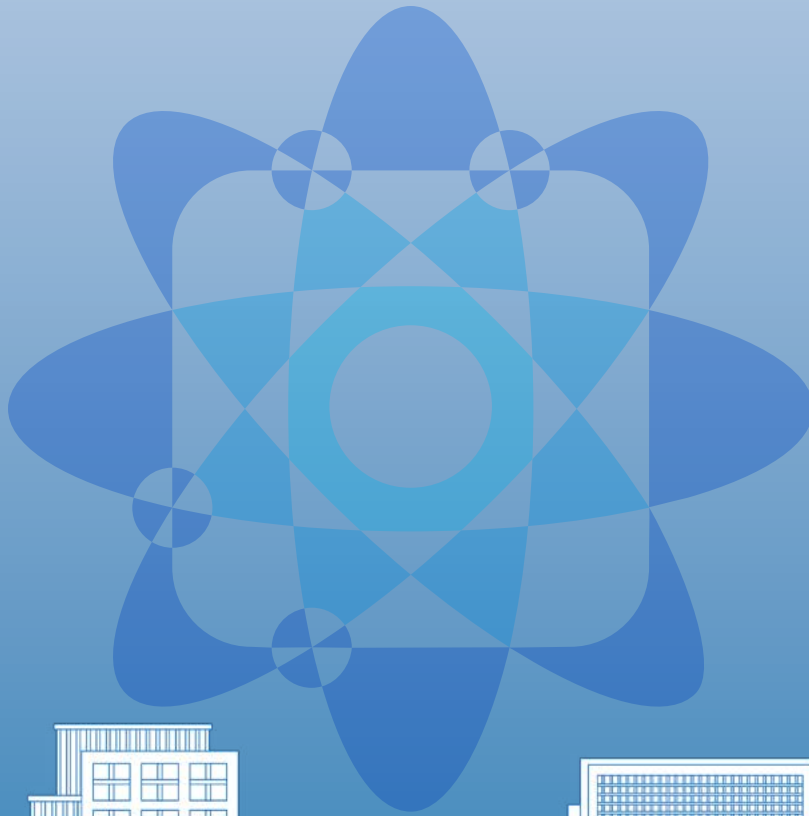




# 5<sup>th</sup> International Conference on Radioecology & Environmental Radioactivity

# PROGRAMME

4 –9 September 2022  
Oslo, Norway





	Sunday 4 Sept	Monday 5 Sept	Tuesday 6 Sept	Wednesday 7 Sept	Thursday 8 Sept	Friday 9 Sept			
		08:00–09:30 Registration							
09:00		Opening Session	Session 1b	Session 2a	PLENARY 3	Session 5c	Session 6a	PLENARY 4	
09:30									
10:00		Coffee	Coffee & Posters		Coffee & Posters	Coffee & Posters	Coffee		
10:30		PLENARY 1	Session 1c	Session 2b	Session 1f	Session 4a	Session 5d	Session 6b	PLENARY 5
11:00									
11:30									
12:00								Closure	
12:30		Lunch	Lunch	Lunch	Lunch	Lunch			
13:00		PLENARY 2	Session 1d	Session 3	Session 5a	Session 4b	Session 7a	ALLIANCE Session	
13:30									
14:00									
14:30		Coffee	Coffee	Coffee	Coffee	Coffee			
15:00	Registration	Session 1a	Session 1e	POSTER VIEWING A	Session 5b	POSTER VIEWING B	Session 7b	POSTER VIEWING C	
15:30									
16:00					IUR Session				
16:30									
17:00									
17:30									
18:00									
18:30									
19:00				Conference dinner					
19:30									
20:00	Informal Reception								
20:30									

## Session themes

- **Session 1:** Radionuclide speciation and ecosystem transfer
- **Session 2:** Radioecology in decommissioning, waste management and disposal and management of nuclear and other legacies
- **Session 3:** Risk characterization and assessment
- **Session 4:** NORM, including technologically enhanced NORM from industry and radon
- **Session 5:** Environmental protection, surveillance and risk management
- **Session 6:** Radiobiological and multiple-stressor effects
- **Session 7:** Emergency preparedness, rehabilitation and management



## Sunday 4 September

16:00	Registration	
16:30		
17:00		
17:30		
18:00		
18:30		
19:00		
19:30		
20:00		Informal Reception
20:30		Informal Reception



## Monday 5 September

08:00–09:30		Registration
09:30–10:00		Opening Session WELCOME ADDRESSES Per STRAND, DSA, Director General and President IUR Jean-Christophe GARIEL, IRSN, Deputy Director General, Health and Environment
10:00–10:30		Astrid LILAND, DSA, Norway Conclusions from the ICRER Online Event in 2021
10:30–11:00		Coffee
11:00–13:00		PLENARY 1 Chairs: Per STRAND and Jean-Christophe GARIEL
11:00–11:20	ROOM A IN PLENUM	Jelena MRDAKOVIC POPIC, DSA, Norway Overview of HERCA initiatives to support common understanding of EU BSS and more effective regulation of radon and NORM at European level
11:20–11:40		Olivier RADA KOVITCH, IRSN, France An overview of some AMORAD project results: Improving models used to predict dispersion and to assess the impact of radionuclides on the environment
11:40–12:00		Joanne BROWN, IAEA Worldwide ingestion doses from natural radionuclides in the diet
12:00–12:20		Mathew JOHANSEN, ANSTO, Australia Global Seafood Dose Assessment 2022
12:20–12:40		Shoji HASHIMOTO, Forestry and Forest Products Research Institute, Japan Dynamics of radiocaesium in forests deposited by the Fukushima Daiichi Nuclear Power Plant accident—long-term monitoring and modelling approaches
12:40–13:00		Valerii KASHPAROV, Ukrainian Institute of Agricultural Radiology (UIAR) of Nubip of Ukraine (recorded presentation) Clean feed and Prussian Blue application as a countermeasure to reduce the Sr-90 and Cs-137 levels in fish from contaminated lakes
13:00–14:30		
14:30–16:00		PLENARY 2 Chairs: Rodolphe GILBIN and Carmel MOTHERSILL
14:30–15:00	ROOM A IN PLENUM	Jan PENTREATH, Plymouth Marine Laboratory, UK Radioecology and radiological protection: research needs and priorities
15:00–15:20		Marc-Andre GONZE, IRSN, France A comprehensive analysis of short to long-term dynamics of atmospheric radiocaesium in forests contaminated by Fukushima and Chernobyl fallouts
15:20–16:00		IUR V.I. Vernadsky Award and Lecture
16:00–16:30		Coffee



