



## Biennium Report 2014/2015

### 1 Introduction

The European Training and Education in Radiation Protection (EUTERP) Foundation is a non-profit making legal entity, created under Dutch law. The membership consists of Associates who join and contribute to the running of the EUTERP Foundation, mainly through co-operations in projects and workshops and through the EUTERP website. The Chairman of the EUTERP Board for the period from January 2014 to December 2015 was Richard Paynter, recently of the PHE (UK) and currently Director of RadPRO Consulting.

(Note that all acronyms are detailed on the last page)

### The Foundation's objectives and achievements

The Three Key Objectives	Key Achievements in 2014 / 2015
To encourage and support harmonization of education and training requirements for RPEs, RPOs and radiation workers, facilitating the mobility of these professionals	<ul style="list-style-type: none"> <li>• ENETRAP III project launch</li> <li>• Liaison with HERCA E&amp;T Task Force</li> <li>• 5th EUTERP Workshop (2015)</li> </ul>
To promote the integration of radiation protection education and training systems into general vocational training and education infrastructures	<ul style="list-style-type: none"> <li>• EAN/EUTERP joint Workshop (2014)</li> <li>• EAGLE project involvement</li> </ul>
To act as a central focus for the sharing of information on training events, standards, developments, and all other related information	<ul style="list-style-type: none"> <li>• Updated National Contacts</li> <li>• 6 new Associates</li> <li>• Associates' RP courses, training events etc.</li> <li>• Web links to other relevant sites</li> <li>• Four newsletters</li> </ul>

### 2 Board membership and responsibilities

The 2014/2015 EUTERP Board consisted of the Chairman, Richard Paynter; the Treasurer, Folkert Draaisma; the Honorary Secretary, Penelope Allisy-Roberts (EFOMP nominee); and three other elected members, currently, Michèle Coeck (SCK•CEN, Belgium), Liaison Officer and Marcel Schouwenburg (TU Delft, Netherlands) who is the Webmaster as well as Deputy Treasurer. The present Board was renewed in June 2013, and Joanne Stewart of PHE (UK) was co-opted as a Board member for 3 years at the August Board meeting, as is allowed under the Articles. Joanne was invited onto the Board to take a leading role in progressing selected work proposals from the ENETRAP projects and as the official EUTERP member of the HERCA working group on RP E&T.

The Board is most grateful to Marcel Schouwenburg for taking responsibility for the EUTERP website, whom together with Tom Clarjjs of SCK-CEN has worked hard to improve the content and accessibility; and to Michèle Coeck particularly for organizing projects involving the EUTERP, the Newsletters and the EUTERP workshops.

The Articles of Association were amended in 2015 following discussions by the Board in 2014. Once approved by the Associates, the final version will be available on the website.

Elections for the next Board are scheduled for 2016. Under the amended Articles, the Board may consist of up to eight Board members and the Associates will be invited to nominate new Board members.

The functions of the Board Members have been drawn up in readiness for the open elections and the operating procedures/regulations for the administration of the EUTERP are in progress.

### **3 Associates**

At the end of 2015, the EUTERP consisted of eighteen Associates from twelve countries, an increase of 50 %. The Associates are listed on the website and come from Belgium, France, Germany, Greece, Hungary, Lithuania, the Netherlands, Norway, Slovenia, Switzerland, Turkey and the UK. In addition, two international organizations (EFOMP and CERN) are Associates. Links to the Associate websites are included and the PHE and SCK-CEN have already included course and training event information on the EUTERP website for promotional purposes.

#### **Sponsorships**

A number of Associates received sponsorships for the two Workshops held during the biennium. At the EAN/EUTERP joint Workshop in Croatia (2014), there were 2 sponsorships and at the 5th EUTERP Workshop in Athens (2015), there were 11 sponsorships.

