



E-Waste Statistics & Advances on Statistics on Secondary Raw Materials in EU

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UNITAR-SCYCLE Programme

24 Sep 2025 EGSS – London

UNITAR-SCYCLE at a Glance



We are part of UNITAR's Division
for Planet
SCYCLE is based in Bonn | Germany

Research / Statistics

- [Global and Regional E-waste Monitors](#)
- [National country studies](#)
- [Statistics Guidelines](#)
- Many Research projects: [Critical Raw Materials](#), [photovoltaics](#), illegal waste traffic, circularity, etc.



Capacity building & trainings

- [E-waste Academies EWAM & EWAS](#)
- [WasteForce](#)
- [Workshops on E-waste statistics](#)
- [Circular Economy Academy](#)



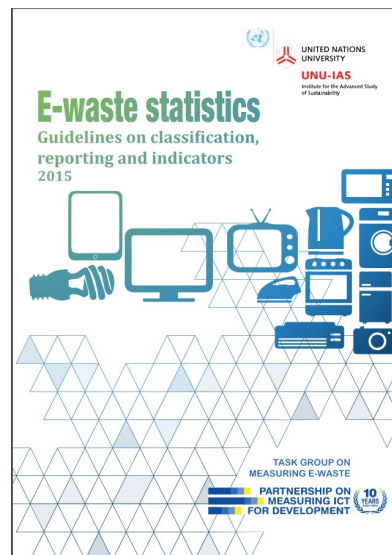
Policy advice & Partnerships

- Studies on Article 7 & 11 and review of the WEEE Directive
- CRM-Act
- UN E-waste Coalition
- Global E-waste Statistics Partnership



Statistics Guidelines

1. *Objectives of the guidelines: To support data producers in developing harmonised and reliable national-level e-waste statistics*
2. *Previous editions and impact:*
 1. First edition published in 2015 and the second in 2018
 2. Parts of method adopted in EU legislation
 3. Used in countries outside of the EU in policy cycle
 4. Global questionnaire and inputs to UN SDG reporting
 5. Technical parameters used more widely e.g. in academia and industry



Planned updates in Edition 3

Technical parameters	Methodological steps	Showcasing examples
<p>Updates</p> <ul style="list-style-type: none">• New UNU-KEYS and revisions - UNU-KEY v2• UNU-KEYS/HS (trade code) correspondence• Indicative weights per UNU-KEY• Lifespan parameters (with regional detail) <p>Expansion</p> <ul style="list-style-type: none">• Product material composition	<ul style="list-style-type: none">• Mapping transboundary e-waste movement• Integrating household surveys into the framework• Secondary raw material (SRM) recovery estimation• Assessing e-waste legislation• Updates in related areas/classification s e.g. Basel Convention, trade - HS	<p>Country/regional examples</p> <ul style="list-style-type: none">• Use of the methodology and guidelines across countries and regional projects• Other relevant activities to quantify e-waste e.g. work of partner organisations

In partnership with:



Funded by:



Timelines for publishing the next edition and ways to input

2024

Drafting the guidelines with international, national agencies and experts

2025

Detailed Pilot testing the updates in EU, Kenya, Jamaica, and Thailand.
Global calculations too

2026

Decisions + publications

THE GLOBAL E-WASTE MONITOR 2024

Authors: Cornelis P. Baldé, Ruediger Kuehr, Tales Yamamoto, Rosie McDonald, Elena D'Angelo, Shahana Althaf, Garam Bel, Otmar Deubzer, Elena Fernandez-Cubillo, Vanessa Forti, Vanessa Gray, Sunil Herat, Shunichi Honda, Giulia Iattoni, Deepali S. Khatriwal, Vittoria Luda di Cortemiglia, Yuliya Lobuntsova, Innocent Nnorom, Noémie Pralat, Michelle Wagner