## Monday 5 September

### SESSION 1a

#### RADIONUCLIDE SPECIATION AND ECOLOGICAL TRANSFER

Chairs: Brit SALBU and Laureline FÉVRIER

Time	Room	Speaker	Topic
16:30–16:50	ROOM A IN PLENUM	Trevor STOCKI, Health Canada, Canada	Survey of Cs-137 in bird species harvested across Canada
16:50–17:10		Caroline LICOUR, Nuclear, Environmental & Medical Physics Applied Research Laboratory, Belgium	Assessment of radio cesium in mosses and lichens and geographic distribution using GIS
17:10–17:30		Masabumi KOMATSU, Forestry and Forest Products Research Institute, Japan	Analysis of <sup>137</sup> Cs concentration in wild mushrooms and plants using radioactivity data brought by residents
17:30–17:45		Guillaume PÉDEHONTAA-HIAA, Lund University, Sweden	Estimation of releases of radio-cesium and polonium by combustion of peat and soil from boreal forest environment
17:45–18:00		Natalia SEMIOSHKINA, R.e.m. Gbr, Germany	Soil - Plant Transfer of Radionuclides in Arid Environments
18:00–18:15		Prasoon RAJ, Emirates Nuclear Technology Center, Khalifa University, Abu Dhabi, UAE	Soil-to-Plant Radionuclide Transfer Factor Experiments in the UAE
18:15–18:30		Andra-Rada HARBOTTLE, IAEA	New IAEA Coordinated Research Project (CRP) on Transfer of Radionuclides in Arid and Semi-Arid Environments for Radiological Environmental Impact Assessment



## Tuesday 6 September

ROOM A (Parallel session)		ROOM B (Parallel session)	
<b>SESSION 1b</b> <b>RADIONUCLIDE SPECIATION AND ECOLOGICAL TRANSFER</b> <b>Chairs: Mathew JOHANSEN and Hans Christian TEIEN</b>		<b>SESSION 2a</b> <b>RADIOECOLOGY IN DECOMMISSIONING, WASTE MANAGEMENT AND DISPOSAL &amp; MANAGEMENT OF NUCLEAR AND OTHER LEGACIES</b> <b>Chairs: Jelena MRDAKOVIC POPIC and Graham SMITH</b>	
<b>09:00–09:20</b> Frederic COPPIN, IRSN, France (Bio)available fraction of <sup>137</sup> Cs in response to its input forms into Fukushima forest soils		<b>09:00–09:20</b> Fredrik LIDMAN, Swedish University of Agricultural Sciences, Sweden Linking Kd values and biogeochemistry - the case of Mo-93 in a coastal Swedish landscape	
<b>09:20–09:40</b> Margot VANHEUKELOM, SCK-CEN, Belgium Can the radiocaesium soil-to-plant transfer be predicted by the soil mineralogy?		<b>09:20–09:40</b> Peter SAETRE, SKB, Sweden Uncertainties in exposure area in safety analysis—lessons learned from biosphere modelling in the evaluation of a repository for long-lived low- and intermediate-level radioactive waste	
<b>09:40–10:00</b> Laureline FÉVRIER, IRSN, France Can geochemical speciation models help to understand <sup>137</sup> Cs phytoavailability in soils?		<b>09:40–10:00</b> Yves THIRY, ANDRA, France Assessing the recycling of chlorine and its long-lived <sup>36</sup> Cl isotope in terrestrials' ecosystems through dynamic modelling	
<b>10:00–10:30</b> Nick BERESFORD, UKCEH, UK (recorded presentation) A simple approach to better estimates of Sr-90 concentrations in crops		<b>10:00–10:15</b> Ryk KLOS, Aleksandria Sciences Ltd, UK Site characterisation for waste disposal dose assessment: a case study	
		<b>10:15–10:30</b> Astrid BARKLEIT, Helmholtz-Zentrum Dresden-Rossendorf, Institute of Resource Ecology, Germany Activation determination for decommissioning of nuclear power plant	
<b>10:30–11:00 COFFEE &amp; POSTERS</b>			



