EUExNet

NEWSLETTER 1
February 2010

European Explosives Network
for Explosive education and Certification of skills

EU Excert
Certifying Expertise in European Explosives Sector

Education and Culture DG
Lifelong Learning Programme

EUExNet (EUExcert III) continues the work to establish a transferable certificate of explosive competence recognised inside and outside EU - start November 2009

Summary of the EUExNet project

The EUExcert partnership has proposed a new Leonardo da Vinci Project which aims to Start an European association and a network with independent national nodes (bodies), which will be licensed to use the EUExcert logo for certificates of explosive competence.

European Union, Education, Audiovisual and Culture Executive Agency Lifelong Learning: Leonardo da Vinci, Grundtvig and Dissemination, Unit P3 has awarded a grant to KCEM to create the Network organisation EUExNet.

Partners

KCEM will as contractor lead the work which initially includes partners from Czech Republic, Estonia, Germany, Italy, Latvia, Lithuania, Malta, Norway, Portugal, United Kingdom and Sweden.

EUExcert will through the EuExNet continue the work to establish a transferable certificate of Explosive competence which will be recognised inside and outside EU.

EuExNet is based on the previous innovative ideas which has been developed in previous Leonardo da Vinci financed EUExcert projects.

National nodes

The national nodes/bodies will be set up according to national prerequisites; however the national nodes/bodies should build their work on using the occupational standards proposed by the EUExcert project or use other adequate occupational standards – which can be recognised by the other EUExcert partners.

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EUExNet
Conference
Mars 17, 2010
Karlskoga, Sweden

Read more >>
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The independent national nodes/bodies elects/appoints two national representatives, whereof one representative is deputy, as members in the steering board of the independent association, EUExcert Europe (previously called the EUExcert Foundation).
The independent European associ-

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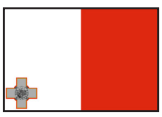
Czech Republic


Estonia


Germany


Italy


Latvia


Malta


Norway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Links:
http://euexnet.blogspot.com
www.euexcert.org
www.kcem.se

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ation, EUExcert, will be operative when the National EUExcert nodes have signed of the agreement "Articles of incorporation".

Head Office

The head office of the independent European association, EUExcert, will initially be placed in Karlskoga with c/o address KCEM.

The EUExcert association aims to develop exchange programs for students and employees, between member organisations in Europe, thus realising the free movement of workers.

EUExcert certificates

The independent national nodes/bodies (using the EUExcert trademark), have the task to award EUExcert certificates and are responsible for accrediting other awarding bodies.

EUExcert certificates will be issued to individuals in the explosives sector, based on a procedure of accreditation of individual competencies – no matter how the experiences, skills or competencies have been acquired – according to the occupational standards that have been chosen as best practice by the previous EUExcert projects.

The process of issuing certificates and accreditation of individual competencies will be carried out in a trial process, defined as a work package, in some of the participating nations, in order to monitor the process of issuing certificates and accreditation of competencies, and to evaluate the possibility to develop a standard for procedure, which other participating nations can follow.

Training

Basic and/or supplementary training can be provided by external VET-providers, Universities or other private or public education institutions, and will not be part of the EUExcert III project.

However, individual competencies acquired during training can be accredited by the national nodes/bodies as part of the trial procedure.

Background to EUExNet

The manufacture and use of explosives, propellants and pyrotechnics underpins a significant part of the European Union economic and industrial activity.

An understanding of explosives science and technology and the competence to harness it is central to maintaining European explosives capability, national security, and in sustaining a competitive European industry.

There is a perception and some evidence, that in Europe, competence levels in this key technological area are being eroded.

In several member nations a high proportion of the most experienced and knowledgeable personnel are retiring or nearing retirement. Urgent efforts are therefore underway in some partner nations to replenish this expertise.

In 2003 Sweden together with United Kingdom, Norway, Finland and Italy started a Leonardo Da Vinci programme to develop a comprehensive framework which describes and categorizes the competences of all workers engaged in the manufacture or use of explosives.

Human errors

Examining the cause of explosive accidents often reveals that human error or failure is a major contributory factor. Effective explosives safety depends on people making the right decisions at the right time. It depends upon people having the necessary competence to carry out their jobs properly.

