eu/index.php/en/

Project 53 (2015 - ongoing)

Strengthening the National Legal Framework and Provision of Specialised Training on Biosafety and Biosecurity in Central Asian Countries.

Actually developed in this CoE Region:
- **Central Asia**
- **South East and Eastern Europe**

Background
The spread of emergent diseases and invasive species has increased dramatically in recent years. In parallel, numerous developments - such as the rapidly increasing transboundary movements, trade liberalisation, increasing concerns about food safety and the environment – have heightened the need for international cooperation in controlling and managing transboundary pests and diseases. At the same time, biosafety and biosecurity systems require, in line with the international standards, proper training and knowledge. Therefore, new biosafety and biosecurity initiatives are critical for both public health and to prevent epidemics and pandemics.

Objectives
Project 53 aims to raise awareness about the importance of biosafety and biosecurity issues with national stakeholders in the Partner Countries, and to promote national and regional cooperation on these issues.

Another fundamental goal is reducing the proliferation risks through the advancement and promotion of safe and responsible conduct in the field of biological sciences.

Main Achievements
The teams worked on the assessment and revision of the national legislation and best practices in the area of biosafety and biosecurity, and on the harmonisation with the appropriate international regulations such as IHR, BTWC and Codex Alimentarius, including the area of regional emergency response with the aim of coming to a " One Health" system.

Moreover, several events of national and regional awareness-raising have been organised, to sensitize political and executive bodies about biosafety and biosecurity issues. The learning program has been enriched by Train the Trainer activities and other educational events, introducing a "security culture", as well as training of technical, scientific and other professionals involved in biosecurity and biosafety.

Extension of the project to another region and until 2022
A fund reinforcement has been released to cover Central Asia and South East and Eastern Europe and to specifically address COVID-19. It allows both regions to benefit quickly from complementary on-line training, provision of consumables and equipment.

For more information: http://coe-project53.istc.int/en/

Project 48 (2016 - 2018)

Improved regional management of outbreaks in the CBRN Centres of Excellence Partner Countries of the African Atlantic Façade.

Developed in the Coe Region:
• **African Atlantic Façade**

Background

The major purpose of the project was to identify gaps, to prepare for coordinated regional solutions and teams (within and between Partner Countries), to provide appropriate training of local staff and set-up the necessary capacity for sustainable preparedness against future major biological outbreaks in the African Atlantic Façade region and neighbouring countries.

Objectives

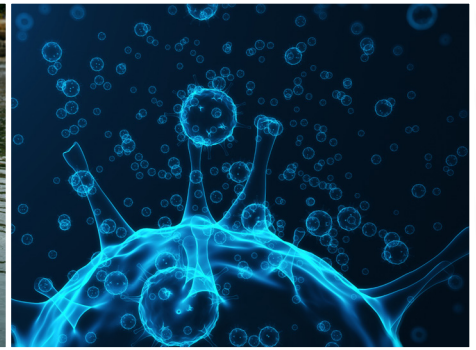
The overall objective of the project was to improve the regional level of preparedness and response to outbreaks crisis (biological risk mitigation) in the CBRN CoE Partner Countries belonging to the African Atlantic Façade Region and neighbouring countries.

Main Achievements

A better prevention and enhanced preparedness have been realised by adapting and enforcing the legal framework for disease surveillance and disease control, by developing stronger regional pools of epidemiological skills and experts, by setting improved regional surveillance networks and early warning response systems, and by raising awareness.

Strong emergency response plans at regional level has been agreed, accurately defining the strategic intervention measures and the role of different actors to quickly contain the spreading of these infectious diseases.

Local and regional assessments, trainings, simulations and cross border exercises have been developed in order to fill gaps and reinforce the regional capabilities, especially crisis communication and crisis management.



Project 46 (2015 - 2018)

Enhancement of CBRN capacities of South-East Asia in addressing CBRN risk mitigation concerning CBRN first response, biosafety and biosecurity awareness raising and legal framework.