Image: Muntaka Chasant for Fondation Carmignac

Status of E-waste Management Globally in 2022



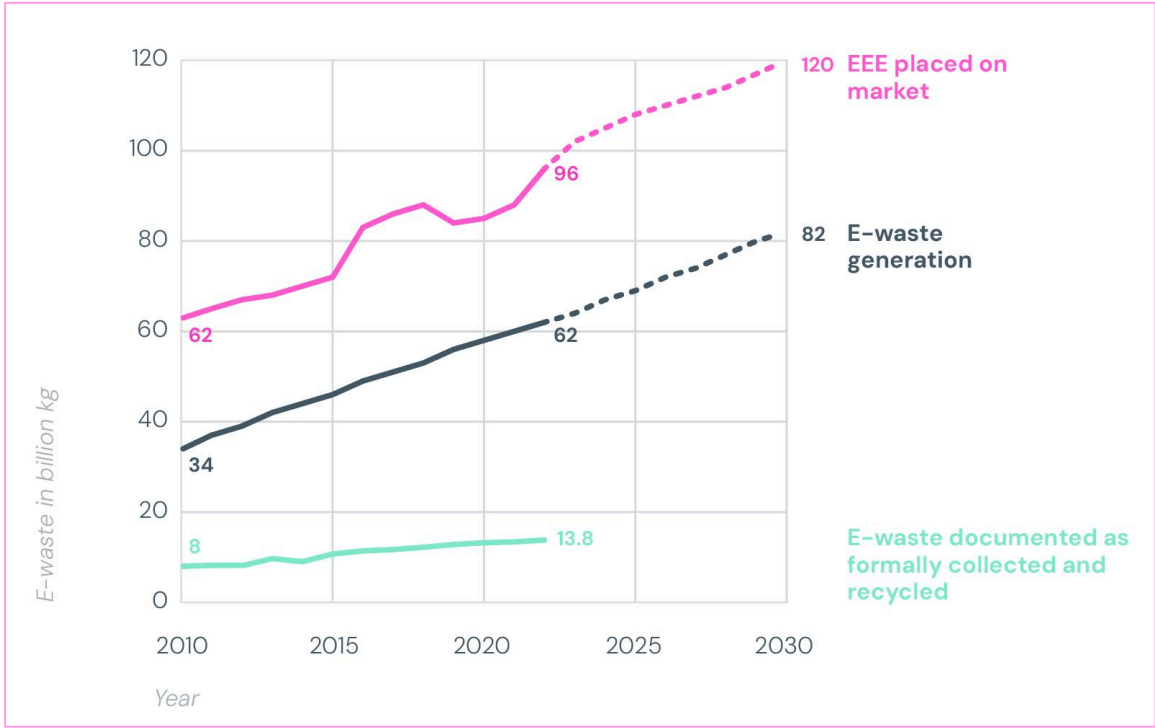
62 billion kg of e-waste generated globally in 2022.

7.8 kg per capita.

22.3% of this e-waste was documented as formally collected and recycled in an environmentally sound manner.

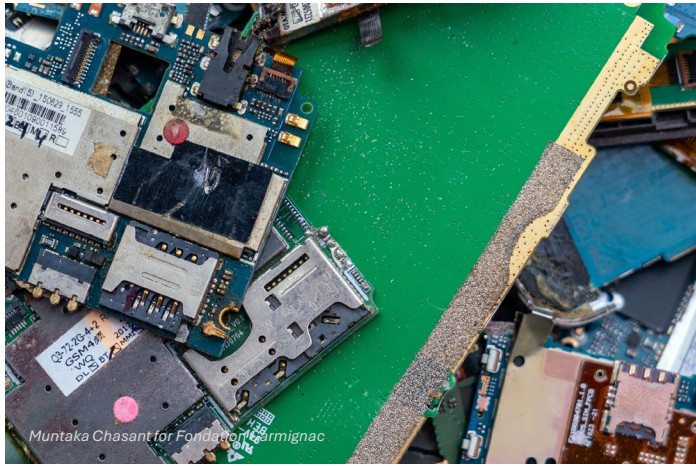
Source: The Global E-waste Monitor 2024

Global E-waste Trends

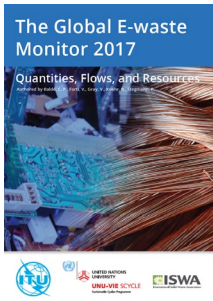


Since 2010, the growth of e-waste generation is outpacing the formal collection and recycling

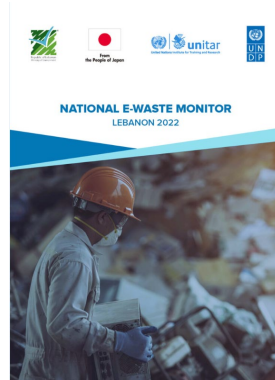
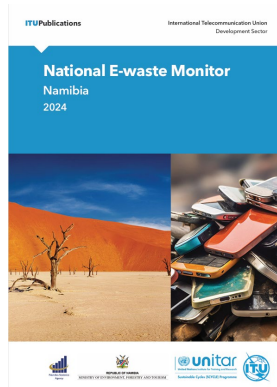
by almost a factor of 5.



What is the Global E-waste Monitor series since 2014?

