EUROPEAN COMMISSION

Community Research

SEVENTH FRAMEWORK PROGRAMME

WP2: First Interim Report

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Project Acronym: ENETRAP II

WP 2 title: Define requirements and methodology for recognition of RPEs

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WP 2 duration: 18 months

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Period covered by the report: 1 September 2009 to 31 March 2010

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1. Introduction

The primary focus of the wider ENETRAP II project is the development of European reference standards for education and training in radiation protection. However, there are a number of subsidiary objectives within the project relating to issues associated mutual recognition between Member States of, not only education and training, but also any status conferred(in part) by that training; specifically the status of Radiation Protection Expert (RPE) and Radiation Protection Officer (RPO)

The requirements for formal recognition of Radiation Protection Experts (RPEs) and the development of methodologies for both national and mutual recognition is being addressed within Work Package 2 of ENETRAP II.

The specific objectives of WP2 are:

- To define the requirements for national and mutual recognition of RPEs within EU Member States.
- To provide guidance with respect to national schemes for recognition of RPEs.
- To develop a mechanism for the mutual recognition of RPEs between Member States

With these objectives to be met by the following work programme:

(i) On the basis of the outcomes of ENETRAP FP6 and on outcomes and recommendations from EUTERP, establish the key requirements for the recognition of RPEs.
(ii) Develop guidance with respect to the essential components of national schemes for RPE recognition.
(iii) Establish required criteria for the mutual recognition of RPEs between Member States.
(iv) Develop a mechanism (based on the established criteria) for mutual recognition of RPEs.
(v) Provide guidance with respect to the application of the developed mechanism.

This report represents the first deliverable of WP2 - proposals for the key requirements for RPEs along with guidance to the essential components of national schemes for RPE recognition (tasks (i) and (ii) above).

2. Background

2.1 Outcome from ENETRAP (FP6)

A major survey was undertaken as part of ENETRAP (6FP) to try and elicit detailed information as to the approach taken across Europe with respect to required education and training for the Qualified Expert (as defined in the Basic Safety Standards, Council Directive 96/29/Euratom). The outcome of this survey was that there is significant variation in the education and training requirements for Qualified Experts, largely as a result of the varying approaches with respect to the role and function of the QE in individual Member States.

It is clear that this inconsistency in approach makes any progress towards mutual recognition of Qualified Expert status between Member States problematic.

2.2 Qualified Expert vs Radiation Protection Expert : Current status

2.2.1 Definition

The issue of role and function of the Qualified Expert has been the subject of considerable discussion and debate subsequent to ENETRAP FP6, most notably at the

1st and 2nd EUTERP workshops[1]. One of the outputs of the second workshop was a proposal that the QE should be re-named and re-defined in the forthcoming revision to the BSS. This proposal was carried through via the Article 31 Group of Experts.

The definition that has been proposed is as follows:

"*Persons having the knowledge, training and experience need to give radiation protection advice in order to ensure effective protection of individuals, whose capacity to act as a radiation protection expert is recognized by the competent authorities"*

The above definition has been included in the current working draft of the revised BSS and, at the time of writing there is nothing to indicate that it will change significantly. This being the case, it was felt prudent to move forward on the basis of this definition within the context of this work project.

2.2.2 Role

The intended role of the RPE is inherent within the definition. The expectation is that the RPE will be a source of professional expertise with the primary function being to provide comprehensive, professional and independent advice to the employer/licensee. Clearly, the focus of that advice will be with respect to required (regulatory and operational) protection measures to restrict exposure.

Also inherent in the proposed definition is that the RPE is an individual whose capacity (ability) to undertake the role effectively is "recognized" by - or, put another way endorsed and acknowledged by - the national Regulatory Authority. In practice, RPE recognition is a process; the individual's competence to provide expert advice in the field of radiation protection has to be formally assessed and deemed to be satisfactory by the Regulatory Authority.

It is important to understand the objective of recognition. Put simply, the objective is to provide the employer/licensee with confidence that the expert he chooses to consult with has the necessary core competence to give advice over a wide range of radiation protection issues. This being the case, the recognition process – however it operates- should seek to ensure that competence is adequately and appropriately assessed so that the status of RPE need not be questioned.

2.2.3 Moving forward: Specific Objectives

The two key tasks for this first phase of the work programme of WP2 were a) to establish the key requirements for recognition of RPEs and b) on the basis of these requirements develop guidance with respect to the implementation of national recognition schemes.

It was important, in doing this work, to bear in mind that the next phase in the work programme is to establish criteria for "mutual recognition" between Member States. It is clear that if effective mutual recognition is to be achieved then there must be a good degree of commonality with respect to the key elements of, and criteria applied to, the various national schemes. It was also important to respect the fact that the majority of EU Member States have well established radiation protection infrastructures and any

[1] 1st EUTERP Workshop, Vilnius,22-24 May 2007
2nd EUTERP Workshop, Vilnius 23-25 April 2008

models or mechanisms for recognition should reasonably be expected to fit into those existing infrastructures. The overarching objective, therefore, was to work towards an outline model for national recognition schemes which, if adopted by Member States would not only:

- Ensure sufficient flexibility for Member States to establish systems for RPE recognition that can be readily accommodated within national infrastructures, but also

- Ensure a degree of commonality sufficient to facilitate mutual recognition of RPE status between Member States.

2.2.4 Competence vs Suitability

As mentioned in section 2.2.2 above the focus in this work package is that of "core competence" for Radiation Protection Experts. It is important to be clear what is meant by this; for the purposes of this project core competence is taken as being:

> *- those specific competences (capabilities) that provide the fundamental basis for the effective execution of the RPE role over a wide range of issues for routine applications of ionizing radiation (eg gauging, industrial radiography, research & teaching, use of unsealed radioactive materials in industry etc) -*

What is not being dealt with explicitly in this work package is the issue of "suitability". There are a number of reasons why someone holding RPE recognition would not be a suitable choice by an employer/licensee seeking advice. For example:

- The provision of appropriate advice within the aspects of the nuclear sector requires particular knowledge, understanding of the work in question only likely to be gained by having sound experience in that sector. It is unlikely that an RPE who has worked solely in, for example, the medical sector has that level of knowledge and expertise and as such, would be an unsuitable choice.

- An RPE who is not fluent in the local language would not be a suitable choice for expert advice as he could not/would find difficulty in communicating with those needing his advice.

- Likewise an RPE who had gained RPE recognition in another country but had no knowledge of the legislation in the country in which he wished to work would not be suitable choice.

NB: The second two points above are relevant with respect to considerations of the management of mutual recognition.

It must be remembered that RPE recognition does not confer automatic suitability for all situations

3. Methodology

The issues of criteria for competence for RPEs and national schemes for RPE recognition are clearly linked. It was decided at the outset that is a workable outcome for the work package was to be achieved it would be important to engage with and consult relevant stakeholders in order to get feedback on the two issues.

3.1 Project questionnaire: Purpose and Structure

It was concluded that the optimum means of conducting the consultation was by means of a simple questionnaire. However, as the primary objective of the consultation was to obtain broad views – and ultimately some form of consensus – it was felt important from the outset that the design/structure of the questionnaire should be such that it did not inadvertently re-open debate on the role of the RPE, or to suggest to contacts that further detailed information on training routes etc was required.

In the event, the final product took the form more of a discussion document than a questionnaire; proposals (supported by brief discussion where appropriate) were put forward and contacts asked to either agree or disagree and to add any general points that they felt relevant.

The questionnaire was structured into four key parts as follows:

Table 1: Structure of Questionnaire

Part	***Summary of content/objective***
Introductory pages	• Overview of the objectives of the work package and an explanation of the nature of the views being sought. • Request for respondent details/affiliation
Section A	• Addressed "aspects to be considered in the recognition process", ie the aspects of professional development that should be assessed (on the basis of evidence provided) as part of the formal recognition process.
Section B	• Considered "criteria for competence". Criteria sufficient to support required <u>core competence,</u> were suggested for each of the suggested aspects in the recognition process o Education, training, practical competence
Section C	• Consideration of the "essential components of a national recognition scheme". Views were sought on a number of specific issues pertinent to the execution of recognition schemes, namely o Role of the Regulatory Authority o Criteria to be satisfied by assessors

	o Assessment process o Requirement for pre-recognition experience o Period of validity of recognition o Re-recognition

The full questionnaire can be found in appendix 1.

3.2 Distribution

The final questionnaire was posted on the ENETRAP II web-site. Attention was drawn to it via the home page and interested parties invited to complete the questionnaire on line.

It was important that the views of the relevant stakeholder groups were captured, ie –

- Regulators/Regulatory Bodies
- Training Providers
- Radiation Protection Professionals/Bodies

This being the case, an email "alert" was sent via distribution lists of known contacts, as follows:

(i) Attendees at ETRAP[2]

(ii) EUTERP national contact points

(iii) HERCA[3]

(iv) ERPAN[4]

(v) WENRA[5]

For both (i) and (ii) above contacts were aware of background to the issues raised as a result of participation in the EUTERP workshops and ETRAP conferences and, as such, already engaged in the issues under consideration. It was hoped that contact with HERCA and WENRA would help to wider views from Regulators.

4. Results

4.1 Overview of response

In the event (despite follow up contacts etc) response to the survey was slow and the final number of completed questionnaires lower than hoped for. That said, there were a sufficient number of complete responses to allow an analysis to be undertaken and all stakeholder groups were represented.

