



UNECE RESOURCE MANAGEMENT WEEK 2024
ASSURING SUSTAINABILITY IN RESOURCE MANAGEMENT
22 - 26 APRIL 2024 | PALAIS DES NATIONS | GENEVA

Futu

Future availability
of secondary
raw materials

RaM

UNFC Progress in end-of-life secondary raw materials (2RMs)

Expert Group on Resource Management 15th Session (EGRM-15)

22nd April 2024, Palais des Nations, Geneva

Iman Dorri, Soraya Heuss-Aßbichler

Ludwig Maximilian University of Munich (LMU)



Funded by
the European Union



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

Federal Department of Economic Affairs,
Education and Research EAER
State Secretariat for Education,
Research and Innovation SERI

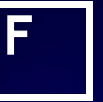
EU Framework Programmes



UK Research
and Innovation



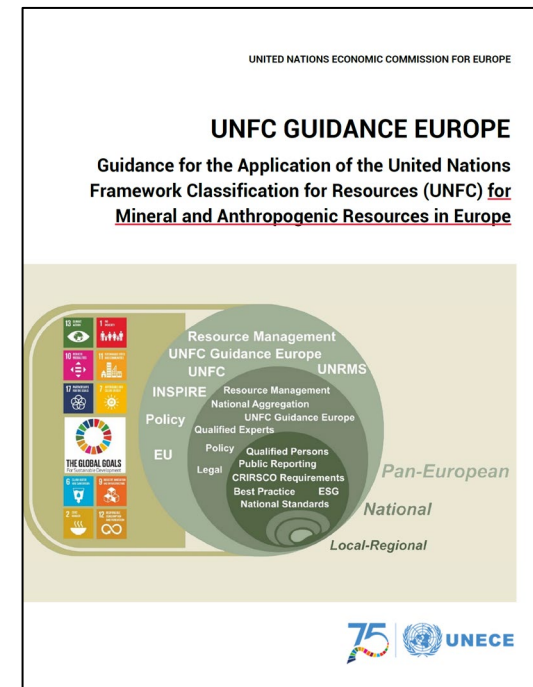
Available documents pertained to the application of UNFC for 2RMs projects



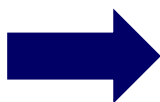
Some case studies related to the application of UNFC for 2RMs

Source of materials	Target material(s)	Country	Year
Tailings	Base metals	Germany	2022
Tailings	Copper, Pyrite, Tungsten	Portugal	2021
Tailings	Barite, Cobalt, Copper, Gallium, Inert Minerals, Indium, Lead, Pyrite, Zinc	Germany	2021
Bottom-ash from municipal solid waste incineration	Iron, Non-ferrous metals, Stainless steel, Glass	Switzerland	2020
Fly-ash from municipal solid waste incineration	Metals (Iron, Zinc, Lead, Copper, Cadmium), Mineral Materials (Gypsum, Limestone, Clay, Quartz), Salt	Austria	2018
Landfills	Refuse derived fuel, Plastic, Wood, Sand, Soil, Construction Materials	Belgium	2018

UNECE guidance document related to 2RMs projects

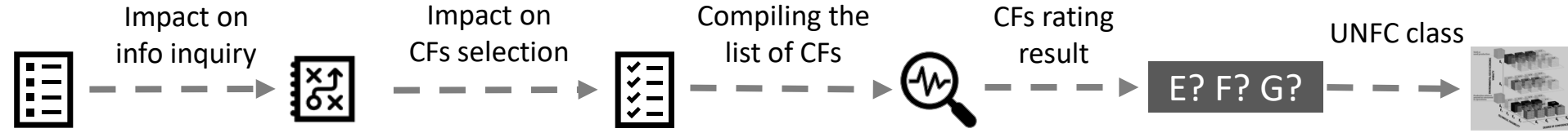


Main issues and challenges in using available documents to classify 2RMs projects by UNFC



- No standardized, clear, and comprehensive instruction to use UNFC for classification of 2RMs projects
- Inconsistency in factors' selection
- Lack of Transparency
- Result reproducibility

