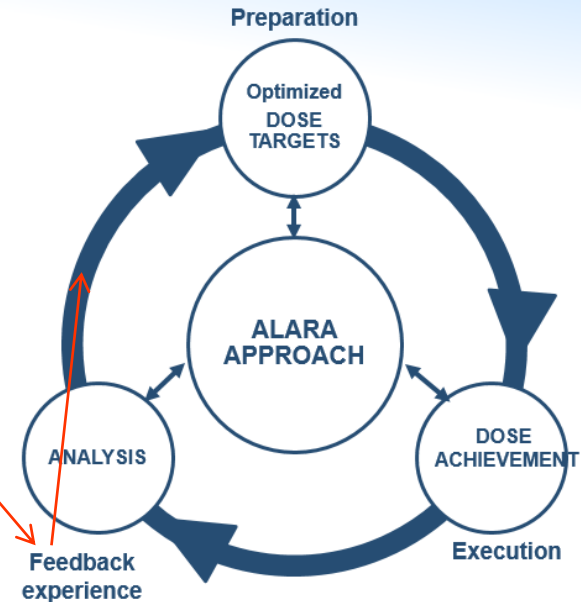


# **15.1 Implementing ALARA approach together: the in-house feedback exchange systems and outside networks (Part 1)**

# Importance of feedback in an ALARA perspective

All previous case studies have demonstrated the importance both for establishing the stakes and for starting the analysis for answering the who, when, where and how questions of having access to good feedback from previous jobs.

Therefore all what can be done to improve in-house feedback systems and favour outside exchanges will be worthwhile for improving optimization implementation



# What to do for improving in house feedback?

From your point of view what has to be done?

Is it already done in your facility?

What problems do you encounter to do it?

# What to do for improving in house feedback?

Of course what is important is to keep track of useful data for analysing the doses “explanations”, through RWP and a synthesis with improvements proposals in the radiation protection feedback reports.

And all that rely on collecting and keeping track in addition to **dose rates mappings (and contamination risks)** of adequate data in **in-house doses databases** (under access, excel...) relying on manual or electronic operational dosimetry:

- **Individual** doses (annual, per month, per week, per day...)
- Collective doses and workload **per task**
- Doses due **mishaps** (unexpected event, that could have been avoided)
- Doses for each accident, incident, near misses (with roots / causes analysis in the feedback report)

This should lead to different data bases for **normal** and **incidental** situations

# Why is it important to follow doses due to mishaps?

Feedback experience from many firms show that even in an optimized situation mishaps can lead to an excess 10/15% of collective dose

But when you reach 70 /80% of dose due to mishaps it means that the dose is 3 to 4 times higher than what can be expected! Which should have been 20/25 instead of 100 !

So what happens if you don't attribute to mishaps the corresponding doses? You start with the 100 you have reached and may be you set a progress objective of 90 ? Of course this is not optimization at all as your objective remains more than 3 times higher than the optimized one; but may be you do not know it if you have not performed a quantitative assessment of how are doses undertaken.

## Of course databases are no sufficient

As already presented in the lecture on procedures and structures, the data base will be useful only if:

- Right individuals have regular access to it, make use of it, and prepare decisions relying on it
- Procedures exist for facilitating that
- Structures exist for making the decision

Complementary to in-house feedback analysis many networks have been set up during the last 20 years for facilitating feedback experience exchanges between those concerned by the same type of problems on the spot. This networks deal either with accidental or normal situations

# ORPNET: an IAEA website for introducing to many of these networks



Since very few years IAEA has developed a web site devoted to networks dealing to improve occupational exposure and ALARA implementation:

the ORPNET Occupational Radiation Protection NETWORKs.

Its aim is to present each network and then to provide links to go on their websites.

It is very easy to reach in typing IAEA, ORPNET on any search engine Google.

A screenshot of a Google search interface. The search bar contains the text 'iaea, ORPNET'. Below the search bar, the word 'Recherche' is followed by 'Environ 273 résultats (0,29 secondes)'. On the left side, there is a vertical menu with categories: Web, Images, Maps, Vidéos, Actualités, Shopping, and Plus. The main content area shows search results for the 'Web' category. The first result is titled 'IAEA - ORPNET' with a green URL 'www-ns.iaea.org/tech-areas/.../norp/default.asp' and a link to 'Traduire cette page'. The description reads: 'An International website to communicate and exchange the information on Occupational Radiation Protection.' Below this, there are two columns of links. The left column includes 'back main list' and 'How are dose constraints ...' with a description: 'How are dose constraints established? Annual dose ...'. The right column includes '34' with a description: 'It all depends on what is meant by the word "objective": If the ...', 'Risks at workplace' with a description: '... P.O. Box 100, Wagramer Strasse 5, A-1400 Vienna, Austria ...', and '45' with a description: 'The reason can be found looking back over the last century. After ...'. At the bottom, there are sections for 'Paris' and 'Changer le lieu', and a 'Le Web' section.