At the closing date there were a total of 29 responses from 16 countries.

4.2 Detailed analysis

4.2.1 Section A: Aspects to be considered in the recognition process

The first issue addressed within the questionnaire was with respect to those aspects that should be considered in the recognition process:

[2] Education and Training in Radiation Protection, Lisbon, 9-11 November 2009
[3] Head European Radiation Protection Control Group
[4] European Radiation Protection Authority Network
[5] Western European Nuclear Regulators' Association

Proposal A1	The key aspects to be considered when assessing the competence of an RPE for the purposes of recognition by the National Authority are : • Background education • Further/complimentary training in radiation protection issues • Experience gained

All 29 respondents supported this proposal ("Yes").

4.2.2 Section B: Criteria for Competence

The process of recognition relies on the assessment of *competence.* This being the case then well defined criteria are required on which to base the assessment.

In section B of the questionnaire proposals were put forward as to criteria sufficient to support required core competence for each of the three key aspects of recognition.

B1: Education

Contacts were asked if they agreed with following proposal.

Proposal B1	The basic criteria with respect to an adequate level of education to support core competence is : • An education to bachelor degree level either specifically in radiation protection, or, in a physical or biological science *OR* • An equivalent education *OR* • An equivalent level of experience * **It is suggested that it would be at the discretion of the Regulatory Body to define what would constitute "an equivalent level of experience".*

The breakdown of overall responses and the breakdown by affiliation are shown in charts 1 and 2 respectively.

Chart 1

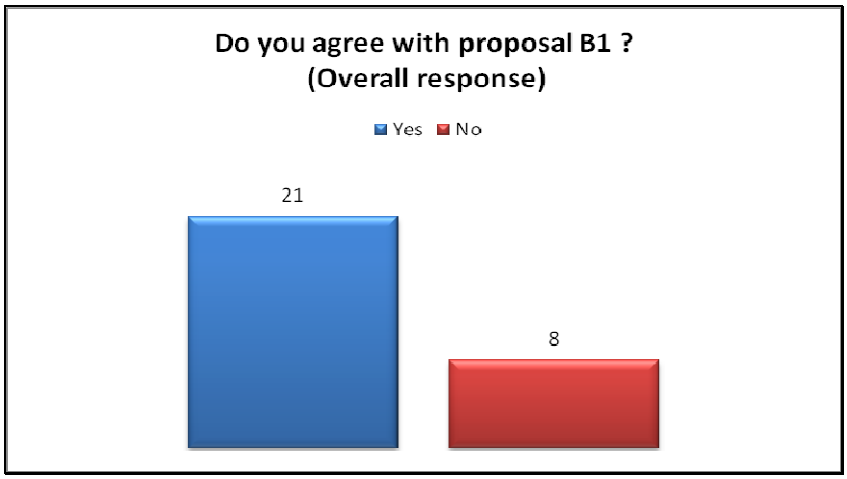
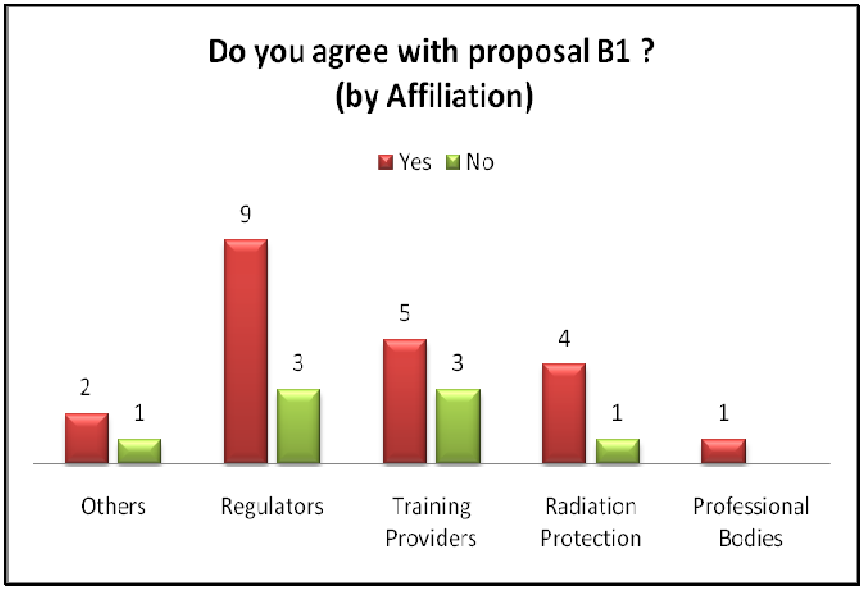


Chart 2



Those responding "no" were asked to provide further comment; a summary of the collated comments is given below.

- The proposed subject matter for the Bachelor degree too restrictive - background education in chemistry, engineering, mathematics, "natural science" would also be appropriate. (x2)
- Disagreement with the proposal for "biological" science as an appropriate subject matter for the Bachelor degree (x2)
- Disagreement that there is any level of experience that could (in time) result in an equivalent to a Bachelor degree level of education. (x3)

B2: Training

The objective of further or complimentary training is to provide specific expertise and competence relevant to radiation protection. Contacts were asked whether or not they agreed with the following proposal:

Proposal B2	The assessment of RPE competence should include a requirement for evidence to be provided sufficient to demonstrate: • Knowledge and understanding of each of the topics in the basic/reference (ENETRAP FP6) syllabus • Knowledge of operational radiation protection methods • Ability to give advice to clients

The breakdown of overall responses and the breakdown by affiliation are shown in charts 3 and 4 respectively.

Chart 3

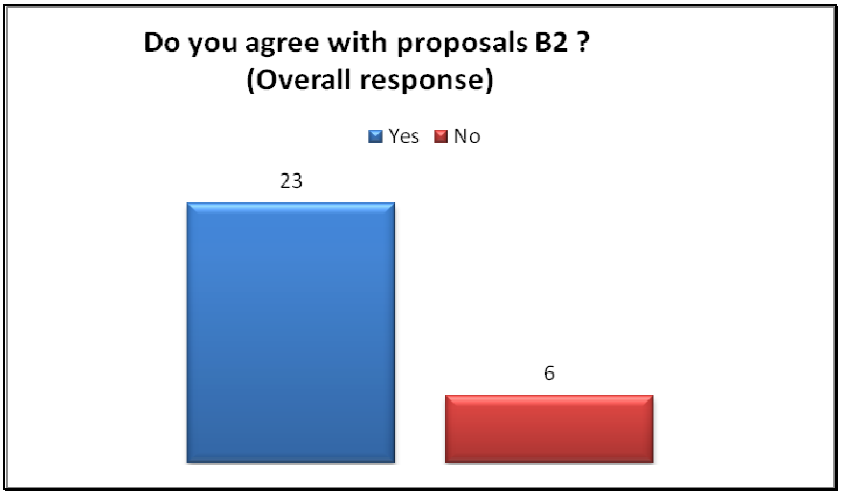
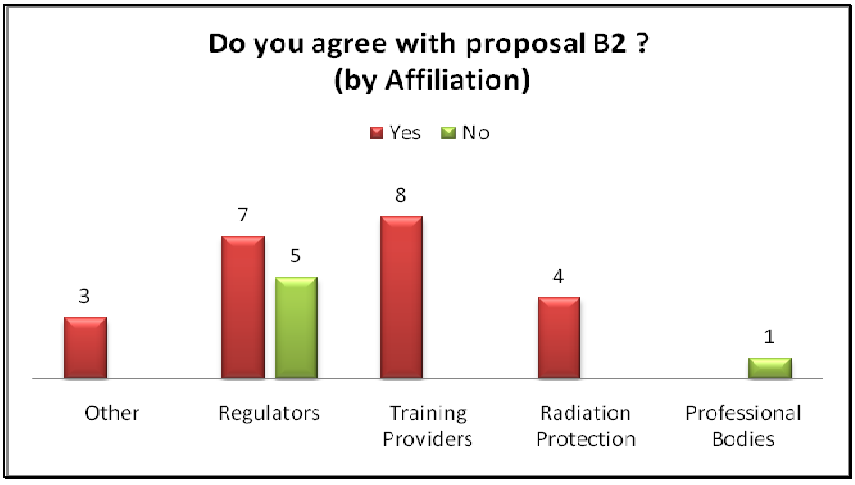


Chart 4



Those responding "no" were asked to provide further comment; a summary of the collated comments is given below.

- "Ability" to give advice cannot be conferred by training (x4)
- Knowledge of operational radiation protection methods should be on an "adequate" level (x2) :- *the point was made that the RPE does not necessarily have to "do" but would certainly be expected to advise, supervise, interpret, analyse etc*
- Training on its own insufficient, evidence of practical application (in specific areas of work) also required

B3: Practical Competence

Radiation protection is fundamentally an "operational" discipline. As such, in addition to evidence of training –based knowledge strong evidence of operational competence ie evidence of ability to formulate and deliver appropriate advice, should be required in order to achieve RPE recognition. Contacts were asked whether or not they agreed with the following proposal:

Proposal B3	The assessment of core RPE competence should include a requirement for the submission of evidence sufficient to demonstrate competence, *i.e.* the ability to give appropriate advice, in each of the following : Legislation Hazard/Risk Assessment Optimization Area Monitoring Personal Dosimetry Designation of Areas Classification of Workers

The breakdown of overall responses and the breakdown by affiliation are shown in charts 5 and 6 respectively.

