



Managing Resources for a Sustainable Future

Seminar on Critical Raw Materials

June 9 and 10, 2022, TU Delft

[Faculty of Architecture, Julianalaan 134, 2628 BL Delft](#)

A two-day course for current and future professionals interested in critical raw materials (CRMs) and their management.

- Deepen your knowledge in critical raw materials
- Apply tools to your own sector
- Learn from industry examples
- Update yourself on policy developments
- Discuss with the experts from the [edX MOOC](#) on the topic, industry representatives, policy-makers, and colleagues interested in the field

Apply here (spaces are limited): <https://www.suscritmat.eu/mooc-summer-seminar/>

Course contents will build on the free online course:

<https://www.edx.org/course/critical-raw-materials-managing-resources-for-a-sustainable-future>

Programme

Wednesday, June 8

From 6:30pm: Get-together in old town Delft; board game “In the Loop” and “Risk and Race” with finger food

Thursday, June 9

Morning: Foundations – Supply chains and CRM management

The material basis of the clean transition, drivers for resource management, and introduction to a model to assess raw materials risks

09:00	Welcome	Alessandra Hool, ESM Foundation
09:10	Introduction of team and participants	All
09:30	Critical raw materials for the energy transition	Evi Petavratzi, British Geological Survey
10:30	Coffee break	
11:00	Drivers for resource management	David Peck, TU Delft
11:45	Talk and discussion: modelling raw material risks	Alessandra Hool, ESM Foundation, and Dieuwertje Schrijvers, WeLOOP
12:30	Lunch break	

Afternoon: Tools for practical application

Material Flow Analysis, applying Life Cycle Assessment to a CRM case, and the option to learn about available software on process modelling and materials risks

14:00	Material Flow Analysis	Ester van der Voet, Leiden University
15:00	Applied LCA	Stefano Cucuracchi, Leiden University
16:00	Coffee break	
16:30	Parallel sessions: Process-model based LCA OR Data and software packages for industry to report on material-related risks	Antti Roine, Outotec Oyi Ansys, Inc
18:00	Evening keynote talk: Nickel in West Papua	Raki Ap, Dutch Ministry of the Interior and Free West Papua Campaign, and & Anne-Linn Machielsen, TU Delft/Leiden University

From 19:00	Apéritif and dinner
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Friday, June 10

Morning: Supply chain resilience and applied examples

Supply chain resilience, examples of industry supply chain risk monitoring, use case cobalt, examples for circular CRM management; identification and discussion of success factors

09:00	Supply chain resilience	René Kleijn, Leiden University
10:00	Identifying raw material risks in the telecommunication sector	Jeroen Cox, KPN
10:30	<i>Coffee break</i>	
11:00	Sustainable cobalt management: current topics	Tom Fairlie and Adam McCarthy, The Cobalt Institute, UK
11:45	Current challenges in e-waste recycling	Barend Ubbink and Stefan van Alphen, In2Waste and A&M recycling.
12:15	Discussion of success factors for circular CRM management	All; moderated by Alessandra Hool
12:45	Lunch break	

Afternoon: Policy developments and current geopolitics

Policy-makers and public bodies introduce and discuss current and upcoming policies, standards and due diligence approaches, guidelines, and collaborations; discussion of current geopolitical events and implications on CRM markets, availability, and the energy transition

14:00	Due Diligence Guidance for Responsible Supply Chains	Luca Maiotti, OECD (online)
15:00	EU policies on critical raw materials	Constanze Veeh, DG GROW (online)
16:00	<i>Coffee break</i>	
16:30	Discussion: Current geopolitical events and implications on the low-carbon transition	Moderated by René Kleijn Guest speakers, Rutger Hoekstra (CML/WEAll), participants
From 17:30	Farewell	