Systematic procedure to classify 2RMs projects by UNFC



Stage 1

Stage 2

Stage 3

Stage 4

Stage 5

Stage 6

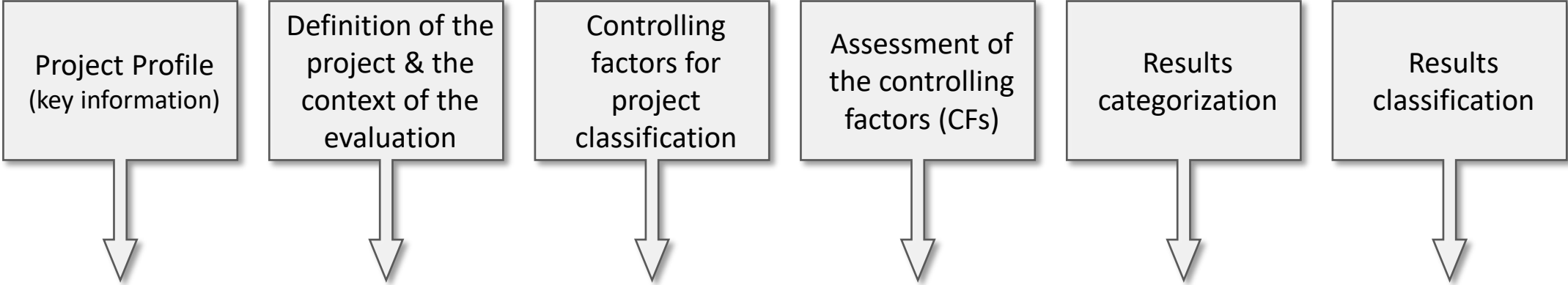
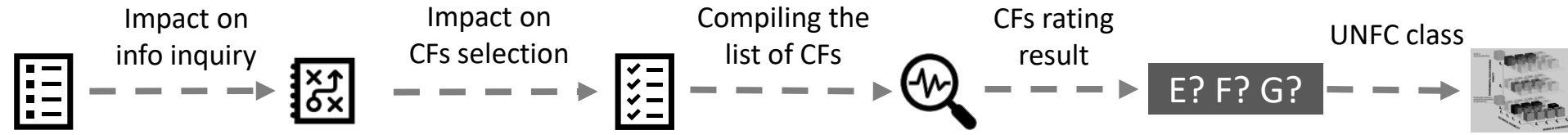
Clarification

Transparency, Consistency & Results Reproducibility



Stage 7
UNFC Reporting

Systematic procedure to classify 2RMs projects by UNFC



Webtool – an Online Tool for 2RMs Projects Classification Based on UNFC



Futu RaM

[Home](#)

[About](#)

[Case Studies](#)

[Questionnaires](#)

[Team](#)

[Contact](#)

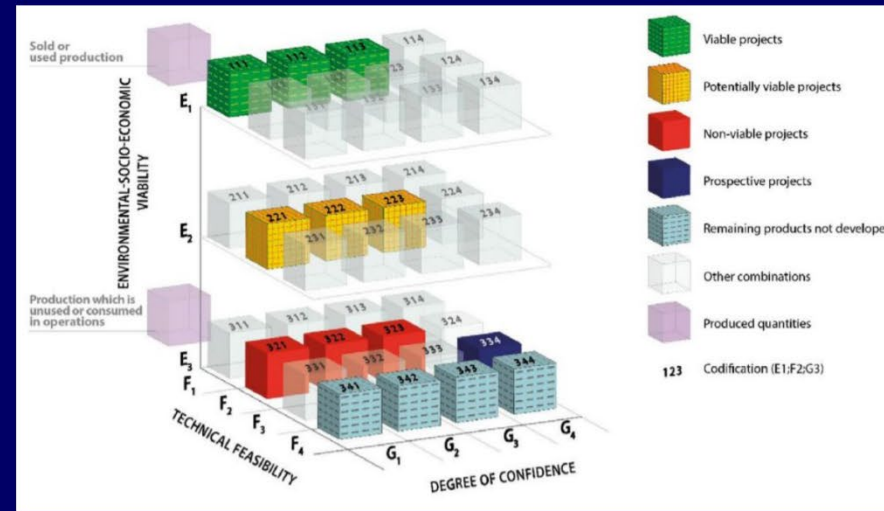
[Get Started](#)

Structured Anthropogenic Resource Assessment

Secondary Raw Materials Availability Assessment in Line with the UNFC

Developed as part of the [FutuRaM](#) project

[Get Started](#)