Chart 5

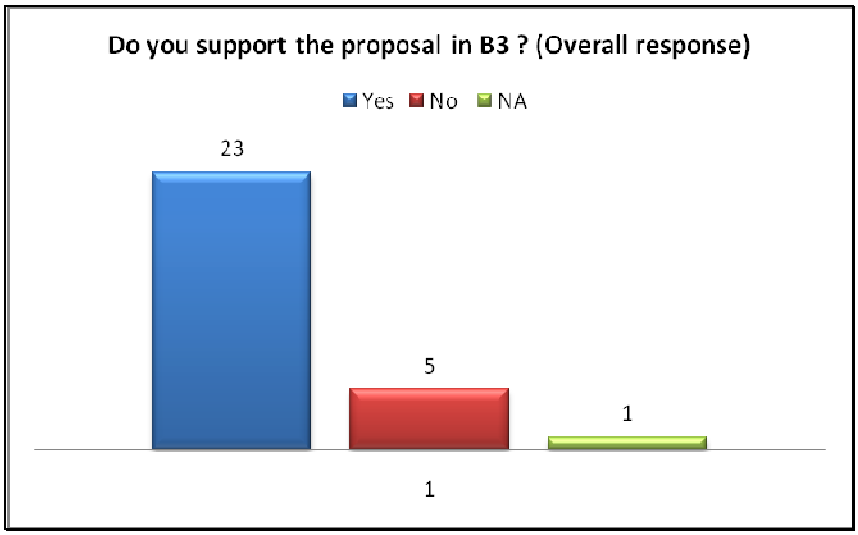
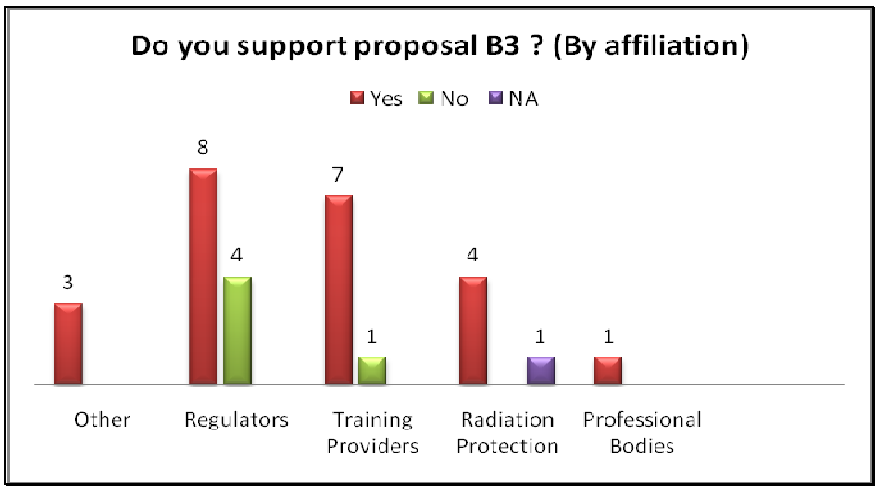


Chart 6



Those responding "no" were asked to provide further comment (although comments were welcome from all); a summary of the collated comments is given below.

- Suggested expansions to the proposed list (x 4) eg "internal dosimetry", "use of PPE", "justification", "radioactive waste management"
- How the ability to advise (or instruct) staff could be assessed was queried (x2)
- Issues of "suitability" rather than competence were raised under this section (x3)

4.2.3 Section C: Essential Components of a National Recognition Scheme

There is no reason for the detailed procedure, or mechanism, for RPE recognition to be exactly the same in all Member States. However, bearing in mind that the ultimate objective is effective mutual recognition there is value in the essential components of national recognition schemes being broadly similar.

In section C of the questionnaire suggested key components were listed and views sought on a number of associated issues.

C1: Role of the Authoratative Body in the Recognition Process

It is clear that responsibility for RPE recognition will lie with the Regulatory Authority (RA). However, recognition is, in fact, the outcome of the assessment process and it was suggested to contacts that there were a number of options as to how the process could be managed in practice. Contacts were asked which of the proposed options they would find acceptable (more than one could be selected).

Proposal C1	Select which of the following options you would find acceptable (you may select more than one). (i) Assessment of competence and awarding of recognition undertaken by the RA only (ii) Assessment of competence undertaken by individual(s) or organisations (e.g. professional societies, private companies etc) acting in accordance with criteria specified by the Regulatory Authority. Outcome of the assessment to be forwarded to the RA for consideration and subsequent awarding of recognition. (iii) Assessment of competence and awarding of recognition undertaken by individual(s) or organisations acting in accordance with criteria specified by the Regulatory

The breakdown of overall responses and the breakdown by affiliation are shown in charts 7 and 8 respectively

Chart 7

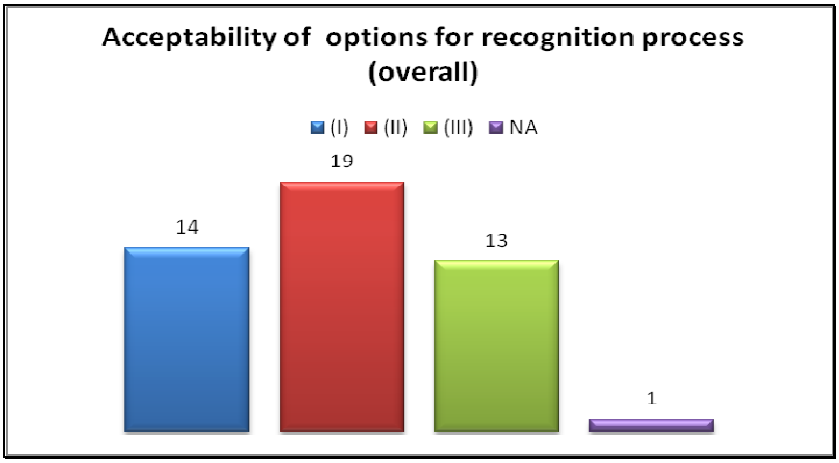
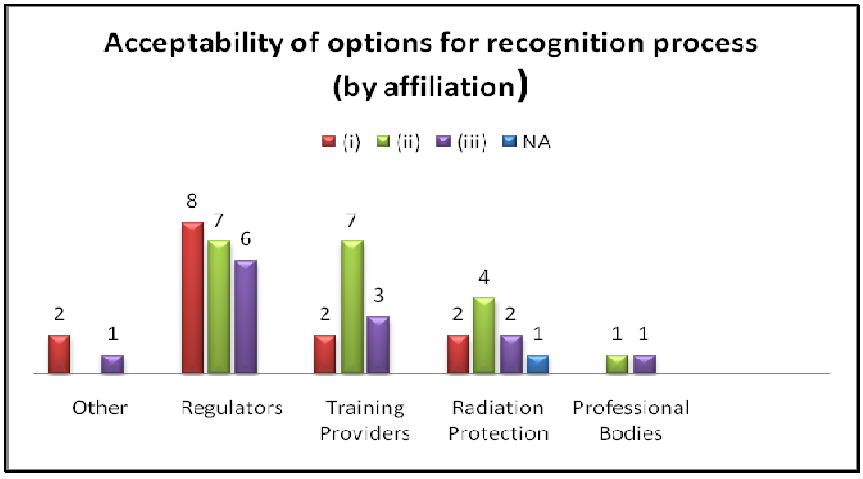


Chart 8



C2: Criteria for Assessors

Irrespective of the chosen option under C1, the process will require "assessors", ie persons to review the evidence submitted and to make a judgement on the outcome. Contacts were asked what criteria they would expect an individual to satisfy in order to act in the capacity as an assessor.

Responses are collated in table 2 (not all contacts responded).

Table 2: Comments on criteria for assessors

Contact reference	Comments
(a)	• Education to at least bachelor degree in RP or a physical science • >10 years experience in operational radiation protection, OR, > 15 years experience in the application of sources • "Assets" – eg participation in radiation protection in an international arena
(b)	• Several years experience as an RPE within home country • Member of recognised professional society • Depth & breadth of radiation protection knowledge • Specific (experienced) assessors for different fields (industry groups ?)
(c)	• Knowledge and competence to enable the assessor to carry out his duty • Education & training more or less equivalent to RPE
(d)	• More experienced and at least as well qualified as those being assessed • PhD plus 10 years practical experience in radiation protection
(e)	• Sufficient knowledge and experience • Independent from the person being assessed • Probably shouldn't be done by one person – commission or consortium would be more appropriate, which should include representatives of Regulatory Authorities and other stakeholders as relevant
(f)	• Qualified RPE in own right • ISO 19011 – Lead Auditor Certificate
(g)	• Impartial • Technically competent • Rigor without rigidity
(h)	• Must meet criteria set by Regulatory Authority
(i)	• At least the same qualification as the individual being assessed • Recognition by the Authorities
(j)	• A qualified RPE with at least 5 years experience in the same area(s) of suitability
(k)	• At least 5 years experience as a qualified RPE
(l)	• At least the same level of competence as the RPE • In an independent position
(m)	• Technical staff within the Regulatory Authority
(n)	• Be themselves a recognised expert
(o)	• To, at least fulfil the criteria for the person being assessed
(p)	• Recognition could be undertaken by a training centre if the training centre itself was recognised by the Regulatory Authority

C3: Assessment of submitted evidence

In order for competence to be assessed certain criteria will have to be satisfied. This being the case, potential RPEs would be required to provide evidence that they have met the specified criteria to the assessor(s)

Again there are a number of options for as to how evidence may be demonstrated. Contacts were asked which of the following they would find acceptable.