#### **Associates' website**

A special part of the EUTERP website is being set up for Associates where documents concerning the administration of the Foundation will be located. These will include the Articles, the audited accounts and the Associates' meeting report. In addition, a discussion Forum for Associates is under development.

#### **Communication**

An outcome from the Associates' meeting held during the 5th EUTERP Workshop was that better communication channels should be set up between the Board and the Associates. To implement this request, the Board has started to communicate directly on at least a quarterly basis, the first such communication, concerning the amended articles and the election procedure to the Board, being issued in December 2015.

### **4 National and international liaison**

#### **a. National Contact Points (NCPs)**

During the last two years, the EUTERP renewed contacts with twenty-three National Contacts in twenty-two countries. Further efforts will be made during the next biennium to ensure that all countries are represented by NCPs.

Each National Contact has the possibility of posting articles and information on the website and Finland, Germany, Luxembourg, Poland, Romania, Hungary, Italy and the Netherlands have all done so. Saudi Arabia has asked to be kept informed of events and the Korean Association for Radiation Application (KARA) made contact with the EUTERP, specifically with regard to the 5th Workshop that was held in Athens.

## **b. Newsletters**

The EUTERP Board has produced four newsletters during this biennium, as planned. These and the past Newsletters are available on the website. Associates and National Contact Points are encouraged to submit Articles for the Newsletters. There were over 200 subscribers to the Newsletters during the last two years although it appears that only 30 % of subscribers open the Newsletter and even fewer click on the links therein, which is somewhat disappointing. However, it appears that several subscribers also forward the Newsletter to colleagues.

## **c. Website**

The new EUTERP website was launched in 2015 and has received an average of around 100 page views per month during the last year of the biennium with some viewers navigating through several pages. The Board is taking further steps to improve the use of the website for example by adding regular news feeds; other suggestions for web developments are welcomed. Imminent changes are foreseen to incorporate the ENETRAP III results in the form of a course database, which should make the website more attractive as well as useful.

## **d. National and international conferences**

The EUTERP participated in 3 international or national conferences with posters or oral contributions. These have been reported in the Newsletters and include the ICMP in Brighton, UK, supported by the EFOMP, the 4th European IRPA congress held in Geneva and the 1st National congress on radiation protection in Turkey hosted by the RaDKoR.

# **5 Collaborations**

## **a. ENETRAP**

The EUTERP is an active partner in the ENETRAP III project (<http://enetrap3.sckcen.be>). This project deals with the continuous development of training courses for the RPE working in different sectors, with the development of a train-the-trainer event, and with policy matters related to E&T in radiation protection.

The EUTERP is specifically involved in the writing of guidance to support the implementation of E&T requirements for RPE and RPO as defined in the Euratom BSS (Work Package 7). In 2014-2015 it contributed significantly to a report that is now being submitted to the Art.31 Group of Experts and put forward for publication in the EC RP series.

The EUTERP is also active in testing, refining and validating the proposed methodologies and promoting their acceptance within Member States (Work Package 6). A supplementary objective is to demonstrate a European registration system for RPEs, facilitating workers' mobility. The close contacts with HERCA are certainly an added value to advance this task in an efficient way. This work started in 2015, and will come to full speed in 2016-2017.

The EUTERP website is used as one of the main dissemination tools of the ENETRAP III results. To this end, the website was revised in 2015 (Work Package 5). The EUTERP is also contributing to the implementation of an E&T database of courses and events, enhancing capacity building. This is expected to be implemented by the summer of 2016. EUTERP also aims to connect to the IAEA database and to make links to other relevant platforms in order to become as holistic as possible.

## **b. EFOMP**

The Board continued to cooperate with the EFOMP over the EUTEMPE.RX project involving training for the medical physicist in diagnostic radiological physics to EQF level 8. This project has parallels with the ENETRAP project and a EUTERP Board member has been a participant in the project during the two years, with the project due to complete in 2016.