Funded by
the European Union



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Confederation

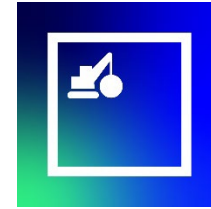
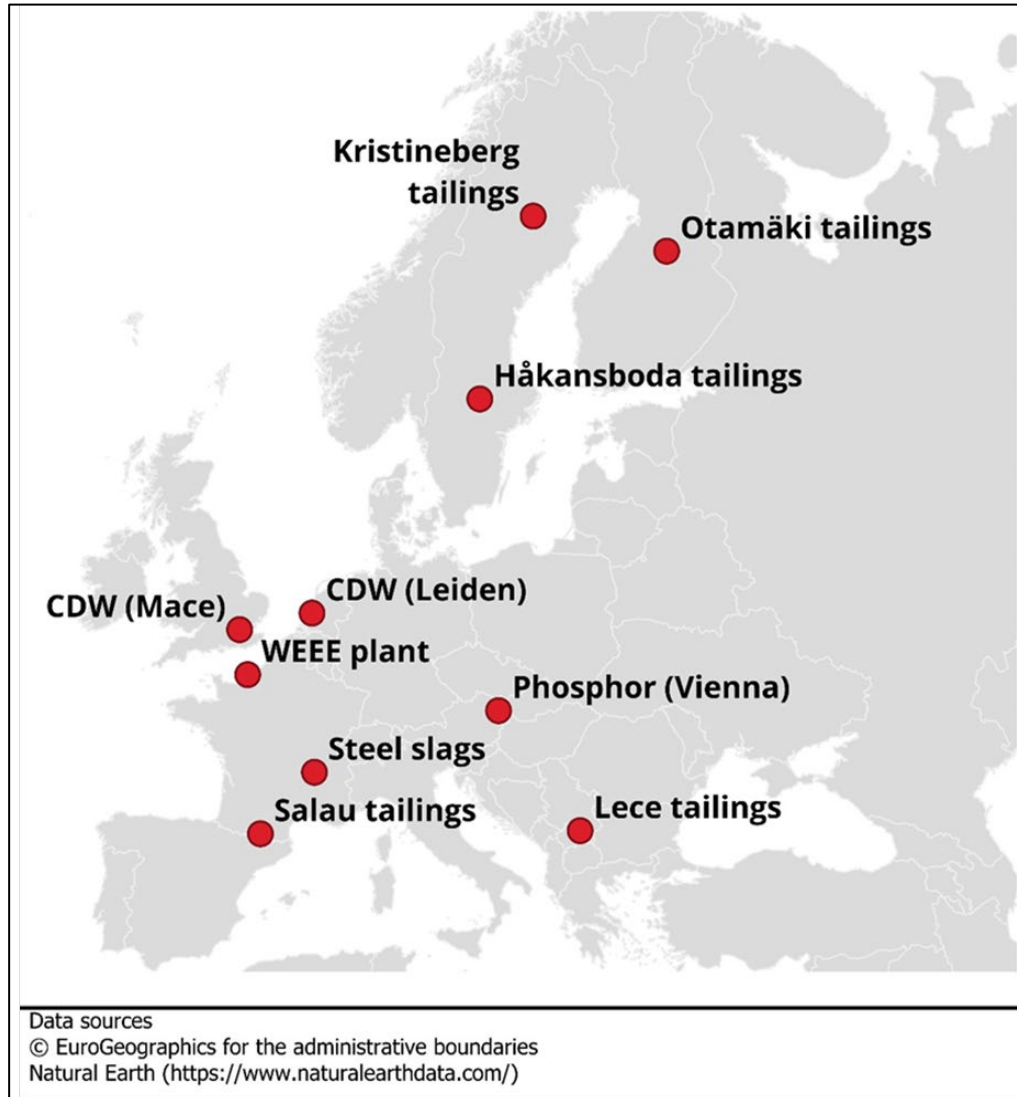
Federal Department of Economic Affairs,
Education and Research EAER
State Secretariat for Education,
Research and Innovation SERI

EU Framework Programmes

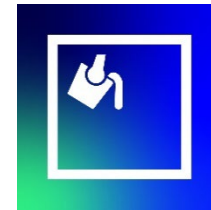


UK Research
and Innovation

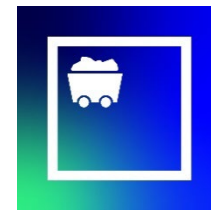
Case studies to test the UNFC procedure and the webtool



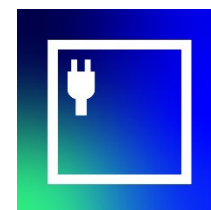
Construction and Demolition waste (CD&W)



Slags and Ashes (SLASH)



Mining Waste (MINW)



Waste Electrical and Electronic Equipment (WEEE)

Thanks for your kind attention!

THE VIEWS EXPRESSED ARE THOSE OF [FutuRaM] AND DO NOT NECESSARILY REFLECT THE VIEWS OF THE UNITED NATIONS.



Iman Dorri

Scientific Researcher

Ludwig-Maximilians Universität

Munich, Germany

dorri.iman@lmu.de

heuss@lmu.de