Proposal C3	….for competence to be assessed to be adequate/satisfactory in each of these general areas certain criteria will have to be satisfied and evidence provided to support this. Which of the following would be acceptable? (i) Submission of documentary evidence only; to support all key areas/criteria. For example, reports, training records, written evidence of advice provided, case studies, etc (ii) Interview with the RPE candidate (iii) Observation of candidate "at work" (iv) Combination of all of the above

The breakdown of overall responses and the breakdown by affiliation are shown in charts 9 and 10 respectively.

Chart 9

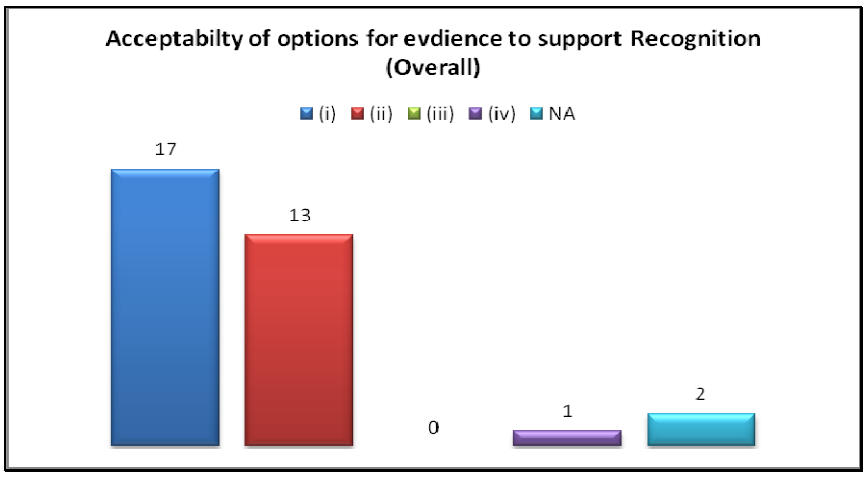
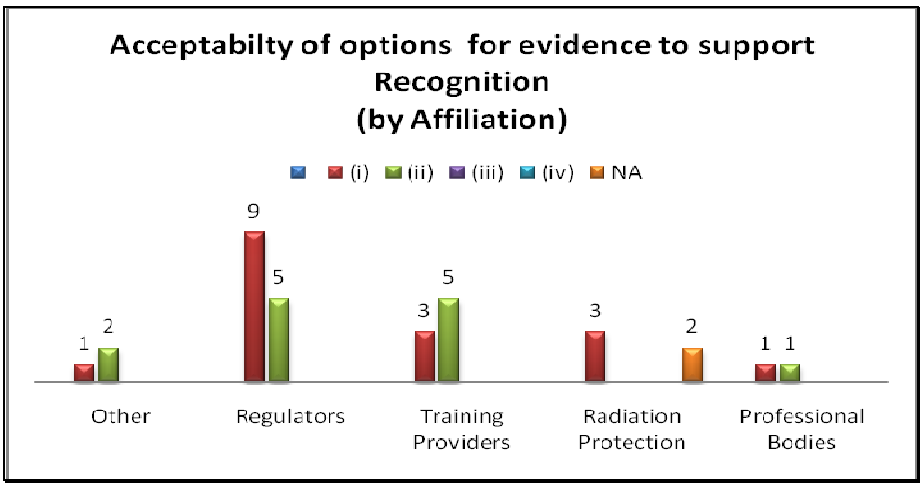


Chart 10



C4: Requirement for pre-recognition experience

Contacts were asked how long should a prospective RPE have been working and gaining operational experience in radiation protection before being eligible for recognition.

Proposal C4	How long should a prospective RPE have been working and gaining practical experience in radiation protection before being eligible for recognition? (i) 0 years (not needed) (ii) 1 year (iii) 3 years (v) 5 years (vi) > 5 years (please specify)

The breakdown of overall responses and the breakdown by affiliation are shown in charts 11 and 12 respectively.

Chart 11

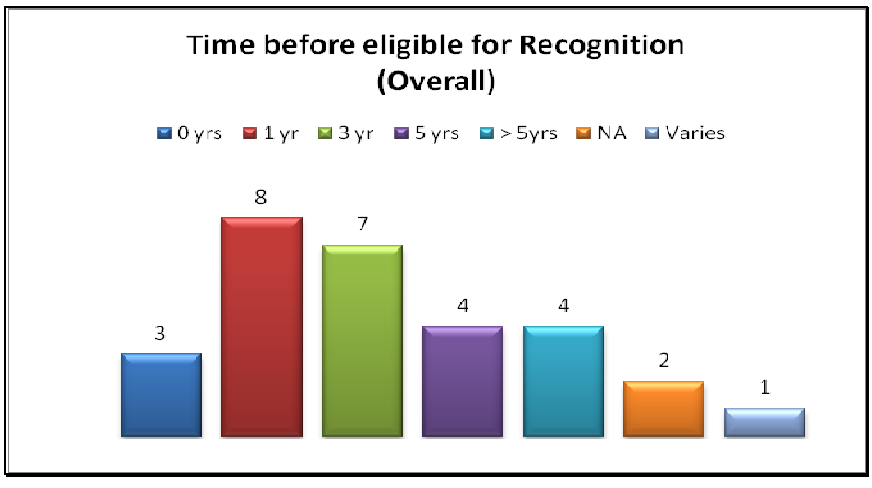
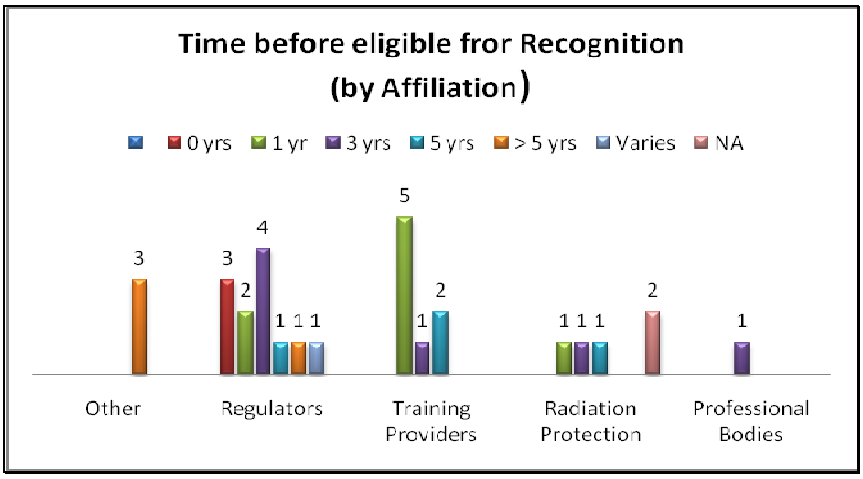


Chart 12



C5: Period of validity

Contacts were asked if RPE recognition should be time-bound or, once gained, valid indefinitely.

Proposal C5	Should RPE recognition be time bound or, once gained, valid indefinitely? (i) Valid for 1 year (ii) Valid for 3 years (iii) Valid for 5 years (iv) Valid for 10 years (v) Valid indefinitely Please add any further comments on period of validity :

The breakdown of overall responses and the breakdown by affiliation are shown in charts 13 and 14 respectively.

Chart 13

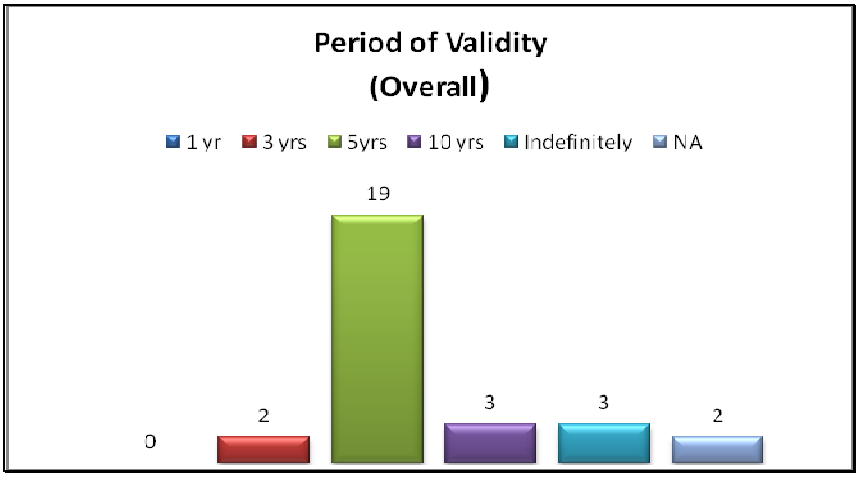
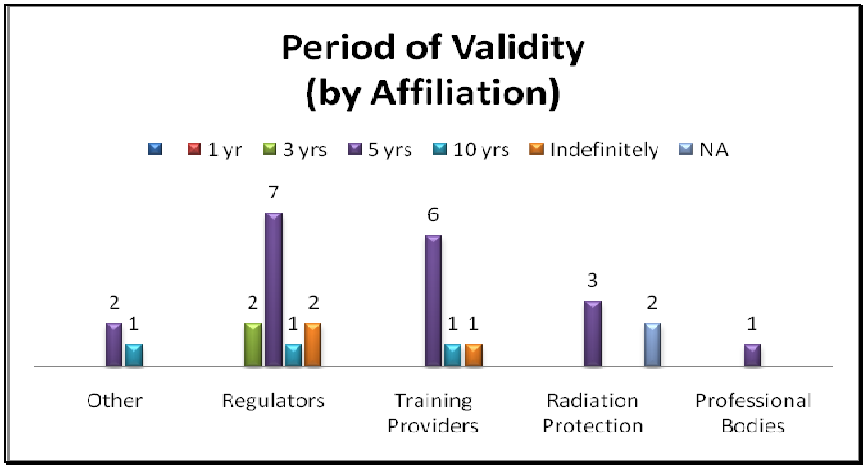


Chart 14



Additional comments on period of validity are given below.

