

## Conference or Workshop Item

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# The Radioecology Exchange

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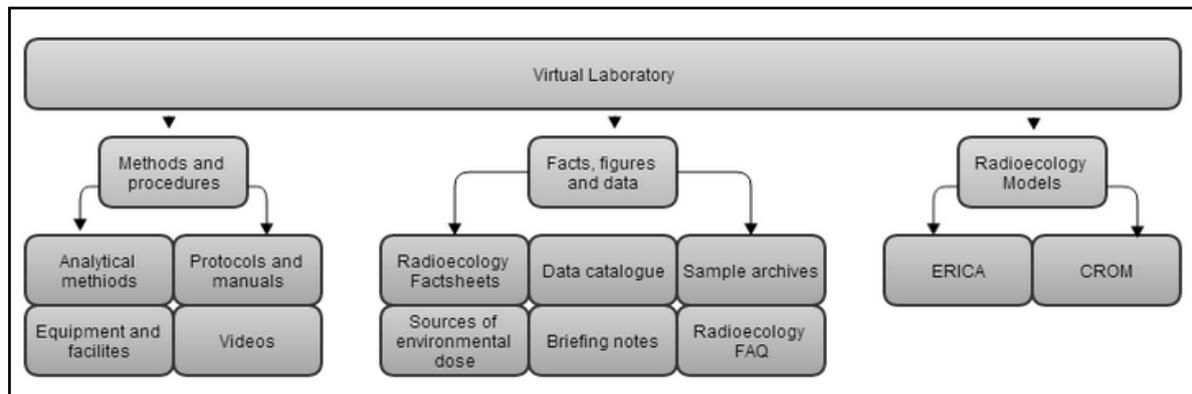
## INTRODUCTION



**Figure 1.** The home page of the Radioecology Exchange website ([www.radioecology-exchange.org](http://www.radioecology-exchange.org))

The **Radioecology Exchange** ([www.radioecology-exchange.org](http://www.radioecology-exchange.org)) (Fig. 1) was created in 2011 under the EU FP7 **STAR** (**S**Tategy for **A**llied **R**adioecology, [www.star-radioecology.org](http://www.star-radioecology.org)) Network of Excellence; (2011-2015). This project aims to integrate radioecological research efforts of European organisations into a sustainable network. In 2013, the EU FP7 **COMET** (**C**Oordination and **i**Mplementation of a pan-European instrument for radioecology (2013-2017); [www.comet-radioecology.org](http://www.comet-radioecology.org)) project commenced; COMET will build upon the work initiated under STAR. The Radioecology Exchange has therefore become the web resource for activities from both projects which will ultimately be maintained by the [European Radioecology Alliance](http://www.er-alliance.org) (ALLIANCE; [www.er-alliance.org](http://www.er-alliance.org)). The Radioecology Exchange is intended to become a ‘gateway’ for information related to European (and wider) radioecological research. Resources that are/will be hosted on the Radioecology Exchange include:

## THE VIRTUAL LABORATORY



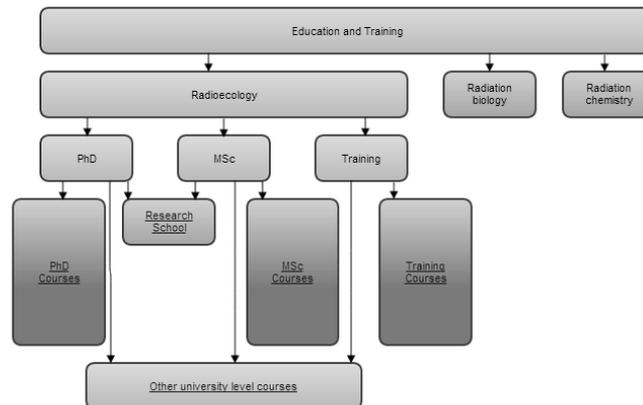
**Figure 2.** Structure of the Virtual Laboratory.

The virtual laboratory (Fig. 2) was created during the STAR Project and will be extended in the future to include information from COMET and ALLIANCE members. It has a dedicated area on the Radioecology Exchange and currently contains:

- Information collated during the STAR project about the facilities held at each partner laboratory and how to access them;
- Descriptions of some analytical methods commonly used in radioecology studies (including, in some cases, video clips and the problems likely to be encountered together with possible solutions);
- Protocols and manuals used during STAR experiments;
- A catalogue of databases held by STAR partners and how to access them;
- Outputs from EURATOM projects – reports and deliverables from many EC funded projects related to radioecology have been compiled to facilitate easy access;
- Factsheets and datasheets that give basic radioecological information for some key radionuclides;
- A list of the sample archives held by STAR partners and how to access them;
- An overview of two assessment models: CROM (human exposure) and ERICA (wildlife assessment);
- Examples which present estimations of absorbed dose to humans and wildlife whilst in typical environmental conditions;
- A collation of radioecology related FAQ;
- Briefing notes that summarise the exposure following the Fukushima accident for the population and in the terrestrial and marine environments.

