



Hestia Hotel Europa – 7–8 October 2024

Day 1: Monday 7th October 2024

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Time		Title	Speaker	Organization
10.00 - 10.30		<i>Registration and coffee</i>		
Opening session				
Chairs: Kathryn Goodenough (British Geological Survey) / Juha Kaija (Geological Survey of Finland)				
10.30 - 10.45	15 min	Welcome to Estonia and CRMs	Sirli Sipp Kulli	Geological Survey of Estonia
10.45 - 11.15	30 min	KEYNOTE: CRM importance in EU, New CRM Act	Madalina Ivanica	European Commission
SESSION 1: CRM in Scandinavia and implications for the Baltic States (Part 1)				
Chairs: Kathryn Goodenough (British Geological Survey) / Juha Kaija (Geological Survey of Finland)				
11.20 - 12.00	40 min	KEYNOTE: The Nordic part of Fennoscandia – a potential treasure trove for European critical raw material needs	Erik Jonsson	Geological Survey of Sweden
12.00 - 12.20	20 min	Re-investigation of historical drill cores - Indications for CRMs in Estonian crystalline basement	Siim Nirgi	Geological Survey of Estonia
12.20 - 13.20 LUNCH BREAK				
SESSION 1: CRM in Scandinavia and implications for the Baltic States (Part 2)				
Chairs: Tapio Halkoaho (Geological Survey of Finland) / Jakob Keiding (Geological Survey of Denmark and Greenland)				
13.20 - 13.40	20 min	GTK's scientific projects supporting CRM exploration in Finland	Tero Niiranen	Geological Survey of Finland
13.40 - 14.00	20 min	Review of the critical raw material resource potential in Greenland	Jakob Keiding	Geological Survey of Denmark and Greenland
14.00 - 14.20	20 min	Lithium pegmatites: from Africa to Europe	Kathryn Goodenough	British Geological Survey
14.20 - 14.40	20 min	The GREENPEG project toolset to explore for buried pegmatites hosting lithium, high purity quartz, and other critical raw materials	Axel Muller	University of Oslo
14.40 - 15.00	20 min	Exploration Carbonatite - TBA	Holly Elliot	British Geological Survey
15:00 - 16:00 POSTER SESSION and COFFEE BREAK				
SESSION 2: CRM in sedimentary basins				
Chairs: Lauri Joosu (Geological Survey of Estonian) / Kathryn (British Geological Survey)?				
16.00 - 16.40	40 min	KEYNOTE: Sedimentary phosphorites	Lauri Joosu	Geological Survey of Estonia
16.40 - 17.00	20 min	Metal-Rich Iron-Manganese Oxyhydroxide Concretions	Martin Liira	Geological Survey of Estonia
17.00 - 17.20	20 min	Comparative Study of Phosphorite Deposits in the Tethyan Phosphogenic Province: Active Exploitation in Türkiye and Abandonment in Albania	Ana Fociro	Polytechnic University of Tirana
17.20 - 17.40	20 min	Perspectives of phosphorites deposits as REE resources	Sophie Graul	Tallinn University of Technology
17.40 - 17.45	5 min	<i>Announcements about dinner and next day</i>	<i>Kairi Põldsaar</i>	
18.00 - 21.00 CONFERENCE DINNER @HESTIA HOTEL EUROPA				



Poster Session – Monday 7th October 2024 15:00 – 16:00

POSTER SESSION - Presenters and Titles				
Number	Related Session	Poster title	Presenter	Organization
1	S2	Geochemical Processes in Estonian Graptolite Argillite: Insights into Vanadium Concentration Mechanisms	Mawo Ndiaye	Tallinn University of Technology
2	S2	Geochemistry, provenance, and tectonic setting of Paleoproterozoic metavolcanic and metasedimentary units of the alutaguse zone, Estonia, a comparative study with the south Svecofennian zones	Juan David Solano Acosta	Tallinn University of Technology
3	S3	Copernicus data to boost raw materials source management: Illustrations from the RawMatCop Alliance Project	Sara Kasmaee	University of Bologna
4	S3	Let the exploration begin: helicopter-borne remote sensing a new addition to geological mapping studies	Sara Salehi	Geological Survey of Denmark and Greenland
5	S3	Harnessing Advanced Technologies for Sustainable Mineral Exploration: The AGEMERA Project	Tony Hand	Tallinn University of Technology
6	S3	Regional-scale exploration targeting of northern Finland for ultramafic-mafic intrusion hosted critical metals and its global implication	Malcolm Aranha	University of Oulu
7	S4	Analyzing the supply chains of critical raw materials in lithium-ion batteries: A focus on cobalt and lithium	Juan Tan	Geological Survey of Denmark and Greenland
8	S4	Recovery of Critical Elements from Estonian Phosphate Rock Using Hydrochloric Acid.	Ruhany Sheherazad Azeez	Tallinn University of Technology
9	S4	Effect of calcination on the leachability of metallic elements from Estonian graptolite-argillite in sulfuric acid	Eliise-Koidula Kivimäe	Tallinn University of Technology
10	S4	Developing non-toxic collector chemicals for the flotation of Cu and P minerals – Towards the sustainable beneficiation of critical raw materials	Samuel Hartikainen	University of Oulu
11	S4	Developing continuously compressing crushing of critical minerals – Towards the sustainable comminution of critical raw materials	Niina Paasovaara	South-Eastern Finland University of Applied Sciences
12	S5	EGT-TWINN: Enhancing Research Capacity at the Geological Survey of Estonia to Accelerate the Country's Transition to Green Energy	Kairi Poldsaar	University of Tartu