- Must be time-bound so that there is an impetus for continual development
- A "re-recognition" process would ensure that experience and continual professional development is being kept up. However, if the validity period is less than 5 years then this becomes an administrative burden.
- 5 years is an appropriate timeframe as over that time significant development/changes might reasonably be expected.
- The area of validity should be specified
- "Recognition" should be equivalent to having the right to practice a profession.
- A guide (or "Code of Conduct") including provisions on penalties, training needs etc should be available for the Regulatory Authority and for RPEs
- Valid indefinitely but subject to periodic review and confirmation.

C6: Mechanism for re-recognition

If RPE recognition is to be time-bound then a mechanism for re-recognition would be required. A number of options we proposed and contacts asked to select their preferred option(s).

Proposal C6	If recognition is time bound then a mechanism for re-recognition will be required. What would be your preferred option? (i) Automatic re-recognition provided working as an RPE (ii) Repeat the full recognition process (iii) Interview to confirm competence (iv) Re-recognition subject to being able to demonstrate continuous professional development (CPD) (v) Other (please specify)

The breakdown of overall responses and the breakdown by affiliation are shown in charts 15 and 16 respectively.

Chart 15

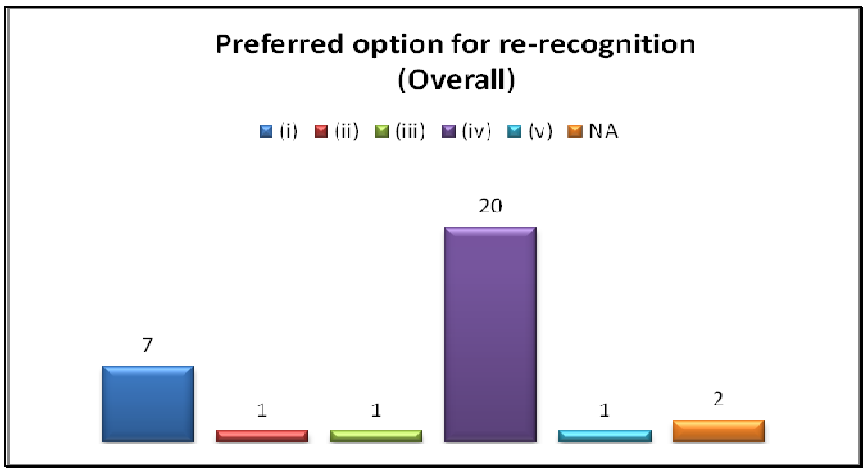
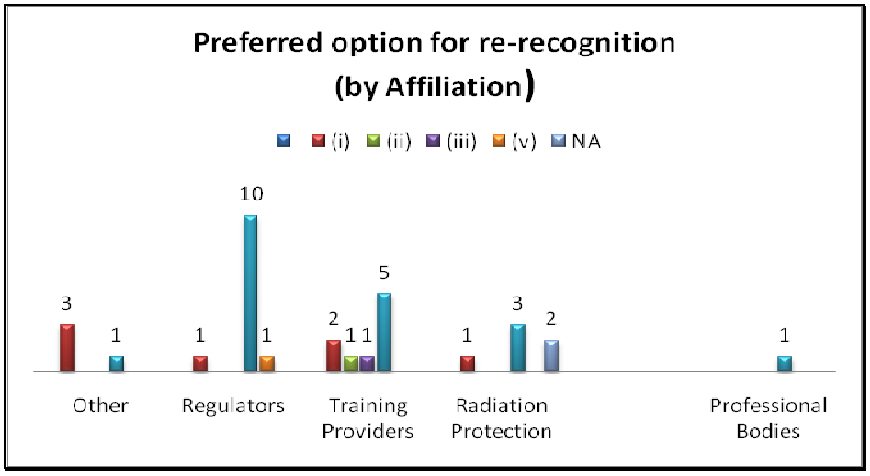


Chart 16



Additional comments provided on this issue were as follows:

- Flexible enough to allow variation in practice. For example, regular reporting to Regulatory Authority may be part of an RPE's routine work, therefore documentary evidence would always be in place
- Attend a specific refresher/update course (as an alternative to the options proposed)
- Re-recognition automatic on the basis of an "activities" report
- (In addition) active implication in radiation protection networks, participation in congresses, seminars etc.

5. Discussion and Conclusions

5.1 Aspects to be considered in the recognition process

There was full agreement with the proposal that

- background education
- further/complimentary training in radiation protection, and
- experience gained

were all aspects that should be considered as part of the recognition process.

Conclusion: *RPE recognition requires the assessment of evidence submitted by the individual to demonstrate that he/she has*

- *an appropriate level of background education*
- *Undertaken further, or complimentary, training in radiation protection as appropriate, and*
- *has an appropriate level of experience in operational radiation protection*

5.2 Criteria for Competence

5.2.1 Education

There was broad (72% for, 38% against) the proposals put forward with respect to the required level of background education for an RPE, with a similar yes-no split observed within the individual stakeholder groups.

A number commented on the subject matter for any academic degree held; on balance there appears to be a preference for a degree in a physical or "hard" science.

Although there was acceptance that a "degree level" education could be attained via educational routes other than a university awarded degree, the view was expressed by some that no level of operational experience could, on its own, result in an intellectual ability equivalent to that gained by an academic route.

Acknowledging these reservations, the following would appear to be a prudent conclusion with respect to the required educational background:

Conclusion : *An education to*

- *Bachelor degree level either specifically in radiation protection, or in a physical/engineering/mathematical discipline*

OR

- *An academic equivalent*

is required to satisfy the basic criteria for core competence as an RPE.

5.2.2 Training

Again, there was general agreement (79%) with the proposals made. Interestingly, all bar one of the "no" votes came from the Regulator group where the breakdown of responses was 58% "yes", 42% "no". The only professional body that responded also voted "no".

Based on the comments provided, the main issue appeared to be a lack of acceptance of the suggestion that ability to give advice could be conferred by training. This is perhaps an arguable point. In general terms the *ability* to do anything is developed on the basis of knowledge, experience and maturity (and is, in part, a personal characteristic) and

each of these assets can be boosted in a training process. However, it is accepted that the development of "soft skills" is generally not a primary objective in radiation protection training. This consideration leads to the following conclusion.

Conclusion : *An individual seeking RPE recognition should be required to provide evidence sufficient to demonstrate*

- *Knowledge and understanding of each of the topics in the basic/reference syllabus*[6]
- *Knowledge of operational radiation protection methods*

It is expected that this evidence will take the form of details of training undertaken eg events attended, on-the-job training etc

5.2.3 Practical competence

There was good agreement (79%) with the proposal that assessment of core competence should include a requirement for the submission of evidence sufficient to demonstrate the ability to give appropriate advice in each of the following key areas:

Legislation: Hazard/Risk Assessment: Optimization: Area Monitoring

Personal Dosimetry: Designation of Areas: Classification of Workers

Again the "no" votes came in the main from Regulators (1 from a training provider) but the majority of supporting comments were really only for suggestions for expansion to the list of topic areas rather than any disagreement; in fact, most of the suggestions were for subjects embedded with the broad topics listed.

One or two of the comments made seemed to be addressing the issue of "suitability" rather than core competence.

On the basis of the above, the conclusion drawn in as follows:

Conclusion : *Recognition of core competence should only be awarded if the individual seeking recognition is able to demonstrate competence ie the ability to give advice in each following key areas :*

Legislation *Hazard/Risk Assessment* *Optimization*

Area Monitoring *Personal Dosimetry*

Designation of Areas *Classification of Workers*

[6] A reference syllabus for RPE training was drafted as part of the ENETRAP FP6 project; this is given in appendix 3. Further development and elaboration of this syllabus is included as part of the work programme of ENETRAP II.

5.3 Essential components of a national recognition scheme

5.3.1 Role of the Authoritative Body

There were no strong views expressed with respect to how Regulatory Authorities might manage the recognition process, although option (ii) – that the assessment of competence could be undertaken by a 3rd party acting in accordance with criteria specified by the Regulatory Authority, but subsequent awarding of recognition to be undertaken by the Regulatory Authority – was the most popular choice.

The breakdown of responses by affiliation did not highlight any particular preferences within stakeholder groups other than training providers were option (ii) was a clear favourite.