# The ORPNET website



It allows through scrolling lists  
To be introduced to either  
worldwide networks or  
regional ones (regions of the  
world). It is also a place for  
reaching the ILO, WHO, EC  
radiation protection websites

Each network will be described  
in a one page with its history,  
objectives, memberships and  
main activities

We will first present those in  
charge of incidental situations  
feedback: OTHEA and RELIR

The screenshot shows the ORPNET website interface. At the top, there is a navigation bar with the IAEA logo and the text "IAEA.org International Atomic Energy Agency". Below this, there are tabs for "About IAEA", "Our Work", "News Centre", "Publications", and "Data Centre". A search bar is also present. The main content area features a large banner for "Occupational Radiation Protection Networks - ORPNET" with a sub-headline: "A medium for communication and exchange of information on Occupational Radiation Protection". Below the banner, there are navigation options: "World Wide", "Regional", and "International Organizations". A "Latest News" section lists several events, including the "7th International Symposium on Naturally Occurring Radioactive Material, Beijing, China, 22-26 April 2013" and a "National Workshop on NORM in Oil and Gas Industry, Doha, Qatar, July 2-3, 2012". A "Regional" dropdown menu is open, showing a list of networks: ARAN, EMAN, EURADOS, EUTERPE, OTHEA, RECAN, and RELIR. The "Events & Meetings" section lists upcoming events, such as the "Neutron and ion dosimetry Symposium, Aix-en-Provence, France" and the "EAN NORM Workshop on 'Measurement strategies in NORM' and topical day 'NORM in oil and gas industry'". A "Most Popular FAQs" section is also visible, along with a "Search in ORP Networks" section listing various network types like "Operational NPPs", "RP in medical practices", "Industrial radiography", "NORM", "Radon exposure to workplace", "Decommissioning of installations", "Waste management", "Individual Monitoring", and "Workplace Monitoring".

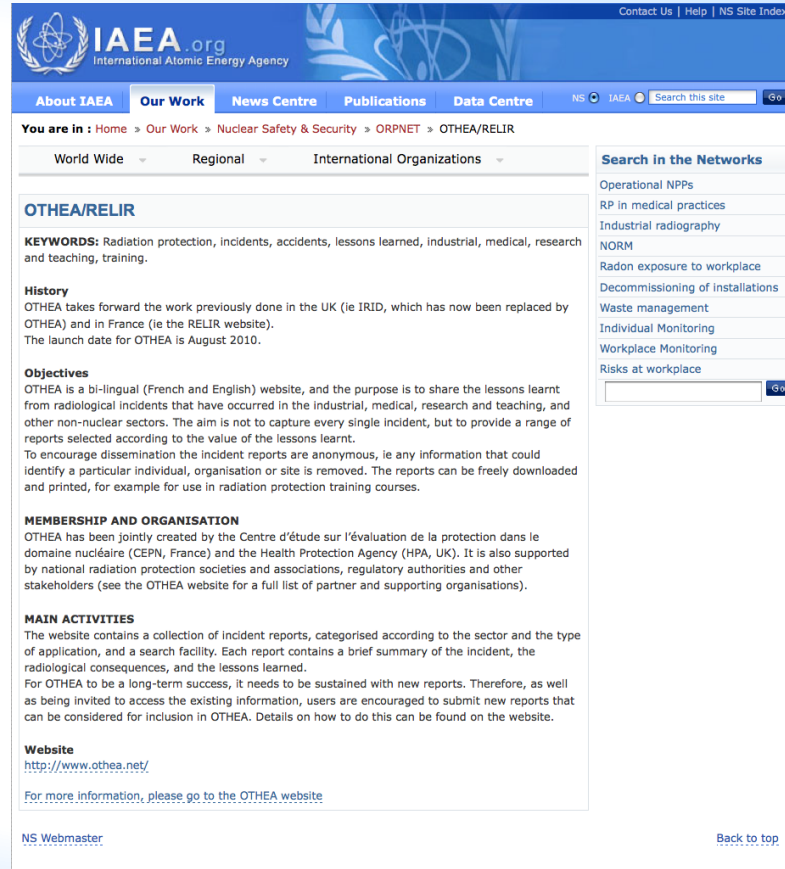


# The OTHEA network for learning lessons from incidents and accidents

It allows RPOs and QE to provide feedback from their own experience and to learn from the others.