## TRAINING AND EDUCATION PLATFORM

The Radioecology Exchange website also hosts an overview of education and training course modules within radioecology/environmental radioactivity presently offered by the STAR consortium (Fig. 3). The pages provide access to course modules, curricula, and learning outcomes and recommended pathways to obtain academic qualifications. They also provide access to some training videos, lectures, presentations and the summary notes from STAR training courses, and links to other training and education platforms, such as those for radiochemistry, radiobiology and radiation Protection.



**Figure 3.** The home page of the Training and Education Platform.

The training and education platform contains information about a number of distinct items:

- The European MSc. in Radioecology – this is a tailored two year MSc. programme, Bologna accredited, consisting of obligatory and voluntary stand-alone course modules. As for any European MSc., students are free to make up credits by taking European Credit Transfer and Accumulation System (ECTS) accredited courses at other institutions and collaborating universities (e.g. Aix-Marseille).
- Radioecology MSc. Course Modules – descriptions of the modules currently offered as part of the European MSc., including the STAR flagship course Experimental Radioecology. These modules are open to MSc. students from other programmes.
- Other MSc. courses available from STAR partners – this covers relevant courses that are not currently part of the official Radioecology MSc. Programme, but that might be relevant to any radioecology student.
- PhD. courses – ECTS courses aimed primarily at PhD. students. Most European PhD. students are expected to take some accredited courses as part of their PhD training. These courses are often also relevant and attractive for professional development and training.
- The Radioecology Research School – this is a networking forum aimed primarily at PhD. and Master students in radioecology and other relevant nuclear sciences.
- Professional Training courses – courses aimed primarily at professionals, such as training in radiological environmental protection aimed at regulators, industry and those undertaking assessments on their behalf.
- Links to e-learning tools – useful teaching aids for students and professionals.

### **STRATEGIC RESEARCH AGENDA (SRA)**

To address emerging issues in radioecology within Europe, initially eight (now 16) organisations signed a Memorandum of Understanding (MoU) that formed the European Radioecology Alliance. The MoU states the intentions of ALLIANCE members to integrate a portion of their respective research and development efforts into a trans-national programme that will enhance and sustain European radioecological competences and experimental infrastructures. A major step in this process was the development of a Strategic Research Agenda (SRA) for radioecology.

The [SRA for radioecology](#) is a living document that was initially prepared by members of the STAR consortium in consultation with the ALLIANCE (Hinton et al. 2013). A consultation process was initiated with the wider community, the results of which can be found on the Radioecology Exchange together with the consortium's responses to comments received.

It provides a long term vision of radioecological research needed within Europe and guidance on future collaborative research topics. The document will be regularly updated, initially by COMET, through consultation with the wider radioecological community and relevant stakeholders (e.g. industry, national regulators, and international organisations) in order to reflect new ideas and scientific progress. Through COMET and the ALLIANCE a roadmap and implementation plan will be developed.

The ultimate goal of the SRA is to improve research efficiency and more rapidly advance the science of radioecology by focussing effort and improving collaboration with many organisations the world over.

## **OBSERVATORY SITES**

STAR has identified two contaminated field sites, the Chernobyl Exclusion Zone in Ukraine and Belarus and the Upper Silesian Coal Basin in Poland, where collaborative studies will be focussed to test hypotheses and approaches. Research at these sites in connection with the SRA will improve methods and models, leading to an enhanced understanding of radionuclide behaviour and effects. Research at these sites is planned by the COMET consortium and data, when collated, will be openly available on the Radioecology Exchange.

## **INFORMATION EXCHANGE**

The Radioecology Exchange maintains a News blog which is regularly updated by STAR and COMET partners with details of upcoming conferences, training courses, jobs, studentships and publications by partner institutes, as well as STAR and COMET project outputs, etc.. If you have anything that you want us to publicise please contact us.

Social media accounts have been created: facebook - <https://www.facebook.com/radioecology> and twitter - [@STARradioecology](#). News items are often also publicised on them.

## **WORKING TOGETHER**

The Radioecology Exchange invites scientists to contribute information to be included on the website. Please contact Catherine Barnett [clb@ceh.ac.uk](mailto:clb@ceh.ac.uk) if you would like to provide or receive more information.

## **REFERENCES**

Hinton, T.G., Garnier-Laplace, J., Vandenhove, H., Dowdall, M., Adam-Guillermin, C., Alonzo, F., Barnett, C.L., Beaugelin-Seiller, K., Beresford, N.A., Brown, J., Eyrolle, F., Fevrier, L., Gariel, J-C., Hertel-Aas, T., Horemans, N., Howard, B.J., Ikaheimonen, T., Mora, J.C., Oughton, D., Real, A., Salbu, B., Simon-Cornu, M., Steiner, M., Sweeck, L. and Vives i Batlle, J. 2013. An invitation to contribute to a strategic research agenda in radioecology. *J. Environ. Rad.* 115:73-82.