## **c. HERCA**

The Heads of European Radiological Protection Competent Authorities (HERCA) Task Force on Education and Training in Radiation Protection was formed in 2012 to develop criteria for the implementation of the forthcoming revised BSS requirements for the radiation protection expert (RPE) and radiation protection officer (RPO). This work was carried out in collaboration with the ENETRAP III project and provided an important input to the

guidance developed by the ENETRAP partners. The EUTERP was invited to participate in the work of the Task Force and was represented by Richard Paynter, the EUTERP President. A HERCA workshop was held in Paris in July 2015 to discuss the views of European regulators on the RPE/RPO requirements and this workshop also reviewed and made proposals for the amendment of the draft ENETRAP III document *European Guidance on the Implementation of the Requirements of the Euratom BSS with respect to the Radiation Protection Expert and the Radiation Protection Officer*. The Guide was amended accordingly. A further meeting of the Task Force was held in September in Athens to review the final version of the Guide.

The HERCA Board has now set up a Working Group on Education and Training in Radiation Protection to continue the work of the Task Force, which was a time-limited body. The mandate of the Working Group includes the development of a common understanding of RPE and RPO knowledge requirements and practical solutions for the implementation of RPE and RPO, taking into account the outcomes of the ENETRAP III project. The EUTERP President has a seat on the Working Group as an observer.

#### **d. EAGLE FP7 project**

The EAGLE project is a Euratom FP7 3-year "coordination action" launched under the work programme 2012, to help identify and disseminate good practice in information and communication processes related to ionizing radiation. A member of the EUTERP Board was appointed to the EAGLE Advisory Board to provide impartial views on the work programme and deliverables. The EAGLE consortium reviewed national and international data, tools and methods as well as institutional work in order to identify education, information and communication needs as well as coordination possibilities at European level. The EAGLE project also fostered moves towards the ideal of citizen-centred communication, including a participative component. The approach taken was based on an interactive exchange of information and opinions concerning risks, and risk communication among the risk assessors, risk managers, mass media, informed civil society and other interested parties referred to as stakeholders. The project brought together representatives of the nuclear sector, users of ionizing radiation, authorities, journalists, social media consultants, and informed civil society. This culminated in the RICOMET conference in June 2015, a three-day conference held in Slovenia with the theme of *Risk Perception, Communication and Ethics of Exposures to Ionizing Radiation*. In fact the conference brought together three EU FP7 projects, which can be seen as a successful effort towards multi- and transdisciplinary research and broader societal involvement in nuclear research and policy. The three projects were EAGLE—Enhancing education, training and communication processes for informed behaviours and decision-making related to ionizing radiation risks; OPERRA—Open project for the European radiation research area—and PREPARE—Innovative integrated tools and platforms for radiological emergency preparedness and post-accident response in Europe. Wide-ranging topics were addressed at the conference and the participation, from researchers in natural sciences and engineering to researchers in social sciences and humanities, from journalists to practitioners, from representatives of communities with local partnerships to science policy-makers, was very broad. Such diversity of audience interests and the novelty of the approach adopted at RICOMET 2015 to bring a variety of stakeholders to several round-tables and workshops contributed to open and far-reaching discussions. All the presentations are available from the website of the conference: <http://ricomet2015.sckcen.be/en> and some were written up as full papers and submitted for an eventual publication in the *Journal of Radiological Protection*. The conference envisaged a further RICOMET to be held in 2016.

#### **e. Visit of the Korean Association for Radiation Application (KARA)**

In October 2015, representatives of the Korean Association for Radiation Application (KARA) visited the UK and met with two EUTERP Board members to discuss the work of EUTERP. KARA provides education & training programs on the qualification system for Radiation Safety Officers (RSO) in Korea, and is now conducting a research project to further develop the Korean system in the light of the RPE qualification systems in Europe. The meeting discussed the current European arrangements for education and training and the new BSS requirements for the RPE and RPO. The meeting provided a range of documentation, web links and references that would be a helpful input to the KARA project.