## Tuesday 6 September

SESSION 1c RADIONUCLIDE SPECIATION AND ECOLOGICAL TRANSFER Chairs: Mathew JOHANSEN and Hans Christian TEIEN		SESSION 2b RADIOECOLOGY IN DECOMMISSIONING, WASTE MANAGEMENT AND DISPOSAL & MANAGEMENT OF NUCLEAR AND OTHER LEGACIES Chairs: Paul DALE and Ulrik KAUTSKY	
ROOM A (Parallel session)	<b>11:00–11:20</b> Hugo LEPAGE, IRSN, France Prediction of dissolved and particulate cesium-137 concentrations in the Rhône River using machine learning	ROOM B (Parallel session)	<b>11:00–11:20</b> Nick BERESFORD, UKCEH, UK (presented by Mike Wood) Wildfires in the Chornobyl Exclusion Zone
	<b>11:20–11:40</b> Sylvia GEORG, Hubert Curien Pluridisciplinary Institute (IPHC), France Speciation and mobility of uranium (VI) in natural waters: Effect of organic matter		<b>11:20–11:40</b> Madison WILLIAMS-HOFFMAN, Edith Cowan University, Australia Distribution of anthropogenic radionuclides <sup>90</sup> Sr, <sup>137</sup> Cs, <sup>238</sup> Pu, <sup>239,240</sup> Pu and <sup>241</sup> Am in marine sediments due to 1950's nuclear weapons testing at the Montebello Islands, Western Australia
	<b>11:40–12:00</b> Nathan BODEREAU, IRSN, France Nuclear industry releases play a role in the riverine Carbon-14 cycle		<b>11:40–12:00</b> Mike WOOD, University of Salford, UK Meaningful and objective inference in radioecological field studies
	<b>12:00–12:20</b> Alexei KONOPLEV, Fukushima University, Japan Long-term dynamics of radionuclides in the soil-water environment: Chernobyl and Fukushima		<b>12:00–12:20</b> Marie BOURGEOUX-GOGET, Institute for Energy Technology (IFE), Norway Geostatistical mapping of two nuclear sites in Norway
	<b>12:20–12:40</b> Ole Christian LIND, NMBU, Norway Whole body bio-imaging of uranium and cerium in the nematode <i>Caenorhabditis elegans</i> using synchrotron based nano X-ray fluorescence analysis		<b>12:20–12:40</b> Russell WALKE, Quintessa Limited, UK Guidance on biosphere modelling for radioactive waste disposal: The BIOMASS methodology
<b>13:00–14:30 LUNCH</b>			



## Tuesday 6 September

Tuesday 6 September			
<b>ROOM A</b> (Parallel session)	<b>SESSION 1d</b> <b>RADIONUCLIDE SPECIATION AND ECOLOGICAL TRANSFER</b> <b>Chairs: Trevor STOCKI and Mike WOOD</b>	<b>ROOM B</b> (Parallel session)	<b>SESSION 3</b> <b>RISK CHARACTERIZATION AND ASSESSMENT</b> <b>Chairs: Russell WALKE and Anca MELINTESCU</b>
	<b>14:30–14:50</b> Isak HOLMERIN, Stockholm University, Sweden Trophic transfer of radioactive micronutrients in a shallow benthic food web		<b>14:30–14:50</b> Knut Erik TOLLEFSEN, Norwegian Institute for Water Research (NIVA), Norway Cumulative hazard and risk assessment of multiple stressors
	<b>14:50–15:10</b> Danielle HILL, Griffith University, Australia Bioaccumulation and biodistribution of legacy contaminants in metamorphosing tadpoles		<b>14:50–15:10</b> Jaqueline CALABRIA, IAEA The IAEA Programme on Methods for Radiological and Environmental Impact Assessment (MEREIA): the new approach
	<b>15:10–15:30</b> Hans-Christian TEIEN, CERAD/NMBU, Norway Transfer of I-129 to fish within the Fukushima and Chernobyl exclusion zones		<b>15:10–15:30</b> Shulan XU, Xu Environmental Consulting AB, Sweden Development of a model for radionuclide transport in streams for biosphere assessment purpose
	<b>15:30–15:45</b> Magali SCHIANO DI LOMBO, IRSN, France Tritiated thymidine internalization in zebrafish embryo and larvae: how do microdosimetry and experimental processes complete each other?		<b>15:30–15:45</b> Ian BYRNES, NMBU, Norway New Insights into Uranium Toxicokinetics in Model Organism <i>Daphnia magna</i> via Micro and Nanoscale Imaging Techniques
<b>15:45–16:00</b> Isabelle VAN DYCK, SCK-CEN, Belgium Phytoremediation of Co and Cs using <i>Lemna minor</i> : Incorporation in growth model and differentiation of radio- and chemo-toxicity	<b>16:00–16:30 COFFEE</b>		





## Tuesday 6 September

<b>ROOM A</b> (Parallel session)	<b>SESSION 1e</b> <b>RADIONUCLIDE SPECIATION AND ECOLOGICAL TRANSFER</b> <b>Chairs: Trevor STOCKI and Mike WOOD</b>	<b>POSTER AREA</b>	<b>16:30–17:15</b> <b>Poster Viewing Session A</b> For posters related to Session Themes 2, 3 & 4
	<b>16:30–16:45</b> Philipp STEINMANN, Federal Office of Public Health, Switzerland Be-7 and Na-22 trends in ground level air		
	<b>16:45–17:00</b> Olivier MASSON, IRSN, France Airborne radioiodine speciation: A study in temporal variation and influencing environmental parameters		
	<b>17:00–17:15</b> Deo SOURABIE, IRSN, France Determination of the scavenging coefficients of gaseous and particulate chlorine-36 by rain		
<b>19:00–23:00 CONFERENCE DINNER</b>			



## Wednesday 7 September

ROOM A - IN PLENUM

### PLENARY 3

Chairs: Joanne BROWN and David COPPLESTONE

#### 09:00–09:20

Young Investigators' Award

Sarah DONAHER, Clemson University, USA

Toxicokinetics and toxicodynamics of military-derived radium in an estuarine sentinel species

Andrian IAVNIUK, National Aviation University, Ukraine (recorded presentation)

Seedling growth processes of the common reed from the Chernobyl Exclusion Zone after additional acute X-ray irradiation

#### 09:20–09:40

Brit SALBU, CERAD/NMBU, Norway

Why should radioactive particles not be ignored?