Conclusion: *Although responsibility for RPE recognition lies with the Regulatory Authority, there is flexibility as to how this process may be managed; this facilitates best use of available resources. Options include :*

- *Assessment of competence and the awarding of recognition undertaken solely by the Regulatory Authority*
- *Assessment of competence undertaken by a 3rd party acting in accordance with criteria specified by the Regulatory Authority. Outcome of the assessment to be forwarded to the Regulatory Authority for consideration and subsequent awarding of recognition.*
- *Assessment of competence and awarding of recognition undertaken by a 3rd party acting in accordance with criteria specified by the Regulatory Body*.

5.3.2 Criteria for Assessors

The role of an assessor in the process of RPE recognition is a key one. For the status of RPE to have value and to be viewed as a source of expert advice without question there must be confidence in the recognition process; specifically, confidence in the ability of those undertaking the assessment of competence of a prospective RPE to exercise sound judgement.

It was clear form the views expressed that there is a general expectation that at the very least assessors should, themselves, be able to satisfy the competence criteria for RPEs and have significant experience in operational radiation protection – ideally having some particular area of specialist knowledge and/or be active in the wider development of radiation protection.

In addition to this requirement for sound professional competence, a number of specific suggestions were made as to the "calibre" of those wishing to be assessors. For example,

- There would be an advantage in assessors being active in the international radiation protection arena
- Assessors should be members of recognised professional societies
- Assessors should be remain independent and impartial
- Assessors should act with rigor but without rigidity

Taking all these points together paints a portrait of an assessor as being experienced, professionally competent and actively contributing in the radiation protection arena. The assessment is then, in effect, a peer review. Of course, in practice, an "assessor" may be an individual or a panel of individuals making a collective decision - the view was expressed that a panel or consortium of individuals to undertake assessments would be preferable - and may, or may not, be part of the Regulatory Authority. Irrespective of the mechanism, the overall criteria for those undertaking the assessment should be the same.

Conclusion: *An individual, or group of individuals, charged with undertaking the assessment of competence of prospective RPEs would be expected to satisfy the following criteria :*

- *be able to satisfy the specific criteria for RPE recognition*
- *be active in the field of radiation protection, having a minimum of 10 years operational experience*
- *be a member of a recognised professional society*
- *act independently and remain impartial*
- *be an active contributor to the radiation protection profession, either on a national basis or/and in the international arena*

5.3.3 Assessment of submitted evidence

In practice, the assessment of competence is made on the basis of evidence provided. The options most preferred for nature, or format, of evidence were:

- Documentary evidence, and
- Evidence obtained via interview with the prospective RPE.

However, it was not clear from the responses (a number of contacts selected both options) whether these two options were equally acceptable or it was combination of the two that was preferred. Subsequent discussion with one or two contacts suggested that the combination would be the ideal option; it is certainly the case that an interview provides a good opportunity to test in-depth understanding of underpinning issues and the wider factors that influence radiation protection such the work of ICRP, the process of regulatory change etc.

Conclusion: *In order to seem recognition, Prospective RPEs should be required to submit documentary evidence in support of each of the 3 key aspects considered in the recognition process. This evidence should be sufficient to demonstrate that the specified criteria for competence have been satisfied.*

- *Education : proof of academic qualifications*
- *Training : attendance certificates, syllabi, proof of exam passes, proof of time spent on-the-job-training, evidence of mentored training etc*
- *Experience: detail/copies of advice given, details of situations analysed, copies of reports provided etc.*

Where practicable, an interview should be conducted with the RPE once the documentary evidence has been considered. The objective of this interview being to test understanding of the underpinning principles and wider factors influencing radiation protection.

5.3.4 Requirement for pre-recognition experience

The full range of views was expressed with respect to how long an individual should have been actively working and gaining operational experience in radiation protection before becoming eligible for recognition.

Approximately half (52%) opted for a minimum of duration of 3 years or more. Interestingly, 10% of contacts selected 0 years, thus suggesting that the criteria for competence could be satisfied by a combination of education and training alone. While it is acknowledged that some experience can be gained as part of the training process it is difficult to see how an individual could gain sufficient depth of experience and mature towards "expert" status without spending a consolidated length of time working in, and dealing with, the issues that arise in a radiation protection environment.

In contrast, 13% of contacts would prefer a minimum duration greater than 5 years (up to 15 years in one case). While this would certainly facilitate comprehensive development it could, perhaps, be an unnecessary burden on the recognition process and possibly cause a difficulties with respect to establishing and maintaining optimum numbers of RPEs, particularly in countries with developing radiation protection infrastructures.

There was one suggestion that the duration of pre-recognition experience should vary depending on the application that the RPE would eventually provide advice on. This is perhaps a valid comment with respect to consideration of *suitability* but it is just core competence that is being addressed here.

Conclusion :	*In order to be eligible for RPE recognition an individual must have spent at least 3 years working and gaining operational experience in a radiation protection environment. During this time the "trainee" should amass the evidence required to demonstrate core competence.*

5.3.5 Period of validity

The majority of contacts (66%) were in favour of a period 5 year period of validity for RPE recognition, with this preference being consistent across the stakeholder groups. It was generally felt that a requirement for "re-recognition" would ensure that experience and competence would be maintained as it becomes the impetus for continuing development. Although there were those who would opt for a longer validity period, almost all qualified that preference with the caveat that competence should continue to be maintained.

There were a couple of other, interesting, observations made in response to this proposal:

a) That "recognition" may be viewed as being equivalent to earned the "right to practice a profession", and
b) That a "code of conduct" - that might include details of competence requirements, the level/nature of service that an employer might expect from an RPE, details of penalties for filing to maintain expected standards etc – would be useful.

While both of these perhaps go beyond the issue of period of RPE recognition they are relevant with respect to retaining recognition and ensuring that appropriate professional standards are maintained. As such, they are perhaps worthy of further consideration.

Conclusion:	*Recognition as an RPE should be time-bound. A period of 5 years is considered to be appropriate; after this time, re-recognition is required if the individual concerned wishes to continue to practice as an RPE.*

5.3.6 Mechanism for re-recognition

Of the options proposed, re-recognition on the basis of being able to demonstrate continuing professional development was the one most preferred (64%), with the next most popular option being automatic re-recognition provided the individual had been working as an RPE (22%). Arguably the former carries with it a higher degree of rigor; just working as an RPE does not necessarily mean that an individual will have been active in ensuring that professional competence (as defined by the Regulatory Authority) has been maintained.

Taking this response in the context of the discussion in section 5.3.5 an ongoing requirement for an RPE to be able to formally demonstrate maintenance of operational competence and continuous professional development seems to be appropriate.

Conclusion:	*In order to obtain re-recognition when the period of validity of the original recognition has expires, an RPE should be required to submit evidence of continuous professional development (CPD) to the assessor/assessing body. Specifically, this evidence should demonstrate:* o *A clear understanding of the role of the RPE* o *Detailed understanding of relevant national legislation* o *General awareness of any legislative developments* o *Awareness that technological advances relevant to radiation protection*

6. Guidance on the essential components of national schemes for RPE Recognition

The two objectives of the work covered by this report were to

a) Establish the key requirements for the formal recognition of Radiation Protection Experts (RPEs), and

b) Develop guidance with respect to the implementation of national schemes for RPE recognition.

It was essential throughout that the focus was on developing an outline for national recognition schemes that could be readily adopted by all Member States.

6.1 Proposal: Requirements for RPE core competence

It is proposed, on the basis of the analysis and discussions in the preceding sections that:

An individual may be deemed as having the core competence necessary to act in the capacity of a Radiation Protection Expert, and be formally recognized as such by the national Regulatory Authority if he/she is able to satisfy the following criteria:

(i) An education to:

Bachelor degree level either specifically in radiation protection, or in a physical/engineering/mathematical discipline

OR
An academic equivalent

(ii) Knowledge and understanding of each of the topics in the basic/reference syllabus[7]

(iii) Knowledge of operational radiation protection methods

(iv) The ability to develop and provide appropriate advice with respect to

Legislation ***Hazard/Risk Assessment*** ***Optimization***

Area Monitoring ***Personal Dosimetry***

Designation of Areas ***Classification of Workers***

(v) A minimum of 3 years experience working in radiation protection environment

Note: With respect to (iii) and (iv) above it is considered to be the responsibility of the Regulatory Authority, or a 3rd party operating with the approval of the Regulatory Authority to establish any further detailed criteria that may be deemed necessary

6.2 Proposal: National schemes for RPE Recognition

It is proposed that the steps towards building and maintaining a national scheme for the formal recognition of Radiation Protection Experts are as outlined below. Further guidance with respect to the specific component of the scheme (denoted in **bold** is given in appendix 2.

Establishment of overall framework	Requirement for RPE Recognition to be **established in national legislation** ↓ **Basis on which RPE Recognition will be awarded** (ie criteria for core competence) to be established ↓ An appropriate number of assessors/assessing bodies to undertake the **assessment of core competence** should be identified. Regulatory Authority to establish criteria that assessor(s) must satisfy. ↓ Individuals/organizations with **authority to award recognition** of core competence should be identified by the Regulatory Authority
Operation of scheme	Once eligible, prospective RPEs submit required **documentary evidence** to the assessor(s)/assessing body. ↓ Assessors consider evidence and conduct **interview** with prospective RPE. ↓ Outcome of assessment notified to those with responsibility for **awarding recognition**. If criteria if competence satisfied, individual is awarded RPE status, **valid** for not more than 5 years. ↓ At end of period of validity RPE should apply for **re-recognition**

7. WP2: Next phase

The next phase of WP2 is to establish the criteria for mutual recognition of RPEs between Member States and then to develop a mechanism (with guidance) for how such mutual recognition would operate in practice.