Concept of competence

The concept of competence is well recognised in EU safety management. Much of EU safety legislation calls for "competent people" in roles that affect safety. In the case of explosives, this will be in all stages of life, from the formulation of new explosives in the laboratory, through manufacture, storage, transportation, use and disposal.

However, in several European countries a high proportion of the most experienced and knowledgeable personnel in the explosives industry are retiring or nearing retirement. It is therefore necessaryto replenish this expertise in this key technology area.

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Comprehensive framework

Within the limits of the Leonardo programme the pilot project has developed a comprehensive framework which will describe and categorise all of the competencies of workers engaged in the manufacture or use of explosives.

The competencies will be underpinned by a training and education programme which will identify the curriculum of subjects and topics and knowledge necessary to generate and develop the competencies. A range of products including workbased learning programmes, e-learning packages using both the Internet and CD-ROM, and conventional teaching materials has been developed and trialled in partner nations.

Network and clusters

The EUExcert programme is now expanding and a network and cluster are formed on EUExNet.

Goals and ambitions in EUExNet

The EuExNet project will monitor and evaluate:

(1) The work to set up national nodes/bodies and

(2) The procedures for accreditation and issuing of certificates at national nodes/bodies.

Framework

The framework for the application is based on the European commission's ideas of making Lifelong learning a reality for all citizens, which is defined as;

> *"all learning activity undertaken throughout life, with the aim of improving knowledge, skills and competence, within a personal, civic, social and/or employment-related perspective."*

Lifelong learning can also defined more specifically towards vocational training, which is defined as;

> *"All learning activity undertaken throughout life, with the aim of improving knowledge, skills/competences and/or qualifications for personal, social and/or professional reasons."*

Ambition

The ambition in the EuExNet project is to introduce a systematic approach to:

1. Lift the status of workers in the Explosives sector in order to,

2. Attract younger people to work in the sector, in order to,

3. Respond to the effects of demographic changes in the ageing workforce, and to,

4. Introduce trajectories for career paths for workers, and to,

5. Encourage individuals to continually improve their abilities, skills and competencies, where,

6. Recognition of competencies can lead to develop a competitive European explosives sector and employable workers, and thus,

7. Creating a learning environment and thereby realising the overall ambitions in the ideas of lifelong learning

Presentation of activities and educations in the Latvian explosive sector

Latvian National Armed Forces School on Explosives

The problems related to the large amounts of unexploded ordnance from WW I and WW II, also from Former Soviet union period, - are actual for Latvia.

In particular, more than 100 000 hectares of land are contaminated by explosive ordnance.

EOD (explosive ordnance disposal) is fundamentally a technical trade that involves the detection, identification and clearance of explosives or destructive devices.

Effective clearance is generally achieved through either neutralization or destruction of a device and the safe remediation of the locality for further use.

To undertake a given task in the workplace effectively and safely, EOD competence and equipment is required.

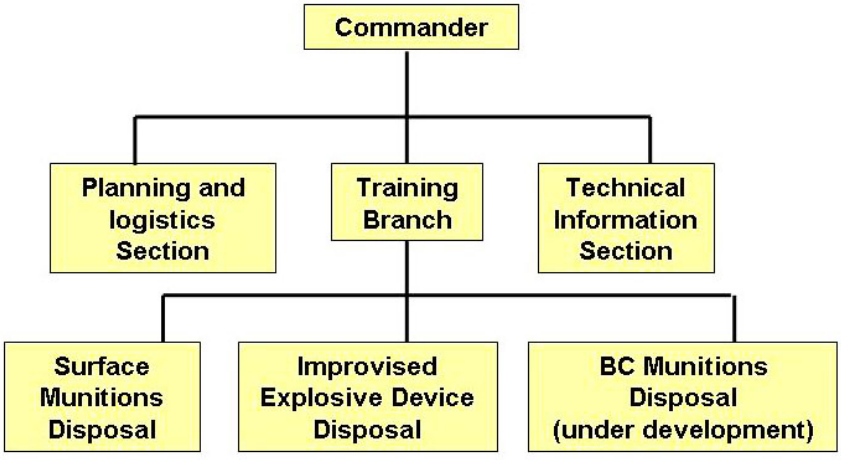
EOD School project was started in 2000 as a part of bilateral corporation project between the Ministry of Defense of the Republic of Latvia and the Ministry of Defense of the Kingdom of Norway.

