IAEA
International Atomic Energy Agency

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

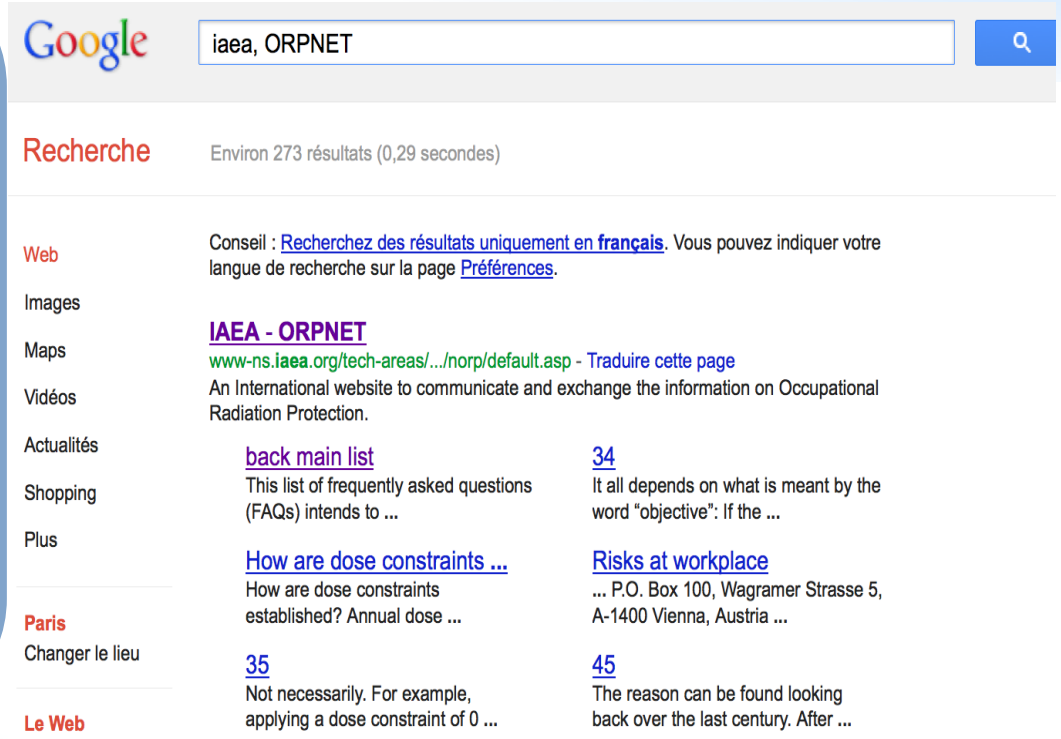
As already presented in the lecture on procedures and structures, the data base will be useful only if:

-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.