Hestia Hotel Europa – 7–8 October 2024

Day 2: Tuesday 8th October 2024

Day 2: Tuesday 8. October				
Time		Title	Speaker	Comments
8.30 - 9.00		<i>Gathering and Coffee</i>		
SESSION 3: New Exploration Techniques for CRM				
<i>Chairs: Jakob Keiding (Geological Survey of Denmark and Greenland) / Pertti Sarala (University of Oulu)</i>				
09.00 - 9.40	40 min	KEYNOTE: Utilizing Machine Learning for Mineral Prospectivity Mapping and Target Generation of Critical Raw Materials	Vesä Nykänen	Geological Survey of Finland
9.40 - 10.00	20 min	Environmentally friendly surficial geochemical exploration techniques	Pertti Sarala	University of Oulu
10.00 - 10.20	20 min	MINEYE - Earth observation techniques for mine life cycle monitoring	Saman Tavakoli	Norwegian Geotechnical Institute
10.20 - 10.40	20 min	An innovative method to image inner structure of orthomagmatic ore deposits using regional seismicity: a case study of Akanvaara Cr-V-PGE deposit in Northern Finland.	Nikita Afonin	University of Oulu
10.40 - 11.00 COFFEE BREAK				
SESSION 4: CRM Processing and Valorization				
<i>Chairs: Saija Luukkanen (University of Oulu) / Jakob Keiding (Geological Survey of Denmark and Greenland)</i>				
11.00 - 11.40	40 min	KEYNOTE: Value chain perspective in CRM extraction	Saija Luukkanen	University of Oulu
11.40 - 12.00	20 min	Developing a value chain for high strength magnets based on rare earth minerals from Europe	Arne Ratvik	SINTEF
12.00 - 12.20	20 min	Pioneering Sustainable CRM Recovery in European Mining	Fotios Konstantinidis	National Technical University of Athens
12.20 - 12.40	20 min	Sustainable mining practices: Innovative technologies on tailings management	Priyadarshini Priumal (INVITED)	University of Oulu
12.40 - 13.00	20 min	Circular solutions for mine tailings	Päivi Kinnunen (ONLINE)	Technical Research Centre of Finland
13.00 - 14.00 LUNCH BREAK				
SESSION 5: Environmental, Social, and Governance aspects of CRM				
<i>Chairs: Juha Kaija (Geological Survey of Finland) / Tapio Halkoaho (Geological Survey of Finland)</i>				
14.00 - 14.40	40 min	Keynote 7: The evolution and impacts of the Finnish mining-sceptical movement from the uranium debate to the green energy transition: an environmental protest wave?	Toni Eerola	Geological Survey of Finland
14.40 - 15.00	20 min	Assessing Water-Use Impacts of Critical Raw Materials Production with Life Cycle Assessment Techniques	Rowan Halkes	British Geological Survey
15.00 - 15.20	20 min	Sustainable management of abandoned mines: The REMINDNET initiative funded by COST	Ledi Moisiu	EIT Raw Materials Regional Innovation Center of Albania
15.20 - 16.00	20 min	Assessing ESG challenges for cobalt supply from new mining projects in Europe.	Stefan Horn	British Geological Survey
16.00 - 16.20	20 min	China's REE Monopoly Renders Global Exploration Efforts Futile. Lessons learned?	Per Kalvig	Geological Survey of Denmark and Greenland
16.20 - 16.30 CLOSING REMARKS + INSTRUCTION FOR EXCURSION (KATHRYN/HEIKKI)				

Conference „Exploration and exploitation of critical raw materials“

Visit to the Geological Survey of Estonia Arbavere Research Centre
Only for participants who signed up during the registration

October 9th, 2024

TIME	AGENDA Wednesday 9 th of October 2024	
09.00	<i>Bus leaving from the Hestia Europe hotel to EGT Arbavere Research Centre</i>	
10.15 – 10.45	<i>Arrival and welcome coffee</i>	
10.45 – 11.15	Overview of the Arbavere Research Centre	Jaak Jürgenson
11.15 – 12.00	Introduction to drill cores in two groups: - CRMs in Estonian phosphorite - CRM indications in Estonian crystalline basement rocks	Lauri Joosu Siim Nirgi
12.00 – 13.00	<i>Buffee lunch</i>	
13.00 – 13.45	Introduction to drill cores in two groups: - CRM indications in Estonian crystalline basement rocks - CRMs in Estonian phosphorite	Siim Nirgi Lauri Joosu
13.45 – 15.00	<i>Return to Tallinn</i>	

Brief overview of the EGT Arbavere Research Centre: [EGT Arbavere Research Centre](#)



Photo: L. Maala