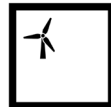
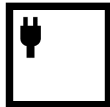


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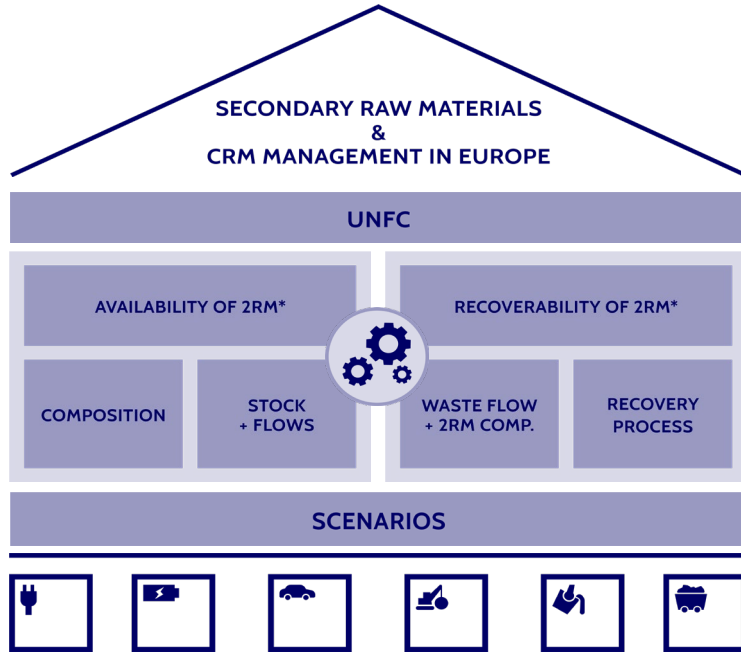


Improving Secondary Raw Material Statistics

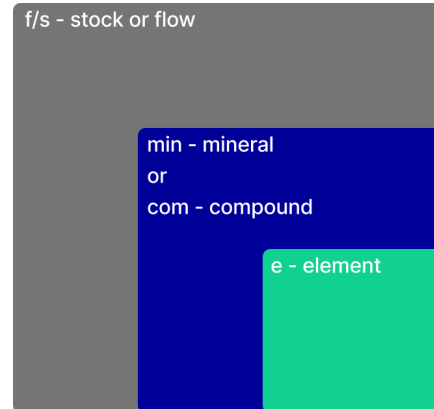
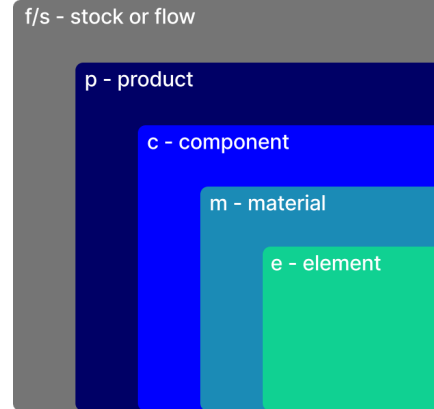
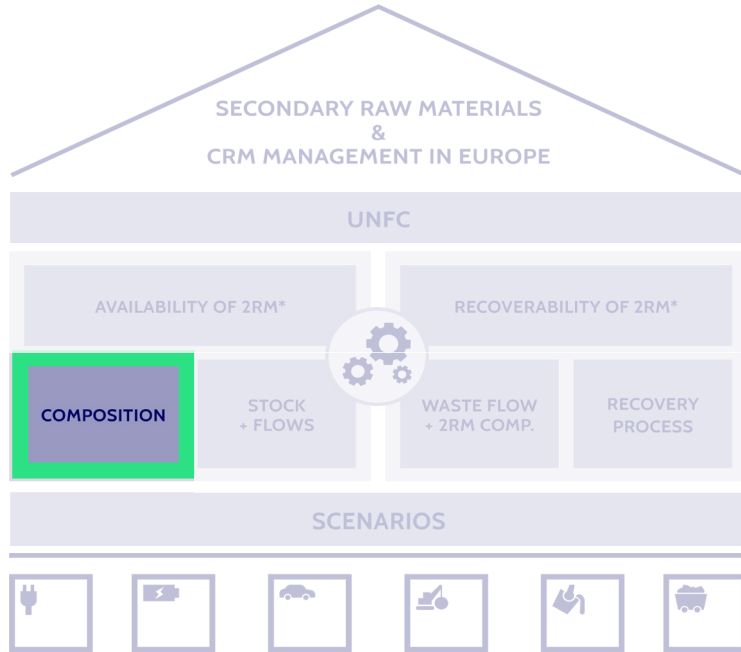
- Research Project
 - 15 million EC Funded project under Horizon Europe, UK and Switzerland (29 partners)
- Improve knowledge on the availability and recoverability of secondary raw materials within the EU
 - Special focus on critical raw materials (CRMs)
 - Scenarios: From now to 2050
- Disseminate via Secondary Raw Material Knowledge Base – Urban Mine Platform V2
- Applying United Nations Framework Classification for Resources (UNFC) for secondary raw materials
- Enable fact-based decision-making
- Waste streams:



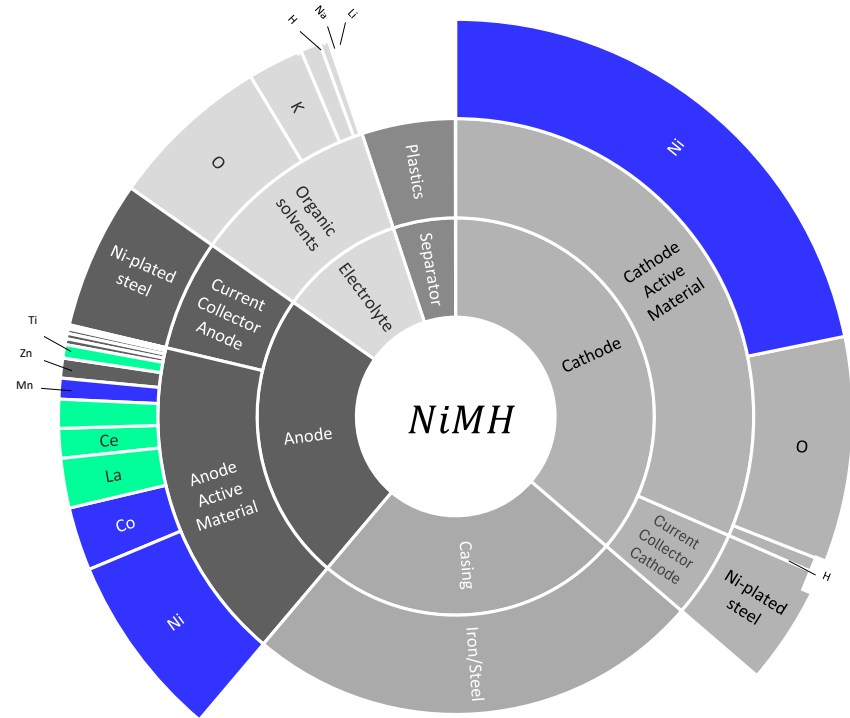
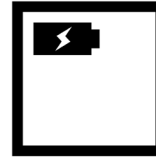
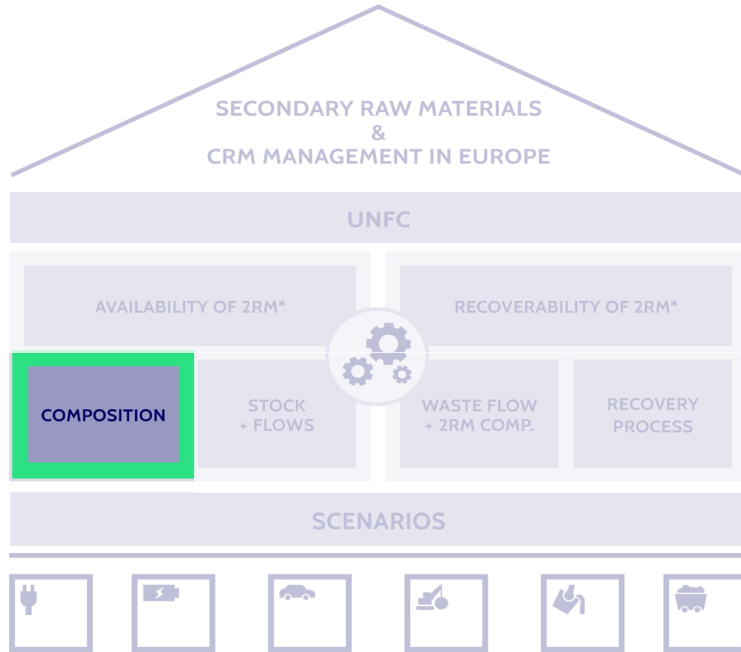
Method