## 6 Conferences and Workshops

### EAN/EUTERP joint workshop (2014)

The EUTERP/European ALARA Network Workshop held in Rovinj, Croatia 7-9 May 2014 had the title: **Education and training in radiation protection: improving alara culture.**

This joint EAN-EUTERP Workshop looked at the concept of ALARA in training activities and considered both how ALARA culture is taught and how radiation protection training programmes are delivered effectively. The workshop was well attended, with 71 participants from 22 different countries. As well as presentations, the workshop included group discussions on a range of relevant topics in including:

- Building ALARA into radiation protection training programmes
- Measuring the effectiveness of training
- The role of qualification and recognition schemes
- Training tools and methods
- National approaches to training

As with our previous workshops there was some discussion on the training requirements for RPEs, RPOs and workers. Georgi Simeonov (European Commission) explained the education and training requirements of the new European Basic Safety Standards, and Ton Vermeulen (HERCA) discussed the conclusions of the HERCA Task Force on Education and Training in Radiation Protection. It was clear from both of these presentations that EUTERP has a valuable role in the development of training requirements for the various categories of persons, and the dissemination of these requirements. This work will be continued through EUTERP's involvement in the ENETRAP III project.

The effectiveness of training was a major theme throughout the workshop. Traditionally the assessment of this has relied on written tests at the end of training courses; these can test knowledge and understanding but only give a limited indication of how trainees might apply these in a practical scenario. Some interesting presentations described how practical skills can be directly tested using practical assessments, carried under the observation of the trainers. Ideally, the effectiveness of training should be demonstrated by tangible improvements in radiation protection. Work-related benchmarks such as radiation doses or the frequency of incidents were discussed; however it was concluded that these were only useful in a few specific, well-defined circumstances. A better option would be to find a means of assessing individual attitudes to radiation protection, ideally before and after training, although the development of such an assessment method is not straightforward.

Many useful conclusions arose from the discussions and presentations and these will be used to develop and take forward the EUTERP work programme. A few key conclusions are given below:

- More work needs to be done in terms of assessing the effectiveness of training. There are several possible workplace indicators, such as monitoring results, individual doses, and reports of audits and inspections (including observation and assessment of behaviours in the workplace). These should be used to construct a framework for analysing the effectiveness of training.
- Effective training providers are critical to both the delivery and assessment of training, and there is value in exploring methods by which the quality of training providers can be assessed and recognised.
- Guidelines need to be developed for national and mutual recognition schemes. These schemes should focus on all-round competence rather than just academic qualifications. In turn, Member States should aim to establish clear and transparent national schemes for the recognition of RPE competence.
- The role of the European quality schemes, ECVET and EQF, need to be incorporated into European training activities.
- A similar formal system of recognition is not considered appropriate for RPOs; however a simpler system for verifying and validating that they have received suitable training should be considered.

All the presentations and some photographs are now available on the EUTERP website (<http://www.euterp.eu/>).

### **EUTERP 6th Workshop (2015)**

The 6th EUTERP workshop “Legislative change in Europe: the implications for training in radiation protection - Rising to the challenge”, 30 September to 2 October 2015, was held at the Hotel Stratos Vassilikos, Athens.

This workshop focused on the required changes in legislation in the European Union and the associated training implications, as a result of the new Basic Safety Standards (BSS) Directive (2013/59/Euratom). Member States are required to bring into force the laws, regulations and administrative provisions necessary to comply with the new BSS Directive by February 6, 2018. This will be a challenge, requiring changes to national legislation, major revision of training activities and new approaches to the qualification and recognition of Radiation Protection Experts and Medical Physics Experts.

The workshop was divided into a series of sessions focussed on specific topics associated with the new BSS. Session 1 looked those sections of the new BSS of specific relevance to training including the provision of information and training of workers potentially exposed to orphan sources, emergency workers, outside workers, the training of operators of non-medical imaging equipment, information to workers and members of the public potentially exposed to radon, and the training requirements for the new roles of Radiation Protection Expert (RPE) and Radiation Protection Officer (RPO).