#### 09:40–10:00

Carmel MOTHERSILL, McMaster University, Canada

Towards a holistic approach to protection of inhabitants of contaminated environments: the role of non-targeted effects

#### 10:00–10:15

Lindis SKIPPERUD, CERAD/NMBU, Norway

Revised model of iodine transfer to dairy cow's milk

#### 10:15–10:30

Dina OKHRIMCHUK, IRSN, France

Long-term biogeochemical cycling of radiocesium in French forests: field monitoring and modelling

10:30–11:30 POSTER SESSION (Poster Area) for all Session Themes



## Wednesday 7 September

SESSION 1f		SESSION 4a	
<b>RADIONUCLIDE SPECIATION AND ECOLOGICAL TRANSFER</b> Chairs: Lindis SKIPPERUD and Frederic COPPIN		<b>NORM, INCLUDING TECHNOLOGICALLY ENHANCED NORM FROM INDUSTRY AND RADON</b> Chairs: Laureline FÉVRIER and Benjamin ZORKO	
ROOM A (Parallel session)	<b>11:30–11:50</b> Estela REINOSO-MASET, NMBU, Norway Establishing a triple quadrupole ICP-MS analysis methodology for the determination of <sup>90</sup> Sr in biological samples	ROOM B (Parallel session)	<b>11:30–11:50</b> Tom CRESSWELL, ANSTO, Australia Assessing the risk of NORM scale to marine biota from offshore oil and gas decommissioning
	<b>11:50–12:10</b> Tobias WEISSENBORN, Institute for Radioecology and Radiation Protection, LUH, Germany How to measure the bioavailability of radionuclides from individual «Hot-Particles»		<b>11:50–12:10</b> Jelena MRDAKOVIC POPIC, DSA, Norway Developing methodology for information collection for a systematic overview of NORM exposure sites
	<b>12:10–12:30</b> Mila PELKONEN, NMBU, Norway Environmental impact of radionuclides and trace elements from acid forming alum shale		<b>12:10 –12:30</b> Joan SERRA-VENTURA, Universitat De Barcelona, Spain Elucidating the soil properties governing the interaction of radium in soils
	<b>12:30–12:45</b> Séléna FERRERES, Hubert Curien Pluridisciplinary Institute (IPHC), France Sorption and desorption of organic matter and uranium from wetland soils: a molecular scale approach.		<b>12:30–12:45</b> Juan MANTERO, University of Seville, Spain Radioecology study of a former feldspar mine in Sweden
			<b>12:45–13:00</b> Nazanin LOVE, Hasselt University, Belgium Marketing and Societal Challenges of Alternative Cementitious Binders Made with NORM-Contained By-products
13:00–14:30 LUNCH			



## Wednesday 7 September

SESSION 5a		SESSION 4b	
ENVIRONMENTAL PROTECTION, SURVEILLANCE AND RISK MANAGEMENT		NORM, INCLUDING TECHNOLOGICALLY ENHANCED NORM FROM INDUSTRY AND RADON	
Chairs: Deborah OUGHTON and Olivier MASSON		Chairs: Jelena MRDAKOVIC POPIC and Tom CRESSWELL	
ROOM A (Parallel session)	<b>14:30–14:50</b> Floris ABRAMS, SCK-CEN, Belgium Optimizing remediation of spatially dispersed agricultural parcels impacted by a nuclear emergency: A spatio-temporal clustering approach for polygon objects under an annual budget constraint	ROOM B (Parallel session)	<b>14:30–14:50</b> Hilde Elise HELDAL, Institute of Marine Research, Norway Radium-226 and radium-228 in seafloor sediments of the Norwegian continental shelf
	<b>14:50–15:10</b> Mike WOOD, University of Salford, UK Disturbance of contaminated soil by military vehicles does not explain anomalous radiation dose rates in the Chernobyl Exclusion Zone		<b>14:50–15:10</b> Benjamin ZORKO, Jožef Stefan Institute, Slovenia Estimating doses of radon and its progeny using TL dosemeters
	<b>15:10–15:30</b> Olena KASHPAROVA, Ukrainian Institute of Agricultural Radiology (UIAR) of NUBiP of Ukraine Model experiments to support field observations on uptake of Cs-137 in Prussian carp ( <i>Carassius gibelio</i> ) (recorded presentation)		<b>15:10–15:30</b> Jan Steinar RØNNING, Geological Survey of Norway, Norway Radon problems in Kinsarvik, Western Norway—revision of the geological model.
	<b>15:30–15:45</b> Erica MAREMONTI, CERAD/NMBU, Norway Deposition of energy leads to population decline via impaired meiosis in <i>Caenorhabditis elegans</i>		
	<b>15:45–16:00</b> Anca MELINTESCU, «Horia Hulubei» National Institute for Physics and Nuclear Engineering, Romania OBT production in crops at night including leaf protein turnover		
16:00–16:30 COFFEE			



## Wednesday 7 September

<b>ROOM A</b> (Parallel session)	<b>SESSION 5b</b> <b>ENVIRONMENTAL PROTECTION, SURVEILLANCE AND RISK MANAGEMENT</b> <b>Chairs: Deborah OUGHTON and Olivier MASSON</b>	<b>POSTER AREA</b>	<b>16:30–17:30</b> <b>POSTER VIEWING Session B</b> Posters related to Session Themes 1 and 7
	<b>16:30–16:50</b> Karolina STARK, SSM, Sweden A regulator's view on radiation protection of the environment		
	<b>16:50–17:10</b> Joanne BROWN, IAEA Current approaches for assessment of the impact of radioactive discharges to the environment: Update of IAEA Safety Report Series 19		
	<b>17:10–17:30</b> Fernando RIBEIRO, Institute of Radiation Protection and Dosimetry, Brazil Towards the atlas of radioactivity in Brazilian soils		
	<b>17:30–17:45</b> Andrey VLASENKO, Baltic Scientific Instruments, Latvia Advanced monitors for radiation early warning systems		