The outcome of this work will be reported as the second deliverable under WP2.

Appendix I

Project Questionnaire

Introduction

ENETRAP II is a project running under the 7th Framework programme of the European Commission. While the primary focus of the project is to develop European Reference Standards for education and training in radiation protection there are a number of subsidiary objectives relating to issues associated with the mutual recognition (between EU Member States) not only of education and training but also of any status conferred by that training.
One of the key areas being looked at under the project is the required education and training for Radiation Protection Experts (RPEs) and the issue for "RPE recognition"; it is with respect to the latter that we are seeking your views.
Some background information and an explanation of the nature of the information being sought is outlined below.

"Radiation Protection Expert"

Background

The current European Basic Safety Standards[8] requires employers/licensees to consult with a Qualified Expert (QE) and provides a definition of the QE. One of the outcomes of a major survey undertaken as part of the ENETRAP (6FP) was that, in practice, there is a significant difference in the role and status of the QE in Member States. A consequence of this is that there is wide variation in approaches to the specified education and training requirements for QEs.

This matter has been the subject of considerable discussion and debate in intervening years, most notably at the 1st and 2nd EUTERP workshops. One of the outputs of the second workshop was a proposal that the QE should be re-named and re-defined in the forthcoming revision to the BSS. This proposal was carried though via the Article 31 Group of Experts.

Definition & Role

The definition that has been proposed is as follows:

"Persons having the knowledge, training and experience need to give radiation protection advice in order to ensure effective protection of individuals, whose capacity to act as a radiation protection expert is recognized by the competent authorities"

The above definition has been included in the current working draft of the revised BSS and, at the time of writing there is nothing to indicate that it will change significantly. It is prudent, therefore to move forward on the basis of this definition.

The role of the RPE is inherent within the definition. The expectation is that the RPE will be a source of professional expertise with the primary function being to provide comprehensive, professional and independent advice to the employer/licensee. Clearly, the focus of that advice will be with respect to required (both regulatory and operationally) protection measures to restrict exposure.

RPE Recognition

Also inherent in the proposed definition is that the RPE is an individual whose capacity (ability) to undertake the role effectively is "recognized" by - or, put another way endorsed and acknowledged by - the National Authority.

In practice, RPE recognition is a process; the individual's competence to provide expert advice in the field of radiation protection has to be formally assessed and deemed to be satisfactory by the National Authority.

[8] Council Directive 96/29/Euratom, Basic Safety Standards for the Protection of the Health of Workers and the General Public against the dangers arising from Ionizing radiation.

It is important to understand the objective of recognition. Put simply, the objective is to provide the employer/licensee with confidence that the expert he chooses to consult with has the necessary core competence to give advice over a wide range of radiation protection issues. This being the case, the recognition process – however it operates- should seek to ensure that competence is adequately and appropriately assessed so that the status of RPE need not be questioned.

Objective of this questionnaire

The specific task that is being undertaken within the ENETRAP II project is to establish requirements for the recognition of the RPE. In the first instance, requirements for national recognition schemes are being considered. However, in doing this work, it is important to bear in mind the eventual need for "mutual recognition" of RPE status between Member States; if effective mutual recognition is to be achieved then there must be a degree of commonality with respect to the key elements of, and criteria applied within, national schemes.

In the appended document a number of proposals are out forward as to what the essential elements and criteria of a national scheme for RPE recognition might be. Your views are sought on these proposals. Our objective is that, on conclusion of this work we will be able to propose an outline mechanism for national recognition schemes which, if adopted by Member States would not only –

- afford sufficient flexibility for Member States to establish systems for RPE recognition that be readily accommodated within national infrastructures, but also
- ensure a degree of commonality sufficient to facilitate mutual recognition of RPE status within member States.

The above being the case, we are not seeking detailed information but your considered opinion as to whether or not it would be possible to operate within the broad parameters proposed.

It would be appreciated if you could return the completed questionnaire by the dd/mm/2010. For further information on the ENETRAP II project please also visit http://enetrap2.sckcen.be

WP 2 of ENETRAP consortium thanks you very much for your collaboration.

Yours sincerely

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RESPONDENT DETAILS

Name:
Affiliation (please select one):

- ☐ Regulatory Body
- ☐ Professional society
- ☐ Training Provider
- ☐ Other (please specify)

Address:
Country:
Email:
Telephone:
Fax:

A. ASPECTS TO BE CONSIDERED IN THE RECOGNITION PROCESS

In effect, the proposed definition for the RPE describes an individual **competent to give advice** on radiation protection matters, the development of that competence being the product of a combination of acquiring adequate knowledge, undertaking appropriate training and gaining relevant experience via appropriate routesIt follows then, that any assessment of competence must be based on assessment of knowledge, training and experience.

However, from a pragmatic point of view, it is proposed that what is required in any recognition process is **evidence** that steps have been taken to gain knowledge and understanding along with **evidence** that these can be applied to effect, indicating that the individual concerned is capable of giving appropriate advice.

It is proposed, therefore, that the aspects to be considered in the recognition process - aspects for which evidence should be provided in support of – should be basic educational qualifications, specific training related to radiation protection and practical experience gained.

PROPOSAL A1	The key aspects to be considered when assessing the competence of an RPE for the purposes of recognition by the national Authority are : • Background education • Further/complimentary training in radiation protection issues • Experience gained
QUESTION A1	Do you support the above proposal ? ☐Yes ☐No If “no” please specify what would you change

B. CRITERIA FOR COMPETENCE

As stated in covering note, the process of recognition relies on the assessment of competence, this being the case, criteria are needed on which to base the assessment. In the following sections, criteria sufficient to support required core competence are proposed for each of the key aspects of recognition.

B1. Education

One of the key conclusions from ENETRAP FP6 was that an academic level of foundation education is an expectation for persons wishing to pursue a career as an RPE. Many variations on the exact nature of this education were noted but what was that the ability for "degree-level thinking" (although not necessarily holding an academic degree) was required. Given the professional and expert nature of the role of the RPE this would seem to be appropriate.

PROPOSAL B1	The basic criteria with respect to an adequate level of education to support core competence is : ● An education to bachelor degree level either specifically in radiation protection, or in a physical or biological science. *OR* ● An equivalent qualification *OR* ● An equivalent level of experience* *It is suggested that it would be at the discretion of the Regulatory Body to define what would constitute "an equivalent level of experience"
QUESTION B1	Do you agree that the options above represent an appropriate level of background education for an RPE? ☐Yes ☐ No If "no", why not ? What alternative would you suggest ?

B2. Training

The objective of further or complimentary training is to provide specific expertise and competence relevant to radiation protection. Such training can take many forms, for example classroom training, on-the-job training, e-learning, b-learning, attendance at conference etc and of course, training can continue throughout a professional career.

It is important to be clear about what can be conferred by training. It is suggested that this falls into three categories:

1. Knowledge and understanding of theoretical issues

   Communication 98/C 133/3[9] presented a "Basic syllabus for the Qualified Expert in Radiation Protection"; in effect; this syllabus lists all those topics considered to be essential subject matter for foundation training for Qualified Experts, however, it is only a list of topics and no guidance was provided as to required level of detail or depth of coverage.

   Another outcome from ENETRAP FP6 was the publication of a "reference syllabus" (the initial proposal for a European Training Scheme for RPE training; a copy is appended. In addition to reflecting Communication 98/C, this reference syllabus also reflected feedback from Member States and provided some guidance on duration, learning objectives, what should be considered required elements and proposals for supplementary modules. Further elaboration of this syllabus is another work package in ENETRAP II.

2. Knowledge of operational radiation protection methods

   Obviously an RPE must be aware of operational (practical) radiation protection methods in order to be able to advise appropriately and this knowledge and awareness can be provided by any, or a mix of, the training methodologies suggested above. Key operational methods are associated with:

   - Radiological measurements
   - Interpretation and application of radiation protection data
   - Work supervision
   - Control procedures for work involving the potential for significant exposure

3. The ability to give adequate advice

   The ability to give advice is an essential skill for an RPE and this ability can be conferred, in part, by training.

[9] Communication 98/C 133/3 from the Commission laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionizing radiation. Official Journal of the European Commission, 30 April 1998

PROPOSAL B2	The assessment of RPE competence should include a requirement for evidence to be provided sufficient to demonstrate : • Knowledge and understanding of each of the topics in the basic/reference (ENETRAP FP6) syllabus • Knowledge of operational radiation protection methods • Ability to give advice to clients
QUESTION B2	Do you agree that the list above represents those aspects that can be addressed by <u>training</u>? ☐Yes ☐No If “no”, why not ? What would you add, or remove, from the list?

B3. Practical Competence

Radiation protection is fundamentally a practical discipline. As such, in addition to evidence of training-based knowledge, strong evidence of practical competence, *i.e*. evidence of ability to formulate and deliver appropriate advice, should be required in order for RPE recognition to be achieved.

With respect to core competence it is suggested that there are 7 key topic areas where competence must be demonstrated. These are listed below along with a brief description of the nature of the required competence.