Project was successfully competed in 2003 with the aim to prepare personnel for EOD and IEDD tasks in Latvia and abroad, creating a united EOD training system for LNAF.

The main tasks of the EOD school are as follows:
- to create an effective, flexible, multilevel EOD training system in accordance to requirements stated in NATO STANAG 2389;
- to create and maintain munitions data base, providing the munitions information for LNAF EOD units in Latvia and abroad;
- to provide a flexible mine awareness and munitions technical training for units other than EOD.

Education in EOD school includes the following courses:
- Explosive Ordnance Reconnaissance Course;
- Explosive Ordnance Disposal Course;
- IEDD Equipment Training Course;
- Improvised Explosive Device Disposal Course;
- Basic EOD course for clearance divers (Surface Phase);
- EOD refreshment course.

All courses are divided in three parts, i.e. theoretical exercises, practical DRY – training, and practical LIFE training. International EOD courses involve the English language skills according to NATO STANAG 6001 - level 2222, as well as working in EOD branch.



The structure of the LNAF School of EOD.

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commander of LNAF
EOD School

Education in the field of explosives-contaminated soils and bioremediation technologies

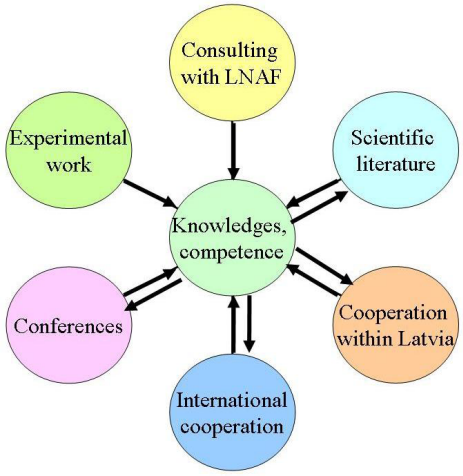



Soil contaminated with explosives residues is a serious environmental problem at many military installations.

Any activity within the defense sector (military exercise, use of vehicles etc.) has an impact on the environment. The most common residues contain 2,4,6-trinitrotoluene (TNT), 1,3,5-trinitroperhydro-1,3,5-triazine (RDX), 1,3,5,7-tetranitroperhydro-1,3,5,7-tetrazocine (HMX), and associated impurities and environmental transformation products.

These chemicals contaminate the soil if the ordnance was exploded incompletely.

Development of biotechnological approaches aimed at elimination of soil contamination is one of the main topics in our research group.



Bioremediation is defined as use of biological processes to degrade/transform contaminants from soil and water.

Introduction of microorganisms capable of detoxifying a particular contaminant, could sufficiently improve the process of biodegradation, especially at the beginning of soil treatment and in the sites, which are characterized by low concentration of indigenous microorganisms.

Since 2004, our research is focused on the study of explosives biodegradation. This study is financially supported by the Ministry of Defence, the Republic of Latvia. The aim to this work is to develop a biotechnological approach for in-situ soil bioremediation.

At the beginning of this work, field inspection and soil sampling was performed at Adazhi military camp. The demolition sites were used as the main source of the microorganisms with explosives-degrading activity. Microorganisms were isolated and characterised. Afterwards, the best isolates were tested for their activity in the presence of various explosives.

Regarding competence development, we use a multidisciplinary approach in this quite specific research area. Thus, experts from LNAF kindly provide us with necessary information, materials, consulting.

Scientific literature remains to be the main source of information related to the theoretical and practical experience, as well as biotechnological solutions in explosives sector worldwide.

Many national institutions are involved in our work, e.g. the Institute of Solid State Physics, Latvia University of Agriculture, National Diagnostics Centre. International cooperation with Mälardalen University (Sweden) and University of Tartu (Estonia) provides with additional knowledge, new skills and idea exchange.

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