## Thursday 8 September

SESSION 5c		SESSION 6a	
ENVIRONMENTAL PROTECTION, SURVEILLANCE AND RISK MANAGEMENT		RADIOBIOLOGICAL AND MULTIPLE STRESSOR EFFECTS	
Chairs: Justin GWYNN and Geert BIERMANS		Chairs: Clare BRADSHAW and Ole Christian LIND	
ROOM A (Parallel session)	<b>09:00–09:20</b> Amy MACINTOSH, Macquarie University, Australia Application of the ERICA Tool for assessing risk to marine biota from NORM-contaminated products from decommissioned offshore subsea oil and gas pipelines.	ROOM B (Parallel session)	<b>09:00–09:20</b> Nele HOREMANS, SCK-CEN, Belgium Effects of long term exposure of plants to radiation in nuclear accident affected areas: possible role of phytohormones and DNA methylation in changes in plant development
	<b>09:20–09:40</b> Jingjing WANG, Technical University of Denmark, Denmark Advanced photocatalytic technology for rapid in-situ concentration of uranium from seawater for marine radioactivity investigation and oceanic tracer study		<b>09:20–09:40</b> Dag Anders BREDE, CERAD/NMBU, Norway Deciphering life-stage and cellular radiosensitivity of <i>C. elegans</i>
	<b>09:40–10:00</b> Agustín CEREZO FERNÁNDEZ, Universitat Rovira i Virgili, Spain Method to automatically obtain the activity concentration of artificial isotopes for real time gamma spectrometry networks		<b>09:40–10:00</b> Jorunn Elisabeth OLSEN, NMBU, Norway Sensitivity to gamma radiation of embryogenic cells of the conifer Norway spruce ( <i>Picea abies</i> )
	<b>10:00–10:20</b> Alexander ULANOWSKI, IAEA, Austria IAEA-coordinated research for advancing dosimetry for biota in terrestrial environments		<b>10:00–10:20</b> Payel BHATTACHARJEE, NMBU, Norway Radio-sensitivity in plants: A comparative overview of differential responses to gamma radiation in radiotolerant <i>A. thaliana</i> and radiosensitive conifer Norway spruce ( <i>Picea abies</i> )
10:30–11:00 COFFEE AND POSTERS			



## Thursday 8 September

SESSION 5d		SESSION 6b	
ENVIRONMENTAL PROTECTION, SURVEILLANCE AND RISK MANAGEMENT		RADIOBIOLOGICAL AND MULTIPLE STRESSOR EFFECTS	
Chairs: Pål ANDERSSON and Alexander ULANOWSKI		Chairs: Nele HOREMANS and Clare BRADSHAW	
ROOM A (Parallel session)	<b>11:00–11:20</b> Justin SMITH, UK Health Security Agency, UK Assessment of dose rates to non-human biota from Sellafield discharges using PC-CREAM	ROOM B (Parallel session)	<b>11:00–11:20</b> Selma HUREM, CERAD/NMBU, Norway Blood biochemistry, histology, and metabolomics in Chernobyl Northern Pike ( <i>Esox Lucius</i> )
	<b>11:20–11:40</b> Geert BIERMANS, Federal Agency for Nuclear Control, Belgium 25 years of online monitoring in Belgium: lessons, perspectives and potential		<b>11:20–11:40</b> Erica MAREMONTI, CERAD/NMBU, Norway Metabolic changes induced by ionizing radiation exposure in Atlantic salmon alevins ( <i>S. salar</i> )
	<b>11:40–12:00</b> Muiyiwa OROSUN, University of Ilorin, Nigeria Soil-to-plant transfer of <sup>40</sup> K, <sup>238</sup> U and <sup>232</sup> Th and radiological risk assessment of selected mining sites in Nigeria using Monte Carlo simulation		<b>11:40–12:00</b> Gustavo T. DUARTE, SCK-CEN, Belgium The transcriptome analysis of <i>Capsella bursa-pastoris</i> from the Chernobyl exclusion zone reveals a unique profile for adaptation to chronic ionizing radiation
	<b>12:00–12:20</b> Hemendra MULYE, Canadian Nuclear Safety Commission, Canada Assessment of radiological dose rates to aquatic organisms in the vicinity of Canadian nuclear power plants located near two Great Lakes		<b>12:00–12:15</b> Yutthana TUMNOI, Office of Atoms for Peace, Thailand A Decade after the Fukushima-Daiichi Nuclear Accident; Have the marine ecosystem and the seafood consumers in Thailand been radiologically impacted by <sup>137</sup> Cs?
13:00–14:30 LUNCH			



## Thursday 8 September

ROOM A (Parallel session)		ROOM B (Parallel session)	
<b>SESSION 7a</b> <b>EMERGENCY PREPAREDNESS, REHABILITATION AND MANAGEMENT</b> <b>Chairs: Blake ORR and Carol ROBINSON</b>		<b>ALLIANCE SESSION</b> <b>«Radioecology ALLIANCE 10 YEARS»</b> <b>Chair: Hildegard VANDENHOVE</b>	
<b>14:30–14:50</b> Erik BERGE, Norwegian Meteorological Institute, Norway Uncertainties in short term prediction of atmospheric dispersion of radionuclides. A case study of a hypothetical accident in a nuclear floating power plant off the West coast of Norway		<b>14:30–14:50</b> Hildegard VANDENHOVE, President of ALLIANCE, SCK-CEN, Belgium Celebrating 10 years ALLIANCE	
<b>14:50–15:10</b> Paul MCGINNITY, IAEA Verification of Japan's measurement data related to radioactive releases from the Fukushima Daichi Nuclear Power Station		<b>14:50–15:10</b> Nele HOREMANS, SCK-CEN, Belgium Chernobyl & Fukushima radioecological observatories: contributions to advances in radioecology	
<b>15:10–15:30</b> Daniel HABER, US Department of Energy, USA US AMS–Norwegian DSA Joint Aerial Survey		<b>15:10–15:30</b> Deborah OUGHTON, CERAD/NMBU, Norway Ecosystem services: a role in radioecology	
<b>15:30–15:45</b> Mats ISAKSSON, University of Gothenburg, Sweden Modelling the life-time effective dose to a population from fallout after a nuclear power plant accident		<b>15:30–16:00</b> ALLIANCE Poster Awards	
<b>15:45–16:00</b> Govert DE WITH, NRG, Netherlands Harmonisation of methods for the radiological impact assessment of aquatic releases to the water system in the Low Countries			
<b>16:00–16:30 COFFEE</b>			