Session 2 looked at communicating risks, and a series of very good presentations prompted an excellent discussion on the difficulties associated with expressing the concept of risk to non-scientific persons and members of the public. The session concluded that it is essential for trainers to be objective and unbiased in the presentation of facts, to follow a balanced approach and to structure their approach to the nature of the audience. Target audiences and the training objective can be subdivided into:

- Professionals who need RP information to carry out their work: eg solicitors, engineers – *information provision.*
- Exposed persons and workers – *trying to achieve changes in behaviour.*
- Members of the public - *provision of information to enable informed judgements.*

The training must be carefully designed to meet the needs of each of these audiences; an appropriate course for one group may not be suitable for another.

Session 3 covered occupational exposure and inevitably prompted much discussion on the roles and associated training requirements for RPEs and RPOs. Most Member States already have persons carrying out these roles, although they are not named as such. There is clearly a strong desire to minimise legislative change and countries are likely to incorporate existing roles defined within their legislation to carry out the RPE and RPO functions.

The outcomes of the ENETRAP III project were discussed in Session 4 and presentations were given on the new specialised training modules for RPEs in the medical, nuclear and NORM sectors. The guidance currently being developed on the roles of the RPE and RPO was presented and it was agreed that this should provide helpful but not mandatory guidance on best-practice methods for implementing the RPE and RPO requirements.

Further sessions covered occupational exposure in the medical sector, an area where there is clearly well established training programmes in place for a wide range of staff, and emergency response arrangements. Three working groups looked at the topics of stakeholder involvement in training development, train the trainers, and risk communication. The groups identified a number of critical issues associated with the topics and these issues were discussed in detail in the plenary session.

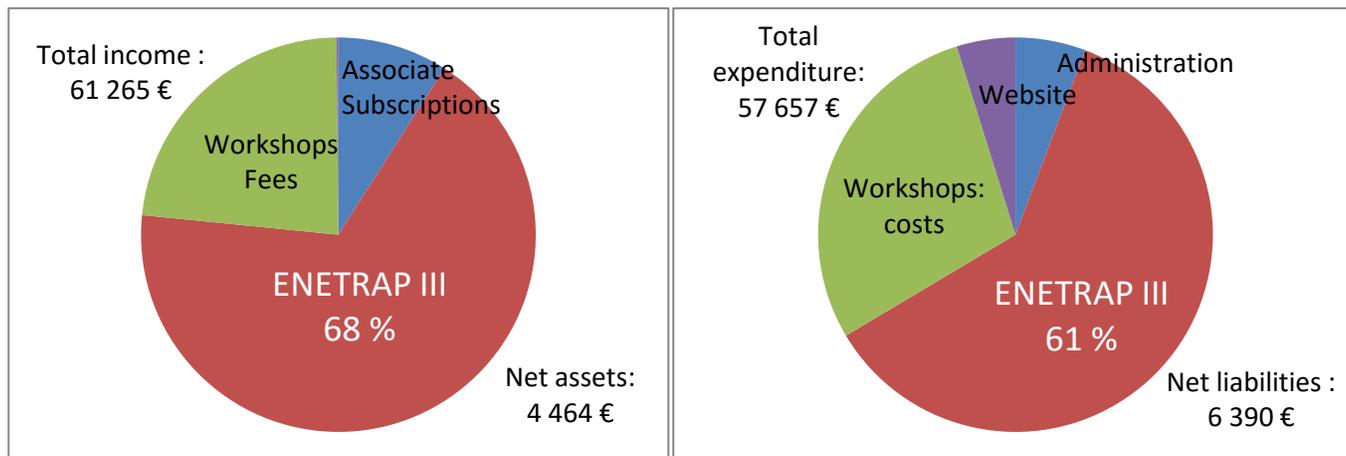
The very constructive discussions that were held over the three days provided much food for thought and should provide useful input into the efforts of Member States to address the training requirements associated with the new BSS. Further information on the workshop, including copies of the presentations and the book of abstracts, may be found on the EUTERP website: <http://www.euterp.eu/EUTERP2015/>

The staff of the Greek Atomic Energy Commission provided the local organization for the Workshop and put much effort into ensuring the event was a success, which was greatly appreciated. The Workshop was attended by 50 participants from 19 different countries.