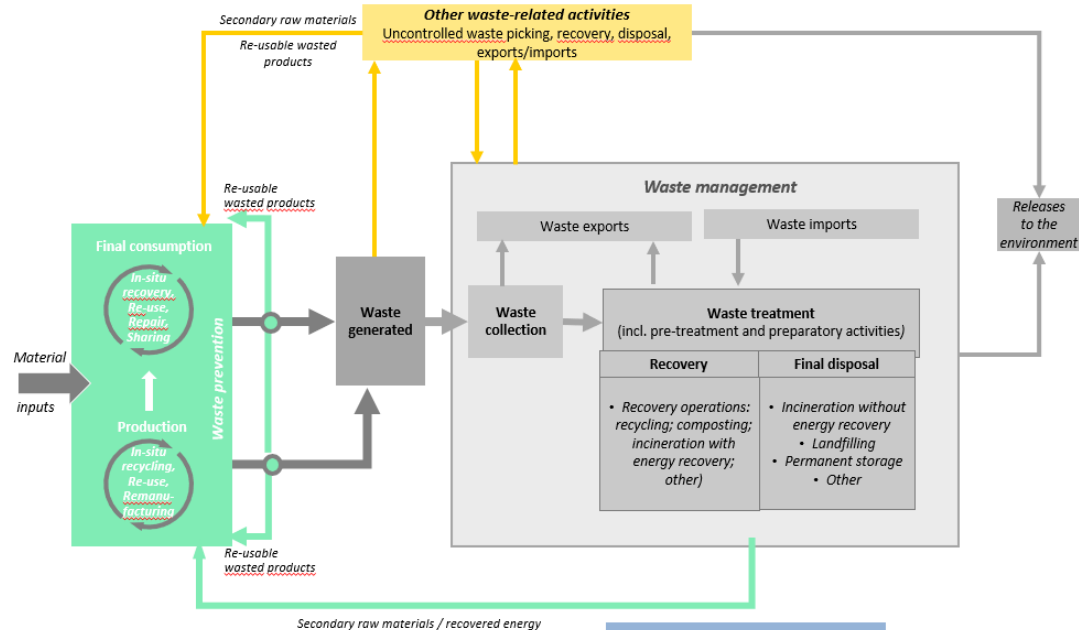
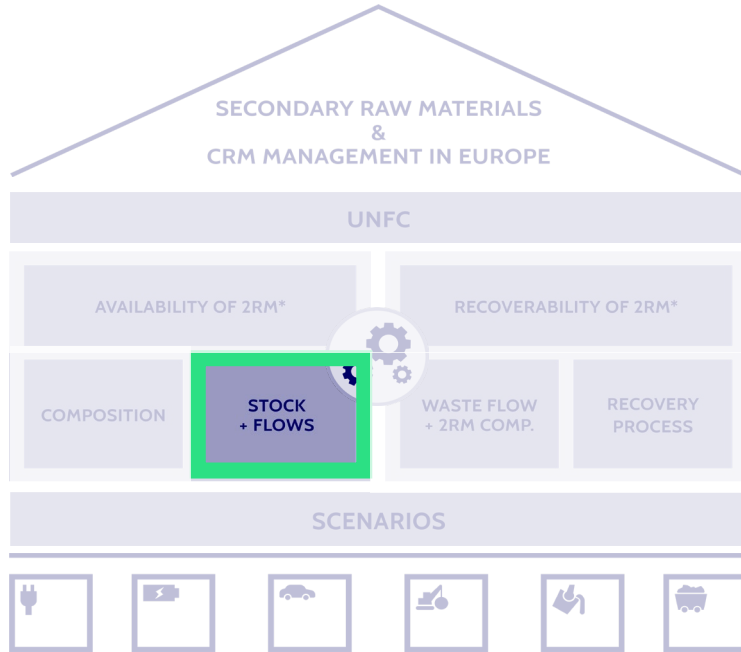
Method



Method



UNECE – Waste Statistics Framework



Legend:

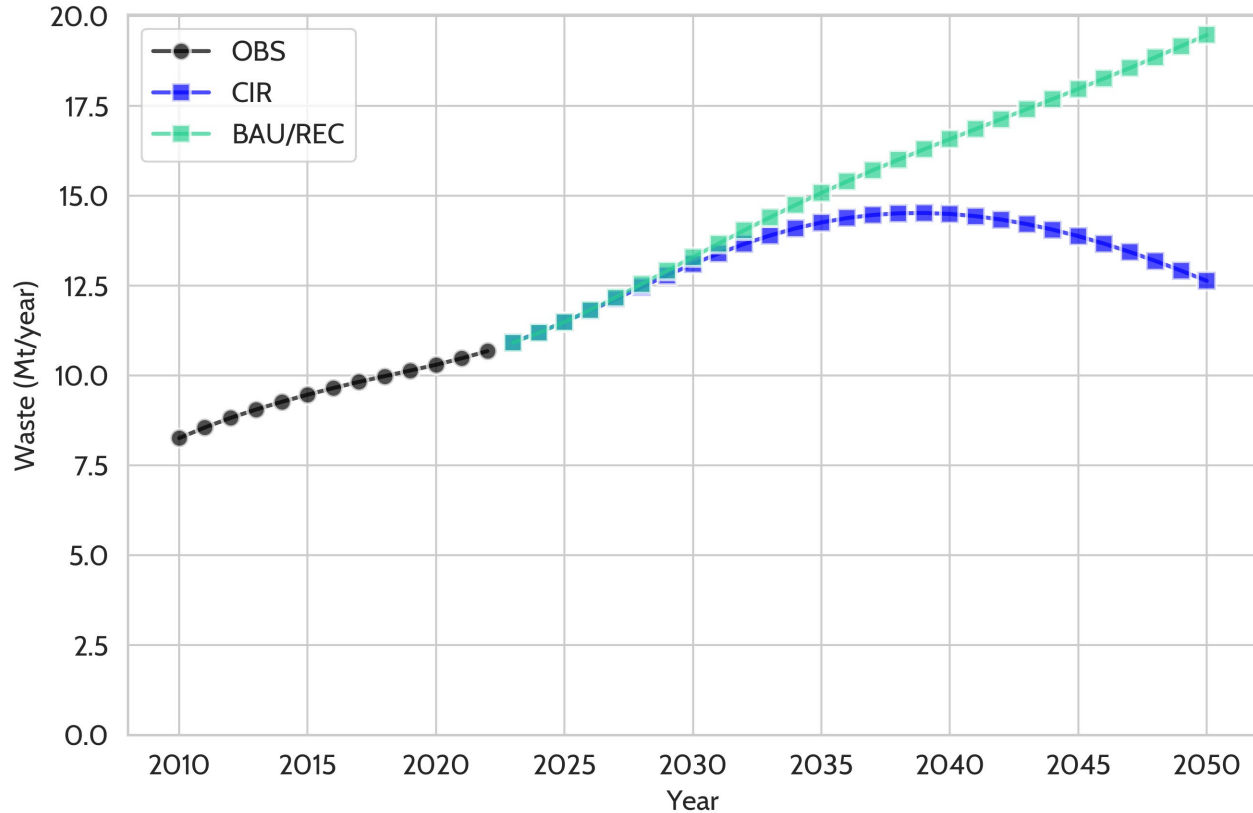
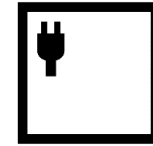
Controlled flows and activities: Waste management

Uncontrolled flows and activities: Other waste-related activities

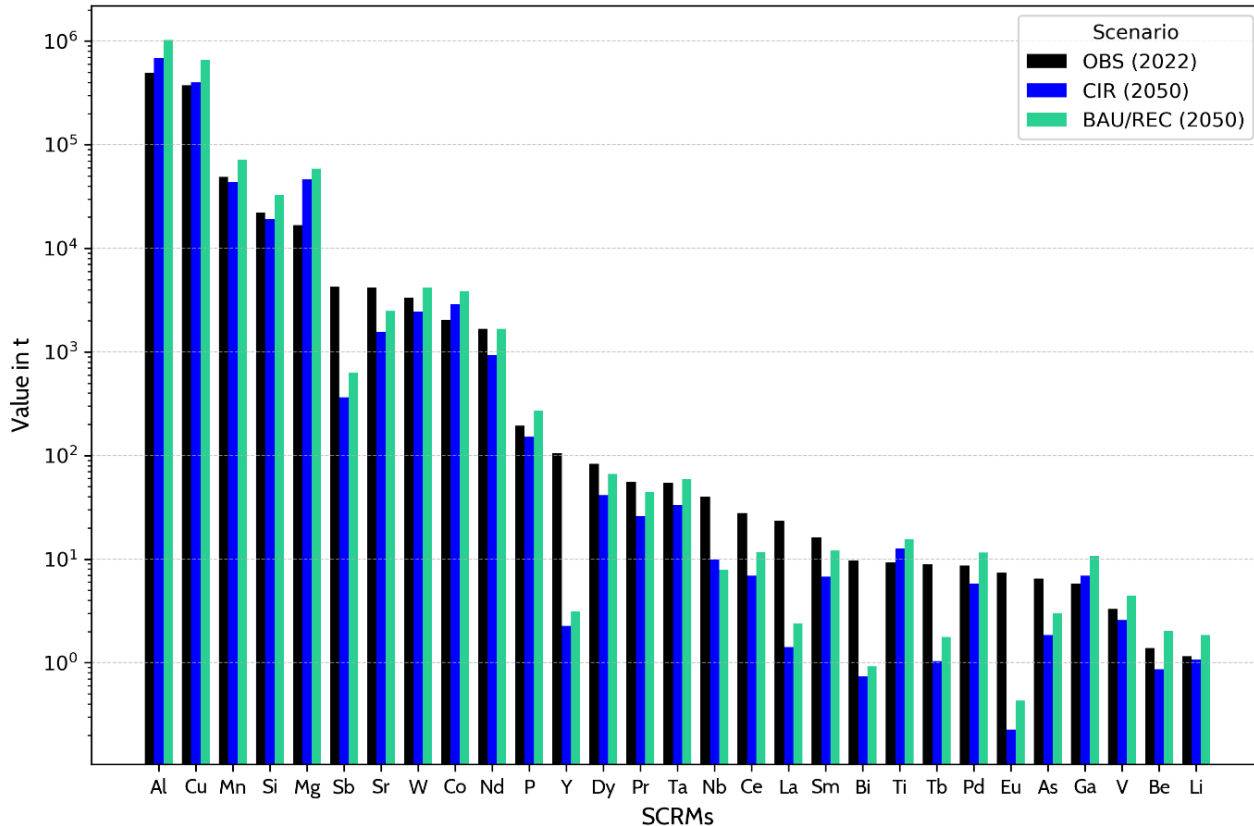
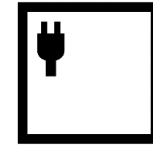
International trade flows of importance to the circular economy and the 3Rs