Developed in the Coe Region:
• **South East Asia**

Background

Project 46 is a three-year project designed for the South-East Asia region needs. In the field of civil protection, all the ten participating countries have intensified their cooperation with each other and they expressed their willingness to exchange best practices with the EU in the field of CBRN disaster (natural and man-made) prevention, preparedness and response. Several fact-finding missions underlined the considerable diversity of CBRN capabilities within the region and their different needs.

Objectives

This project aimed to enhance the capabilities of countries in the South-East Asia Region to respond to incidents involving CBRN materials. These incidents can range from deliberate terrorist or criminal use of such materials, to the accidental release of such materials due to human error or natural factors. It also seeks to train first responders, incident commanders and specialist teams in how to respond effectively to CBRN incidents in a cooperative and coordinated manner.

The project also envisages assisting countries in the region to review and evaluate their laboratory capabilities, safety procedures and waste management processes, particularly related to bio-hazardous material.

Main Achievements

The activities planned for the first responders delivered 31 training modules to 334 CBRN Commanders and increased the availability of CBRN responders able to deal with related emergencies.

The training programmes for biosafety and biosecurity preparedness saw the participation of 432 professionals, and the delivery of 45 training modules across the activities of three work packages.

A network of 16 biorisk management experts (Biorisk Expert Team - BET) able to train others in biosafety and biosecurity has been successfully created, while 115 National Laboratory Experts (NLEs) have been trained in biorisk management by local trainers (BET members).Thirty-three experts in the field of architecture and engineering with understanding of biomedical laboratory design, established a team of professionals with key competences of construction, operation and maintenance.

Several training sessions in bio-waste management (off-site waste managers, off-site waste handlers, policy makers, on-site managers, lab/hospital staff, local experts/authorities) have been delivered to 182 participants.

For more information: www.cbrn-coe46.eu/

Project 35 (2014 - 2017)

Management of hazardous chemical and biological waste in the African Atlantic Façade region and Tunisia.

Developed in the Coe Region:
• **African Atlantic Façade**

Background
Appropriate chemical and biological waste management is important in order to avoid mishandling or use of such dangerous materials, with a negative impact on people (contamination), environment (pollution) or security (thefts, criminal activities, sabotage, proliferation).

Objectives
The objective of this project was to enhance (or initiate) best practices in hazardous chemicals and biological waste management in the African Atlantic Façade region and in Tunisia. Aspects related to sampling, detection, measurement, protection, decontamination, mitigation, transport, containment, site remediation and disposal have been considered in each country (tailored approach), while keeping a regionally consistent approach as much as possible. The work covered state of the art, regulatory and technical inventories, capacity building trainings, workshops and a dedicated practical large scale CB sampling and measurement programme (for labs and their trained technicians), including CB proficiency testing schemes to measure performance achieved.

Main Achievements
The inventory of existing provisions, regulations, chemical and biohazardous waste management needs, and any common practices in the field of CB waste management has been realised in each country, as well as the compilation of existing international requirements and guidelines for the safe and secure management of chemical and biohazardous waste. The project developed a sustainable and tailored training system for biohazardous and chemical waste management, and also raised awareness in the general civil society about the security concerns associated with those special waste materials.

Management of hazardous chemical and biological waste in the African Atlantic Façade region and Tunisia
The training implemented by this project proved to be very useful in the management of the COVID-19 crisis. The region is working on a follow-up of the project with a special focus on hospitals' biological waste management.

For more information: http://www.cbrncoe35.eu/home

"Since 2010 the EU has sought to mitigate chemical, biological, radiological and nuclear (CBRN) risks from beyond its borders through the EU CBRN Centres of Excellence Initiative. It is the EU's largest civilian external security programme and is financed through the Instrument contributing to Stability and Peace with a budget of €130 million for the years 2014-2020. The Initiative is one of the main tools to mitigate CBRN threats and risks from outside the EU."

(Extracted from the European Court of Auditors' (ECA) Special Report n°14/2018: The EU Chemical, Biological, Radiological and Nuclear Centres of Excellence: more progress needed.)

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