Topic Area	Nature of Required Competence
Legislation	The ability to interpret regulatory requirements in practical situations.
Hazard & Risk Assessment	The ability to identify and assess risks of actual and potential exposure to ionizing radiation. Must include the ability to calculate projected exposure.
Optimization	The ability to interpret and apply radiation protection data. For example, - decay and emission data, source outputs, dose histories, monitoring results, manufacturer data, shielding calculations. The ability to identify and propose appropriate control procedures to restrict radiation exposure in accordance with the ALARA principle
Area Monitoring	The ability to interpret radiation and contamination measurements in order to identify necessary control procedures.
Personal dosimetry	The ability to interpret personal dosimetry data in order to identify necessary control procedures.
Designation of Areas	The ability to identify the need for area designation (supervised or controlled). The ability to identify appropriate access control measures for designated areas.
Classification of Workers	The ability to identify the need for classification and personal monitoring of workers

PROPOSAL B3	The assessment of core RPE competence should include a requirement for the submission of evidence sufficient to demonstrate competence, *i.e.* the ability to give appropriate advice, in each of the following : Legislation Hazard/Risk Assessment Optimization Area Monitoring Personal Dosimetry Designation of Areas Classification of Workers
QUESTION B3	Do you agree that the list above represents area where a RPE should be able to demonstrate practical competence in order to obtain recognition? ☐ Yes ☐ No If "no", why not? What would you add, or remove, from the list?

C. ESSENTIAL COMPONENTS OF A NATIONAL RECOGNITION SCHEME

There is no reason for the detailed procedure, or mechanism, for RPE to be exactly the same in all Member States. However, bearing in mind that the ultimate objective is effective *mutual recognition*, it is suggested that the essential components of national recognition schemes should be broadly similar.

These key components are listed in the table below; your views are sought on a number of associated issues.

Scheme Component	Discussion
Foundation in Regulation	It is/will be a requirement of the (revised) Basic Safety Standards Directive that the capacity for an individual to act as an RPE must be recognized by the Regulatory Authority. It follows, therefore, that a requirement for RPEs to be recognized must be a requirements set in national legislation/regulation.
Authoritative Body	It is clear that the responsibility for RPE recognition lies with the Regulatory Authority (RA). However, recognition is the outcome of an assessment process and it suggested that there are options as to how this process is managed. Select which of the following options you would find acceptable (you may select more than one). ☐ Assessment of competence and awarding of recognition undertaken by the RA only. ☐ Assessment of competence undertaken by individual(s) or organisations (e.g. professional societies, private companies etc) acting in accordance with criteria specified by the

	Regulatory Authority. Outcome of the assessment to be forwarded to the RA for consideration and subsequent awarding of recognition. ☐ Assessment of competence and awarding of recognition undertaken by individual(s) or organisations acting in accordance with criteria specified by the Regulatory Authority. Irrespective of the chosen option, the process will require "assessors", *i.e.* person(s) to review the evidence submitted and to make a judgement on the outcome. What criteria would you expect an individual to satisfy in order to act in the capacity of an assessor?
Administration	Any scheme will have to be effectively administered
Criteria for Competence	In sections A and B the general areas for consideration in the recognition process were discussed. However, for competence to be assessed to be adequate/satisfactory in each of these general areas certain criteria will have to be satisfied and evidence provided to support this. Which of the following would be acceptable? ☐ Submission of documentary evidence only; to support all key areas/criteria. For example,, reports, training records, written evidence of advice provided, case stuies, etc ☐ Interview with the RPE candidate ☐ Observation of candidate "at work" ☐ Combination of all of the above How long should a prospective RPE have been working and gaining practical experience in radiation protection before being eligible for recognition? ☐ 0 years (not needed) ☐ 1 year ☐ 3 years ☐ 5 years ☐ > 5 years (please specify)
Period of Validity	Should RPE recognition be time bound or, once gained, valid indefinitely? ☐ Valid for 1 year ☐ Valid for 3 years ☐ Valid for 5 years ☐ Valid for 10 years ☐ Valid indefinitely Please add any further comments on period of validity :

	If recognition is time bound then a mechanism for re-recognition will be required. What would be your preferred option? ☐ Automatic re-recognition provided working as an RPE ☐ Repeat the full recognition process ☐ Interview to confirm competence ☐ Re-recognition subject to being able to demonstrate continuous professional development (CPD) ☐ Other (please specify)

Guidance on National Schemes for RPE Recognition

SCHEME COMPONENT	GUIDANCE
Foundation in Regulation	There should be a requirement in national legislation for those wishing to act in the capacity of Radiation Protection Experts to have that capacity to act recognized by the relevant Regulatory Authority
Basis on which recognition is awarded	The criteria on which national recognition as an RPE will be awarded should be established. The following broad criteria are considered to be prudent : ❖ An education o to Bachelor degree level either specifically in radiation protection, OR, in a physical/engineering/mathematical discipline OR o an academic equivalent ❖ Knowledge and understanding of each of the topics in core modules of the European reference syllabus[10] for RPE training ❖ Knowledge of operational radiation protection methods (nature of competence given in footnote 1) ❖ Competence to give appropriate and relevant advice in each of the following key areas : Compliance with national legislation Hazard/risk assessment Optimization Area Monitoring Personal dosimetry Designation of Areas Classification of workers ❖ Eligibility to apply for formal RPE recognition
Assessment of Competence	The Regulatory Authority should authorise a sufficient number of individuals and/or organisations to undertake the assessment of competence of those seeking RPE recognition. These "assessors" may or not come from within the Regulatory Authority, but all assessors should satisfy the following criteria:

[10] Under development

	❖ be able, themselves to satisfy the specific criteria for RPE recognition ❖ be active in the field of radiation protection, with a minimum of 10 years operational experience ❖ be a member of a recognised professional society ❖ able to act independently and remain impartial ❖ be an active contributor to the radiation protection profession either nationally or internationally
Authority to award RPE Recognition	The Regulatory Authority should clearly establish where responsibility for awarding recognition (subsequent to the criteria for competence being met) lies. One of the following 3 options is preferred : ❖ The Regulatory Authority undertakes both the assessment of competence and the subsequent awarding of recognition ❖ The assessment of competence is undertaken by a 3rd party acting in accordance with criteria specified by the Regulatory Authority; the outcome of that assessment is forwarded to the Regulatory Authority for consideration and subsequent awarding of recognition. ❖ The assessment of competence and awarding of recognition is undertaken by a 3rd party acting in accordance with criteria specified by the Regulatory Authority.
Evidence required to demonstrate competence	The nature and format of the evidence that prospective RPEs (once eligible) are required to submit to those assessing competence should be clearly stated and understood. The following protocol is preferred: ❖ **Documentary evidence** should be submitted in support of each of the 3 key aspects considered in the recognition process. The evidence should be sufficient to demonstrate that the specified criteria for competence have been satisfied o Education : proof of academic qualifications o Training : attendance certificates, syllabi, proof of exam passes, evidence of on-the-job or mentored training etc o Experience : evidence of advice given, details of situations analysed, reports provided etc ❖ Following consideration of the documentary evidence the assessor(s)/assessing body should conduct an **interview** with the prospective RPE. The objective of this interview being to Confirm understanding of underpinning principles and the wider factors influencing radiation protection, and Assess verbal communication skills

Guidance on National Schemes for RPE Recognition

Period of validity of RPE Recognition	Once awarded, the period validity of RPE recognition should not exceed 5 years. Re-recognition via the approved mechanism and within a specified window of time (+/- 6 months of the 5th anniversary of awarding of the original recognition) should be required if the individual wishes to continue to practice as an RPE.
Re-recognition	In order to obtain re-recognition and RPE should be required to submit evidence of continuous professional development (CPD) to the assessor(s)/assessing body. (It is expected that the submission of documentary evidence only should be required for the purposes of re-recognition). Specifically, this evidence should demonstrate : ❖ A clear understanding of the role of the RPE ❖ Detailed understanding of relevant national legislation ❖ General awareness of any legislative developments ❖ Continued awareness of operational radiation protection methods and any technological advances relevant to radiation protection. Agreed criteria that RPE must be meet in order to satisfy each of the above will need to be established by the assessor(s)/assessing body. The period of validity of any re-recognition should be the same as that specified for first recognition.

Guidance on National Schemes for RPE Recognition

Footnote 1:

Brief description of nature of required operational competence

Topic Area	Nature of Required Competence	Topic Area	Nature of Required Competence
Legislation	The ability to interpret regulatory requirements in practical situations.	Area Monitoring	The ability to interpret radiation and contamination measurements in order to identify necessary control procedures.
Hazard & Risk Assessment	The ability to identify and assess risks of actual and potential exposure to ionizing radiation. Must include the ability to calculate projected exposure.	Personal dosimetry	The ability to interpret personal dosimetry data in order to identify necessary control procedures.
Optimization	The ability to interpret and apply radiation protection data. For example, - decay and emission data, source outputs, dose histories, monitoring results, manufacturer data, shielding calculations. The ability to identify and propose appropriate control procedures to restrict radiation exposure in accordance with the ALARA principle	Designation of Areas	The ability to identify the need for area designation (supervised or controlled). The ability to identify appropriate access control measures for designated areas.
Classification of Workers	The ability to identify the need for classification and personal monitoring of workers		