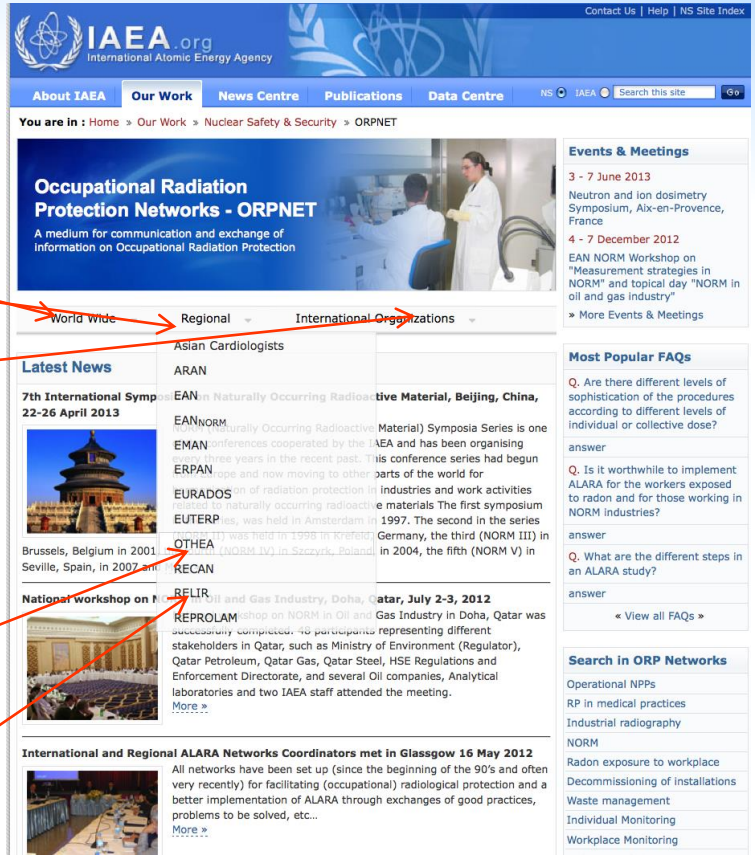


The ORPNET website

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

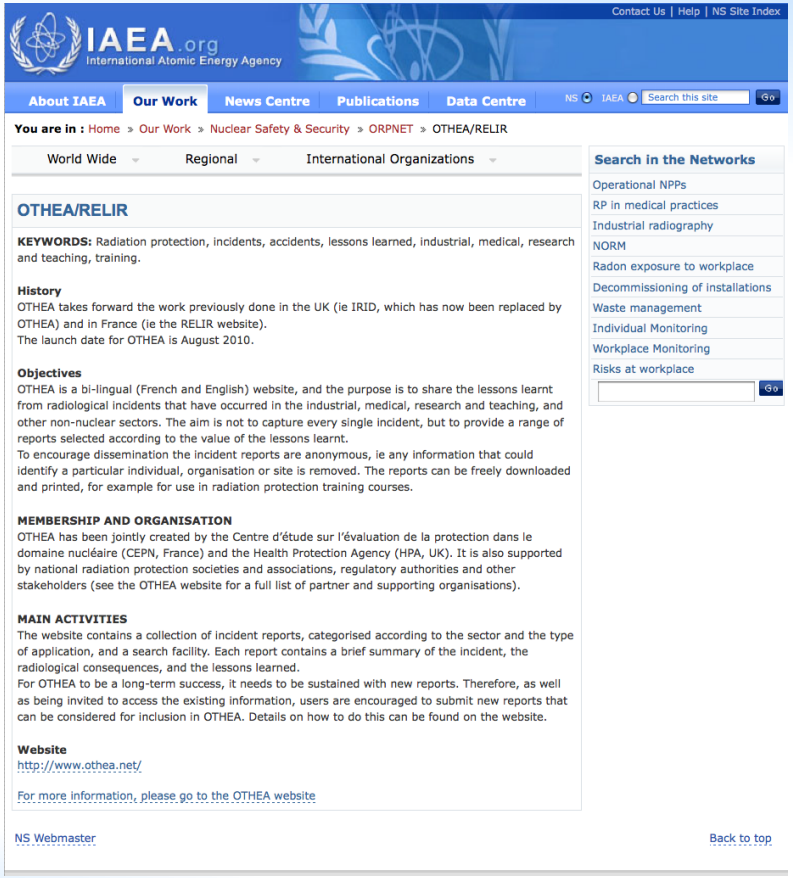


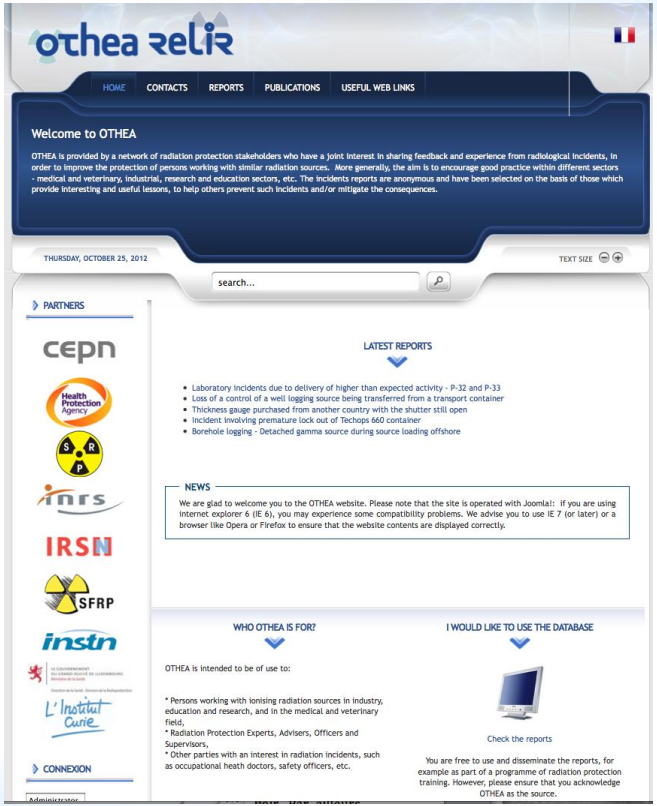
The OTHEA network for learning lessons from incidents and accidents

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

All is made anonymous.

It can used in two languages: English and French.





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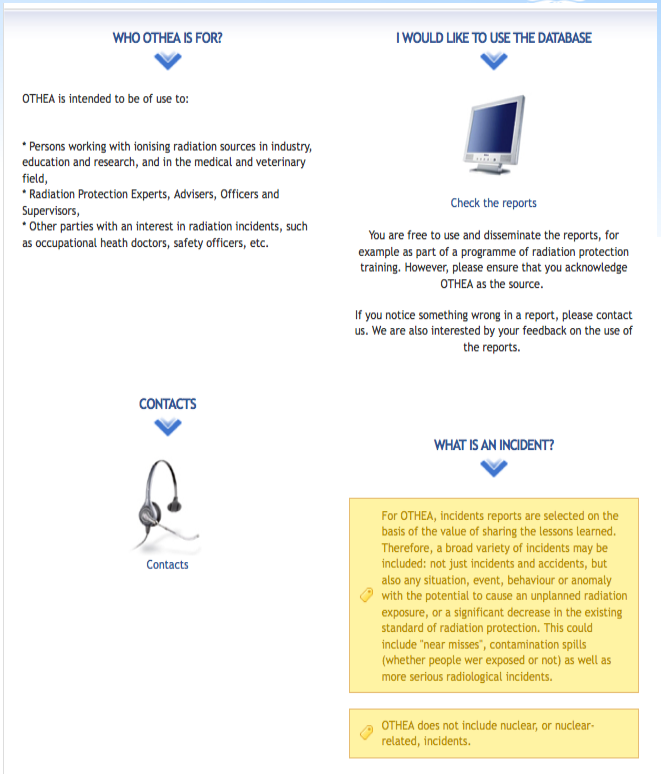

Let’s try going to OTHEA through ORPNET

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