All is made anonymous.

It can be used in two languages: English and French.



The screenshot shows the OTHEA/RELIR website interface. At the top, there is the IAEA logo and the text 'IAEA.org International Atomic Energy Agency'. Below this is a navigation menu with tabs for 'About IAEA', 'Our Work', 'News Centre', 'Publications', and 'Data Centre'. A search bar is located to the right of the menu. The main content area is titled 'OTHEA/RELIR' and contains several sections: 'KEYWORDS', 'History', 'Objectives', 'MEMBERSHIP AND ORGANISATION', and 'MAIN ACTIVITIES'. A 'Search in the Networks' sidebar is visible on the right, listing various categories like 'Operational NPPs', 'RP in medical practices', etc. At the bottom of the page, there are links for 'NS Webmaster' and 'Back to top'.

**OTHEA/RELIR**

**KEYWORDS:** Radiation protection, incidents, accidents, lessons learned, industrial, medical, research and teaching, training.

**History**  
OTHEA takes forward the work previously done in the UK (ie IRID, which has now been replaced by OTHEA) and in France (ie the RELIR website).  
The launch date for OTHEA is August 2010.

**Objectives**  
OTHEA is a bi-lingual (French and English) website, and the purpose is to share the lessons learnt from radiological incidents that have occurred in the industrial, medical, research and teaching, and other non-nuclear sectors. The aim is not to capture every single incident, but to provide a range of reports selected according to the value of the lessons learnt.  
To encourage dissemination the incident reports are anonymous, ie any information that could identify a particular individual, organisation or site is removed. The reports can be freely downloaded and printed, for example for use in radiation protection training courses.

**MEMBERSHIP AND ORGANISATION**  
OTHEA has been jointly created by the Centre d'étude sur l'évaluation de la protection dans le domaine nucléaire (CEPN, France) and the Health Protection Agency (HPA, UK). It is also supported by national radiation protection societies and associations, regulatory authorities and other stakeholders (see the OTHEA website for a full list of partner and supporting organisations).

**MAIN ACTIVITIES**  
The website contains a collection of incident reports, categorised according to the sector and the type of application, and a search facility. Each report contains a brief summary of the incident, the radiological consequences, and the lessons learned.  
For OTHEA to be a long-term success, it needs to be sustained with new reports. Therefore, as well as being invited to access the existing information, users are encouraged to submit new reports that can be considered for inclusion in OTHEA. Details on how to do this can be found on the website.

**Website**  
<http://www.othea.net/>  
For more information, please go to the OTHEA website

NS Webmaster [Back to top](#)

**othea relia**

HOME CONTACTS REPORTS PUBLICATIONS USEFUL WEB LINKS

Welcome to OTHEA

OTHEA is provided by a network of radiation protection stakeholders who have a joint interest in sharing feedback and experience from radiological incidents, in order to improve the protection of persons working with similar radiation sources. More generally, the aim is to encourage good practice within different sectors - medical and veterinary, industrial, research and education sectors, etc. The incidents reports are anonymous and have been selected on the basis of those which provide interesting and useful lessons, to help others prevent such incidents and/or mitigate the consequences.

THURSDAY, OCTOBER 25, 2012

search...

**PARTNERS**

cepr

Health Protection Agency

INRS

IRSN

SFRP

instn

L'Institut Curie

CONNEXION

**LATEST REPORTS**

- Laboratory incidents due to delivery of higher than expected activity - P-32 and P-33
- Loss of a control of a well logging source being transferred from a transport container
- Thickness gauge purchased from another country with the shutter still open
- Incident involving premature lock out of Techops 660 container
- Borehole logging - Detached gamma source during source loading offshore

**NEWS**

We are glad to welcome you to the OTHEA website. Please note that the site is operated with Joomla!: if you are using internet explorer 6 (IE 6), you may experience some compatibility problems. We advise you to use IE 7 (or later) or a browser like Opera or Firefox to ensure that the website contents are displayed correctly.