## Thursday 8 September

<b>ROOM A</b> (Parallel session)	<b>SESSION 7b</b> <b>EMERGENCY PREPAREDNESS, REHABILITATION AND MANAGEMENT</b> <b>Chairs: Blake ORR and Paul MCGINNITY</b>	<b>POSTER AREA</b>	<b>16:30 – 17:30</b> <b>POSTER VIEWING Session C</b> Posters related to Session Themes 5 & 6
	<b>16:30–16:50</b> Yevgeniya TOMKIV, CERAD/NMBU, Norway Embracing the complexities: the value of listening to public in nuclear emergency preparedness		
	<b>16:50–17:10</b> Magne SIMONSEN, Norwegian Meteorological Institute, Norway Challenges in radionuclide transport prediction modeling in coastal and oceanic environments		
	<b>17:10–17:30</b> Samantha WATSON, UK Health Security Agency, UK Findings from literature reviews concerning non-radiological health impacts of protective actions used in radiological emergencies		
	<b>17:30 – 17:45</b> Christopher RÄÄF, Lund University, Malmö, Sweden Restoring areas after a radioactive fallout: A multidisciplinary study on decontamination		



## Friday 9 September

09:00–10:30	ROOM A IN PLENUM	<b>PLENARY 4</b> <b>Chairs: Hildegarde VANDENHOVE and François BESNUS</b>
09:00–09:20		Neil WILLEY, University of the West of England, UK Ecological Insights for Environmental Protection, Surveillance and Risk Management of Radionuclides in the Environment
09:20–09:40		Justin GWYNN, DSA, Norway The status of the sunken nuclear submarine Komsomolets in the Norwegian Sea
09:40–10:00		Lauri PARVIAINEN, POSIVA, Finland Site characterisation for biosphere modelling in a safety case for DGR of spent nuclear fuel
10:00–10:30		Deborah OUGHTON and Brit SALBU, CERAD, Norway Ten years of CERAD: lessons learned and future prospects
10:30–11:00	COFFEE	
11:00–13:00	ROOM A IN PLENUM	<b>PLENARY 5</b> <b>Chairs: Astrid LILAND and Laureline FÉVRIER</b>
11:00–11:20		Hildegarde VANDENHOVE, SCK-CEN, Belgium MEENAS hand and hand with PIANOFORTE the European Partnership in European Radiation Protection Research
11:20–11:40		Knut Erik TOLLEFSEN, Norwegian Institute for Water Research (NIVA), Norway Adverse Outcome Pathway: A Path towards better Data Consolidation and Global Co-ordination of Radiation Research
11:40–12:10		Kathryn HIGLEY, Oregon State University, USA (recorded presentation) The future of radioecology education: does big data play a role?
12:10–12:40		Carol ROBINSON, DSA, Norway Highlights from ICRER 2022
12:40–13:00		<b>CLOSE OF CONFERENCE</b> <b>Per STRAND, DSA, Director General and President IUR</b> <b>François BESNUS, IRSN, Director of the Environment Department</b>



## POSTERS

First Name	Last Name	Organization	Country	Paper Title	Poster Board	Related Session	Poster Viewing
Tomas	ERIKSEN	Institute for Energy Technology	Norway	Geostatistical mapping of a contaminated riverbank in Norway	34	2	A
Dietmar	ROTH	Ages - Dept. Radon and Radioecology	Austria	Long-term monitoring of anthropogenic radionuclides in the Austrian environment	36	2	A
Jungjoon	LEE	Korea Institute of Nuclear Safety	South Korea	Verification Tool of Investigation Result by MARSSIM Sign Test and WRS Test for Residual Radioactivity of Building and Site at the Decommissioning Completion Stage of Nuclear Facilities	37	2	A
Anna	CWANЕК	Institute of Nuclear Physics, Polish Academy of Sciences	Poland	The comprehensive study of radioactivity in the western Arctic environment	31	3	A
Samuel	HANCOCK	McMaster University	Canada	Investigating Time and Low Radiation Dose Dependence of Radiation Induced Biological Effects	32	3	A
Edyta	ŁOKAS	Institute of Nuclear Physics Pas	Poland	Fallout radionuclides in cryoconite from the Northern and Southern Hemispheres	33	3	A
Ansumali	ASHISH	Sharda University, Greater Noida	India	Assessment of Radiological and Chemical doses from the retention and exposure of Uranium in different organs and tissues	58	3	A
Sohan	CHOUHAN	Canadian Nuclear Laboratories (CNL)	Canada	An effort to make future Canadian Nuclear Power Plant and mining site Environmental Risk Assessments consistent - Developing a Canadian database of parameter values required for assessing non-human biota doses	59	3	A
Rie	SAITO	Fukushima Prefectural Centre for Environmental Creation	Japan	Relationships between genetic population structure of wild boar using DNA analysis in Fukushima Prefecture including evacuation zone and caesium-137 activity concentration in their body	60	3	A
Hallvard	HAANES	DSA	Norway	Literature review: multispecies cosm experiments suitability in radioecology	64	3	A
Danielle	BEATON	CNL	Canada	Environmental DNA as a Tool for Biomonitoring and Mapping Metals Cycling in Mine Impacted Water	18	4	A
Eckehard	KLEMT	Ravensburg-Weingarten University	Germany	Transport of natural gas in pipelines and natural occurring radioactivity	21	4	A
Josephine	KRISTENSEN	Technical University of Denmark	Denmark	Determination of <sup>210</sup> Po in soil by alkaline fusion decomposition followed by alpha spectrometry measurement for investigation its environmental behaviours	22	4	A
Juan	MANTERO	University of Seville	Spain	Coal Mining Legacy and NORM radionuclides in a Restored Area in Southern Spain	23	4	A
Nona	MOVSISYAN	Center for Ecological-Noosphere Studies of NAS RA	Armenia	Temporal Variations of Radionuclides Distribution in Soils of Mount Aragats, Armenia	24	4	A
Ana	NOGUERA	Centro Universitario Regional Del Este, Universidad De La República	Uruguay	Assessment of natural radionuclides in phosphate fertilizers marketed in Uruguay	25	4	A
Atsile	OCWELWANG	NNR	South Africa	Radon measurements in private homes in the KOSH gold mining areas (Klerksdorp, Orkney & Stilfontein)	26	4	A



