

## METRODECOM partners

 <b>CESKÝ METROLOGICKÝ INSTITUT</b>	CMI Cesky Metrologicky Institut Brno - Czech Republic
	CEA Commissariat a l'énergie atomique et aux énergies alternatives - France
	ENEA Agenzia Nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile - Italy
	IFIN-HH Institutul National de Cercetare Dezvoltare pentru Fizica si Inginerie Nucleara "Horia Hulubei" - Romania
	European Commission Directorate General Joint Research Centre
	LNE Laboratoire national de métrologie et d'essais - France
	MIKES Mittatekniikan Keskus - Finland
	NPL Management Limited - United Kingdom
	PTB Physikalisch-Technische Bundesanstalt - Germany
	SCK•CEN Studiecetrum Voor Kernenergie - Belgium
	STUK Sateilyturvakeskus - Finland
	ANDRA Agence nationale pour la gestion des déchets radioactifs - France
	EDF Électricité de France S.A. – France
	NUVIA Czech Republic

## JRC Mission

As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.



*Ispira, in the province of Varese (Lombardy region), is a small town on the shore of Lake*

*Maggiore. The city of Milan, about 60 km to the south-east, has good train connections to the Ispira/Varese area. The nearest international airport is Milano Malpensa, 28 km south.*



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## 2<sup>nd</sup> Workshop

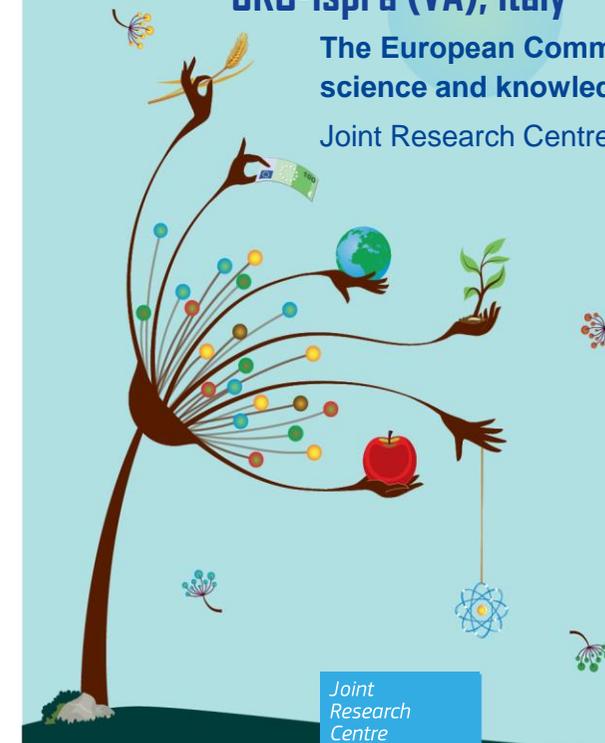


**METRODECOM**  
*Metrology for  
Decommissioning  
Nuclear Facilities*

**11<sup>th</sup> -12<sup>th</sup> October 2016**

**JRC-Ispira (VA), Italy**

**The European Commission's  
science and knowledge service  
Joint Research Centre**



Joint  
Research  
Centre

<b>Title</b>	<b>Metrology for decommissioning nuclear facilities</b>
<b>Hosted by:</b>	<b>European Commission Joint Research Centre Nuclear Safety and Security</b>
<b>Participation conditions and expenditures</b>	Travel and hotel accommodation are self paid. No workshop registration fee.
<b>Registration</b>	<a href="https://web.jrc.ec.europa.eu/rem/">https://web.jrc.ec.europa.eu/rem/</a>
<b>Contact:</b>	<a href="mailto:JRC-Metrodecom-Workshop@jrc.ec.europa.eu">JRC-Metrodecom-Workshop@jrc.ec.europa.eu</a>
<b>Supported by:</b>	

#### JRP ENV54 MetroDecom project

The MetroDecom project addresses the needs of the decommissioning process by the development and implementation of new measurement techniques, instruments, standards and reference materials, and by ensuring knowledge transfer to stakeholders.

The aim is to create within the European Metrology Research Programme (EMRP) innovative metrological solutions and improved methods, and measurement facilities that will have a significant technological and financial impact on the growing demands of the European decommissioning industry.

<http://www.decommissioning-emrp.eu/>

## Welcome to the 2<sup>nd</sup> Workshop organised in the framework of the MetroDecom project at the JRC- Ispra on the 11<sup>th</sup> - 12<sup>th</sup> October 2016.

Nuclear decommissioning is an integral part of the life cycle of nuclear power plants, and a crucial factor in public acceptance of nuclear power generation.

The end of the operational life of the first generation of nuclear power plants must be succeeded by an effective nuclear decommissioning process and a sustainable management of the radioactive and nuclear waste.

Significant reductions in the substantial cost for decommissioning of more than one hundred nuclear facilities in Europe can be achieved by development and implementation of new and more effective assay techniques.

MetroDecom takes the technologies and methodologies developed in the previous EMRP project "Metrology for radioactive waste management" one step further by demonstrating their implementation and performance in real decommissioning situations.

**The aim of the workshop is to facilitate a dialogue among stakeholders, authorities, industrial operators, manufacturers of measurement devices and project partners from the fifteen participating European National Metrology Institutes, agencies and industrial companies.**

### PROGRAMME

- Characterisation of materials present on decommissioning sites
- Measurement facility for waste segregation
- Implementation of free release measurement facility on a decommissioning site (JRC Ispra)
- Monitoring of radioactive waste repositories
- Development of reference materials and standard sources
- Knowledge transfer and industrial application

### Sessions aimed to

Development of methods for the radionuclide characterisation of different types of materials present on the site being decommissioned. The methods include remote mapping of contamination inside nuclear facilities, statistically valid sampling methods and automated in situ radiochemical analysis.



Development of traceable methods for the pre-selection of waste materials prior to measurement for repository acceptance or possible free release.



Development and implementation of the free release measurement facility (FRMF) on a decommissioning site. This will include the implementation and testing of a large-scale industrial prototype FRMF, including eco-friendly shielding, measurement software improvements, scanning of wastes with heterogeneous density, passive neutron counting.



Development and implementation of methods for monitoring radioactive waste repositories. This will involve the construction and field-trial of gas monitoring systems including the prototype of radiocarbon monitoring mid-infrared spectroscope, development of sensors for repository site integrity monitoring, construction of acoustic thermometry testing facility for temperature monitoring, design of a calorimeter for direct measurement of radioactive waste packages thermal power.



Development of reference materials and standard sources for calibration, validation and testing of devices, instruments and procedures developed in the above objectives.