## 7 Financial statement and budget report

The opening balance of the EUTERP accounts in 2014 consisted of 7246 € as a result of the modest surplus from the EUTERP Workshop in Cyprus, the frugal administrative requirements of the EUTERP Board and the support of the first Associates to join EUTERP. This balance enabled the EUTERP to underwrite involvement in the EAN/EUTERP Workshop in Croatia in 2014, the 5th EUTERP Workshop held in Athens in 2015 and to support 13 sponsorships proposed by Associates to attend these Workshops at which information on education and training developments is disseminated. It also supported, in part, Board members to make presentations at national conferences to encourage new Associates. At the end of 2015, the balance of the accounts was a net asset of 4464 €, the Workshop having made a small surplus with the generous input of the GAEC to ensure its smooth running. This, together with the 2016 and 2017 Associates' subscriptions will enable the EUTERP to continue functioning for the next biennium. The audited financial statements of account are available on the Associates' website.

### Total income and expenditure for the biennium 2014/2015.



It should be noted that almost all of the Foundation Board administrative costs are still being met in kind by the Associate bodies of the Board members.

EUTERP Board

2016-08-22

## Acronyms

ALARA	As low as reasonably achievable, regarding radiation exposures
<a href="#">ALLIANCE</a>	European Radioecology Alliance
<a href="#">BSS</a>	European basic safety standards for the protection against the dangers arising from exposure to ionising radiation
DG TREN	The former DG Transport and Energy is now separated into the <a href="#">Directorate-General for Mobility and Transport (European Commission)</a> and the <a href="#">Directorate-General for Energy (European Commission)</a>
<a href="#">EAGLE</a>	Enhancing Education, training and communication processes for informed behaviours and decision-making related to ionizing radiation risks
<a href="#">EAN</a>	European ALARA Network
E&T	Education and training
EC	European Council
<a href="#">EFOMP</a>	European Federation of Organisations for Medical Physics
<a href="#">EMAN</a>	European Medical ALARA Network
<a href="#">ENEN</a>	European Nuclear Education Network
<a href="#">ENETRAP</a>	European Network on Education and Training in RAdiological Protection
<a href="#">ENS</a>	European Nuclear Society
ETRAP	Conference on Education and Training in Radiological Protection
<a href="#">EURADOS</a>	European Radiation Dosimetry Group
<a href="#">EURAMET</a>	European Association of National Metrology Institutes
FP6	EU Framework Programme 6
<a href="#">HERCA</a>	Heads of European Radiological Protection Competent Authorities
HPA and PHE	Health Protection Agency, UK now Public Health England
<a href="#">MEDRAPET</a>	Medical radiation protection education and training
<a href="#">MELODI</a>	Multidisciplinary European Low Dose Initiative
<a href="#">NERIS</a>	European Platform on preparedness for nuclear and radiological emergency response and recovery
<a href="#">NRG</a>	Nuclear Research and Consultancy Group
<a href="#">OPERRA</a>	Open Project for European Radiation Research Area
RPE, MPE and RPO	Radiation Protection Expert, Medical Physics Expert and Radiation Protection Officer, respectively
<a href="#">SCK•CEN</a>	Studiecentrum voor Kernenergie•Centre d'Etude de l'Energie Nucléaire
<a href="#">TU Delft</a>	Technical University, Delft