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First Name	Last Name	Organization	Country	Paper Title	Poster Board	Related Session	Poster Viewing
Francis	OTOO	Ghana Atomic Energy Commission	Ghana	Studies of seasonal variation of indoor radon concentration in Ghana Atomic Energy Commission	27	4	A
Dídac	SERRAÏMA	Universitat de Barcelona	Spain	Examining soil Kd (U) for short- and long-term assessments	28	4	A
Miquel	VIDAL	Universitat de Barcelona	Spain	Testing barium as chemical analogue for the assessment of radium behaviour in soils	29	4	A
Pål	ANDERSSON	Swedish Radiation Safety Authority	Sweden	Cesium-137 in Swedish wildboar - an emerging concern as the wildboar population spreads into new regions.	38	1	B
Jonas	ANDRESEN	NMBU	Norway	Radiocaesium transfer from reindeer meat to the blowfly <i>Calliphora vicina</i> and the parasitoid wasp <i>Nasonia vitripennis</i>	39	1	B
Ana	NOGUERA	Universidad de la Republica de Uruguay	Uruguay	Distribution of <sup>210</sup> Po in the trophic levels of a brackish lagoon in Uruguay	40	1	B
Astrid	BARKLEIT	Helmholtz-Zentrum Dresden-Rossendorf, Institute of Resource Ecology	Germany	RADEKOR: Speciation and transfer of radionuclides in the human organism especially taking into account decorporation agents – a joint project	41	1	B
Daisy	HUNT	UWE/CEFAS	United Kingdom	Taxonomic Patterns in Brown Seaweeds to Enrich Environmental Monitoring of Radionuclides	44	1	B
Masashi	KIHANA	Institute For Environmental Sciences	Japan	Effect of Ca in rooting medium on the shoot Cs concentration of <i>Arabidopsis thaliana</i> and <i>Oryza sativa</i>	46	1	B
Sari	PEURA	SKB	Sweden	Element concentrations in crops are more dependent on plant species than soil concentrations - the concentration ratio concept revisited	49	1	B
Beate	RIEBE	Institute of Radioecology and Radiation Protection / Leibniz University Hannover	Germany	A microscopic view into transport and transfer behavior of long-lived radionuclides along the pathway groundwater - soil - surface – plant (TRANS-LARA)	50	1	B
Teresia	SVENSSON	Linköping University, Department of Thematic Studies - Environmental Change	Sweden	Cl distribution in soil and vegetation in boreal habitats along a moisture gradient from upland forest to lake margin wetlands	51	1	B
Hans-Christian	TEIEN	CERAD/NMBU	Norway	Uranium in fish feed and transfer to farmed Atlantic salmon ( <i>Salmo salar</i> L.)	53	1	B
Hans-Christian	TEIEN	CERAD/ NMBU	Norway	Tracing <sup>90</sup> Sr using <sup>84</sup> Sr as a surrogate: Method development using ICP-QQQ.	52	1	B
Mikinori	TSUKI	Iwate University	Japan	Evaluation of air radiation dose rate changes on ungrazed pasture after the Fukushima Daiichi Nuclear Power Plant accident	54	1	B
Martin	HJELLSTRÖM	University of Gothenburg	Sweden	Emergency preparedness in Sweden: Using medical gamma cameras alongside Whole-body counters for measurement of internal contamination	1	7	B