2050 WEEE Outlook

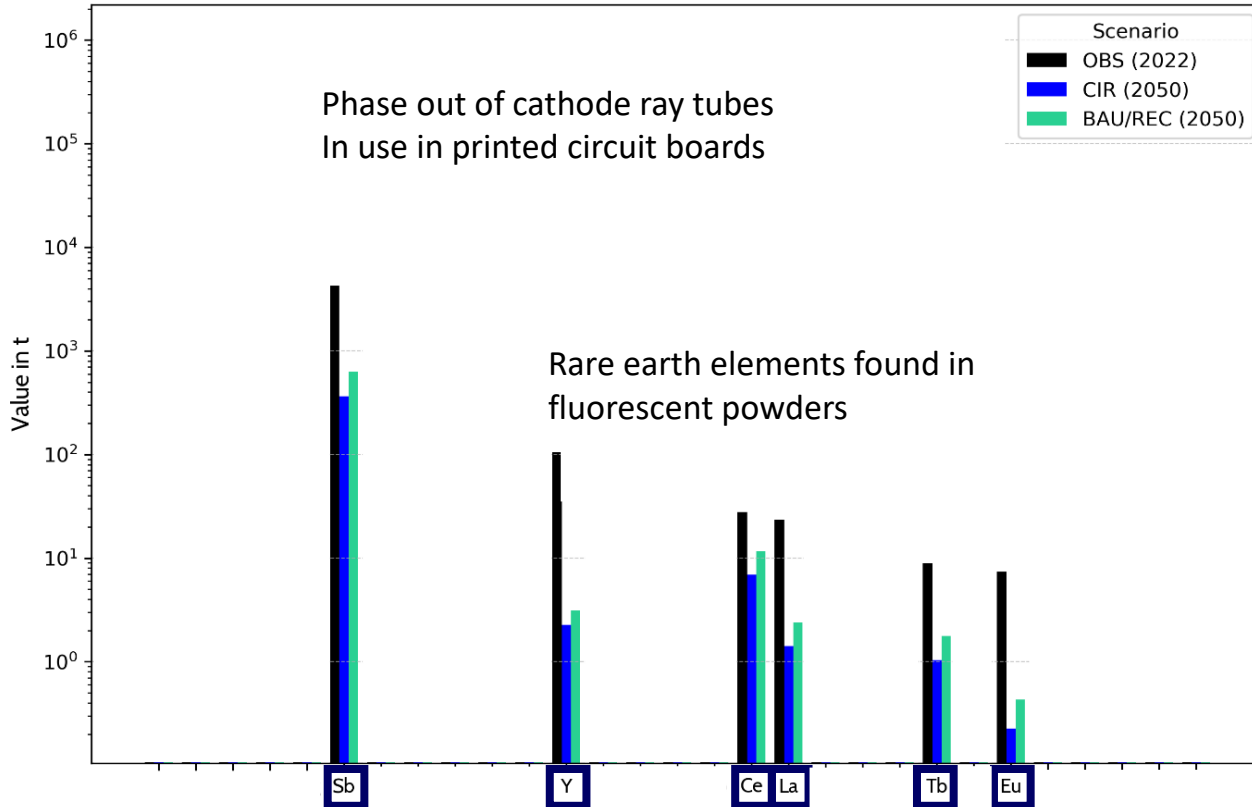
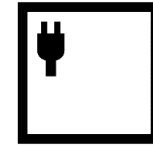
EU27 + Great Britain, Switzerland, Iceland and Norway