**WHO OTHEA IS FOR?**

OTHEA is intended to be of use to:

- Persons working with ionising radiation sources in industry, education and research, and in the medical and veterinary field,
- Radiation Protection Experts, Advisers, Officers and Supervisors,
- Other parties with an interest in radiation incidents, such as occupational health doctors, safety officers, etc.

**I WOULD LIKE TO USE THE DATABASE**

Check the reports

You are free to use and disseminate the reports, for example as part of a programme of radiation protection training. However, please ensure that you acknowledge OTHEA as the source.

# The OTHEA network for learning lessons from incidents and accidents

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You are free to use and disseminate the reports, for example as part of a programme of radiation protection training. However, please ensure that you acknowledge OTHEA as the source.

If you notice something wrong in a report, please contact us. We are also interested by your feedback on the use of the reports.

**CONTACTS**

Contacts

**WHAT IS AN INCIDENT?**

For OTHEA, incidents reports are selected on the basis of the value of sharing the lessons learned. Therefore, a broad variety of incidents may be included: not just incidents and accidents, but also any situation, event, behaviour or anomaly with the potential to cause an unplanned radiation exposure, or a significant decrease in the existing standard of radiation protection. This could include "near misses", contamination spills (whether people were exposed or not) as well as more serious radiological incidents.

OTHEA does not include nuclear, or nuclear-related, incidents.

# Let's try going to OTHEA through ORPNET

Go to Google

Ask for IAEA, ORPNET

Go to ORPNET

Ask for OTHEA

Go to check the reports

Go to industry

- there is a list of the cases with their languages
  - With country of origin (only UK and France at the moment; up to you...)
  - And available languages
- You can select one or make use of the search keyword and put there
  - Industrial radiography
  - Have a look to number 6 : Deterministic injuries to radiographer's hand
- You see the organisation of any case: description; radiological consequences and then lessons learned

# OTHEA Contact

OTHEA is not that kind of network where people meet each other; however every one can provide its feedback through fulfilling a questionnaire that will be checked and become anonymous.

In France the regional RPO's networks have each an individual contact to provide the OTHEA/RELIR database with new lessons learned from incidents.

OTHEA/ RELIR is more than only a database: it relies on human networks

- If you would like to submit an incident report for inclusion on OTHEA, download the questionnaire, complete it and send it to :  
Peter.Shaw@hpa.org.uk or Sharon.Ely@hpa.org.uk

OTHEA is developing its contacts abroad.

- If you want to contact them, make use of the emails below:
- **In France:** Pascal Croüail, Centre d'étude sur l'Evaluation de la Protection dans le domaine Nucléaire (CEPN), pascal.crouail@cepn.asso.fr
- **In Luxembourg:** Patrick Majerus, Radiation Protection Division of the Ministry of Health, patrick.majerus@ms.etat.lu

# International System on Occupational Exposure (ISOE)



ISOE was set up in 1992 by the OECD/NEA with soon after the participation of IAEA. A kind of world radiation protection professionals community from **nuclear power plants** club (with the participation of regulatory bodies)

ISOE has set up a database that includes more than 90% of all NPP's in the world; that data base is the core of the system and includes annual collective dose data from each plant and collective doses per task (!), it allows then benchmarking analysis per tasks, but also per sister groups of reactors, and it provides good practices documents...

The data base can be considered as the “glue” of the system, however ...

**...what makes it alive** are the annual regional and international **workshops**, as well as the radiation protection managers ad hoc meetings and the regulatory bodies ad hoc meetings.

# The ISOE Network





## ISOE Network

Information System on Occupational Exposure



[Home](#) [About ISOE](#) [Symposium](#) [Publications](#) [RP Contacts](#) [Management](#) [RP Library](#) [Database](#)

### Home

#### Status on Fukushima Accident

For the latest information concerning the status of Fukushima NPP Accident, see the following websites:

- [Japan Nuclear and Industrial Safety Agency](#)
- [Japan Atomic Industrial Forum](#)
- [Tokyo Electric Power Company](#)
- [Japan Ministry of Education, Culture, Sports, Science & Technology](#)
- [International Atomic Energy Agency](#)

### Welcome to the ISOE Website



*The Information System on Occupational Exposure (ISOE) System was created in 1992 to **provide a forum for radiation protection professionals** from nuclear electricity utilities and national regulatory authorities worldwide **to share dose reduction information, operational experience and information to improve the optimisation of radiological protection at nuclear power plants.***

ISOE is jointly sponsored by the OECD Nuclear Energy Agency and the International Atomic Energy Agency