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First Name	Last Name	Organization	Country	Paper Title	Poster Board	Related Session	Poster Viewing
Ali	HOSSEINI	DSA	Norway	FDMT: from deterministic Excel based model to probabilistic compartmental modelling platform	2	7	B
Daniel	LIENHARD	Federal Office of Public Health	Switzerland	Low Level Measurements of Radionuclides in the Upper Troposphere and Lower Stratosphere: How to Continue?	3	7	B
Jerzy-Wojtek	MIETELSKI	Institute of Nuclear Physics (IFJ PAN)	Poland	New kind of radiological threats related to nuclear propulsion	4	7	B
Martina	ROZMARIC	Environmental Protection Agency	Ireland	The Implementation of Ireland's New National Radiation Monitoring Network	5	7	B
Jan Steinar	RØNNING	Geological Survey of Norway	Norway	NGU's role and activity in the Norwegian Nuclear emergency Organization.	6	7	B
Magnus	ULIMOEN	Norwegian Meteorological Institute	Norway	Localising releases of radionuclides using observations from filter stations	7	7	B
Naeem	SYED	DSA	Norway	Nuclear Safety and Hazard Analysis of the sunken "Komsomolet" submarine	63	7	B
Geert	BIERMANS	Federal Agency for Nuclear Control	Belgium	The challenges and opportunities of environmental radioactivity monitoring in an evolving public landscape	8	5	C
Michael	CORRY	ANSTO	Australia	Wildlife dose assessment to determine the impact of radiological releases on local flora and fauna at a nuclear facility in Australia.	9	5	C
Dorottya	JAKAB	Centre for Energy Research	Hungary	Optimising the measurements and evaluations of environmental radiological monitoring	10	5	C
Elena	PRIETO BUTILLÉ	Universitat Rovira I Virgili	Spain	Set up and performance of a gamma spectrometry river water monitor with a Sr12 scintillation detector	11	5	C
Fernando	RIBEIRO	Institute of Radiation Protection and Dosimetry, Brazil	Brazil	Contamination and potential ecological and human risks of radionuclides and heavy metals in soils of Rio de Janeiro state, Brazil	12	5	C
Nimelan	VEERASAMY	Institute For Environmental Science	Japan	Development of a simple and rapid isotopic equilibration method to quantify non-exchangeable organically bound deuterium in organic matter	13	5	C
Sinikka	VIRTANEN	STUK	Finland	Nationwide environmental radiation monitoring programme in Finland	14	5	C
Alexander	DIENER	Bundesamt für Strahlenschutz	Germany	The revision of the German national regulation for modelling the exposure of members of the public to ionising radiation	56	5	C
Petros	LEIVADAROS	Czech Technical University Of Prague	Germany	New multi-isotope AMS laboratory for environmental research in the Czech Republic	62	5	C
Wanwiwa	TUMNOI	Department of Biology, Faculty of Science, Silpakorn University	Thailand	Potential Impacts of Cs-137 from the Fukushima-Daiichi Nuclear Accident on Genetics of Asian Green Mussel ( <i>Perna viridis</i> ) in Eastern Coast of Thailand	15	6	C
Hengyi	ZHU	NMBU	Norway	Mechanistic analysis of gamma radiation induced damage onto spermatogenesis in <i>C. elegans</i>	16	6	C

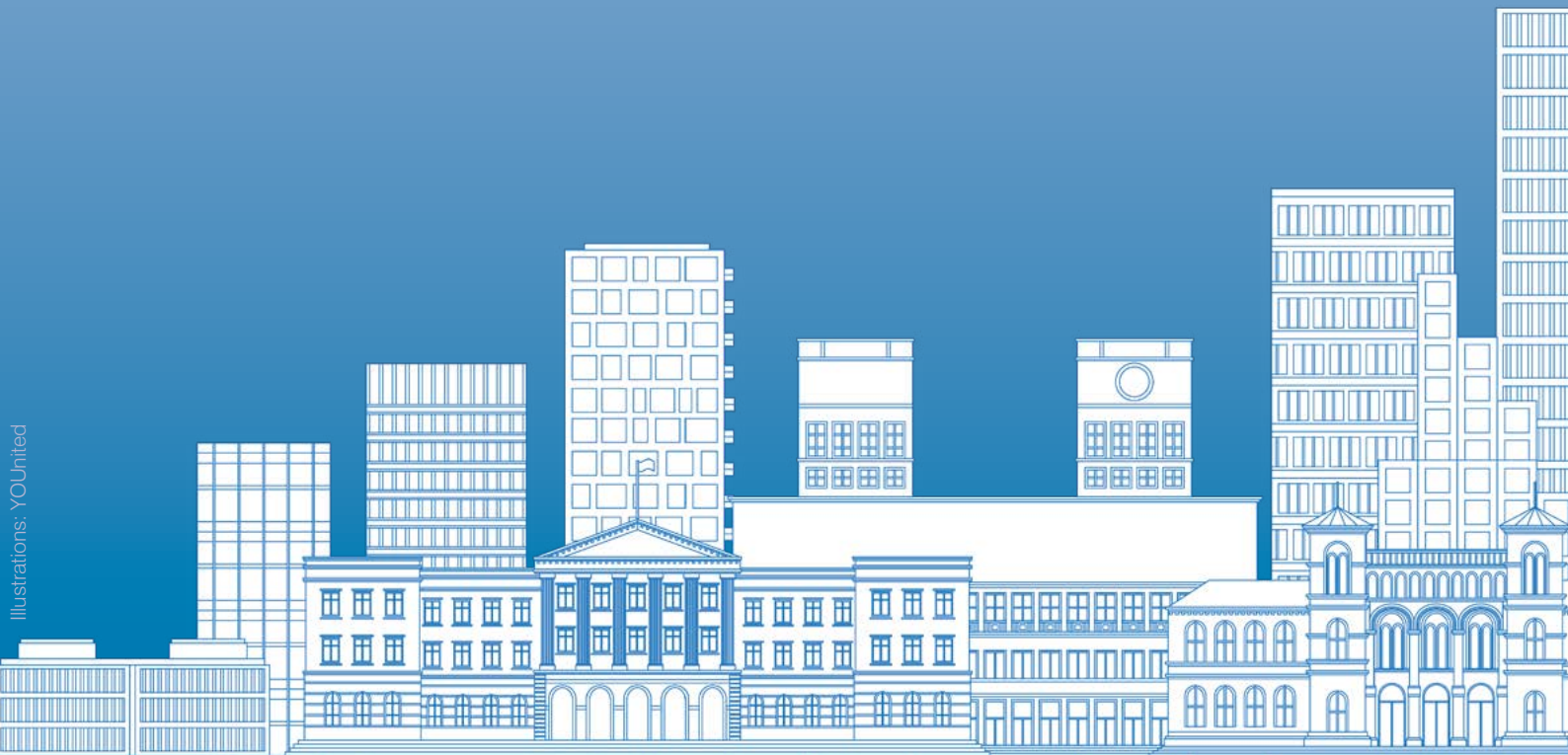
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# 5<sup>th</sup> International Conference on Radioecology & Environmental Radioactivity 4–9 September 2022 Oslo, Norway

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