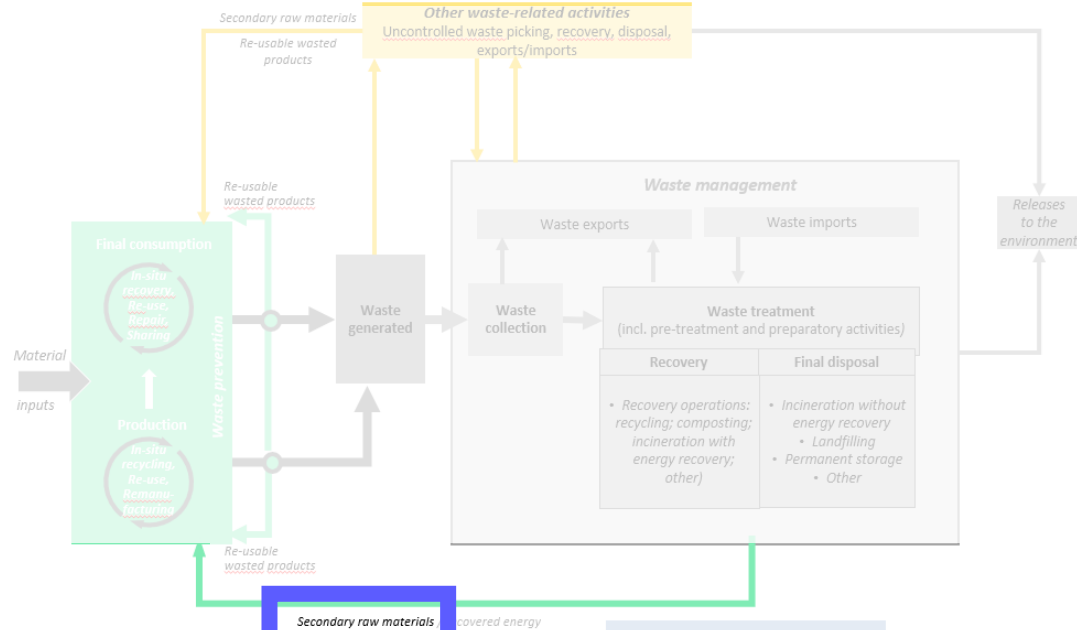
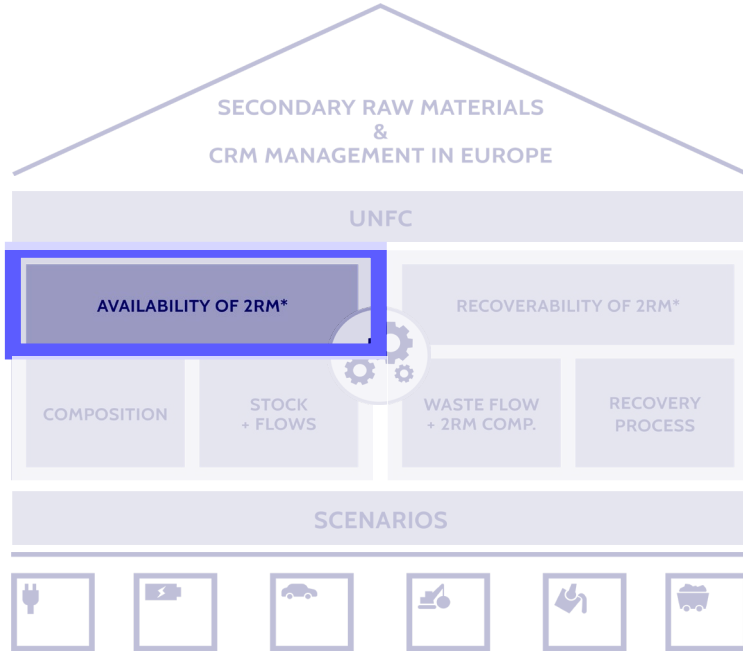
Embedded strategic and critical raw materials in WEEE grows from 1.0 Mt in 2022 to 1.2-1.8 Mt in 2050



Some significant declines are observed



Availability of critical raw materials



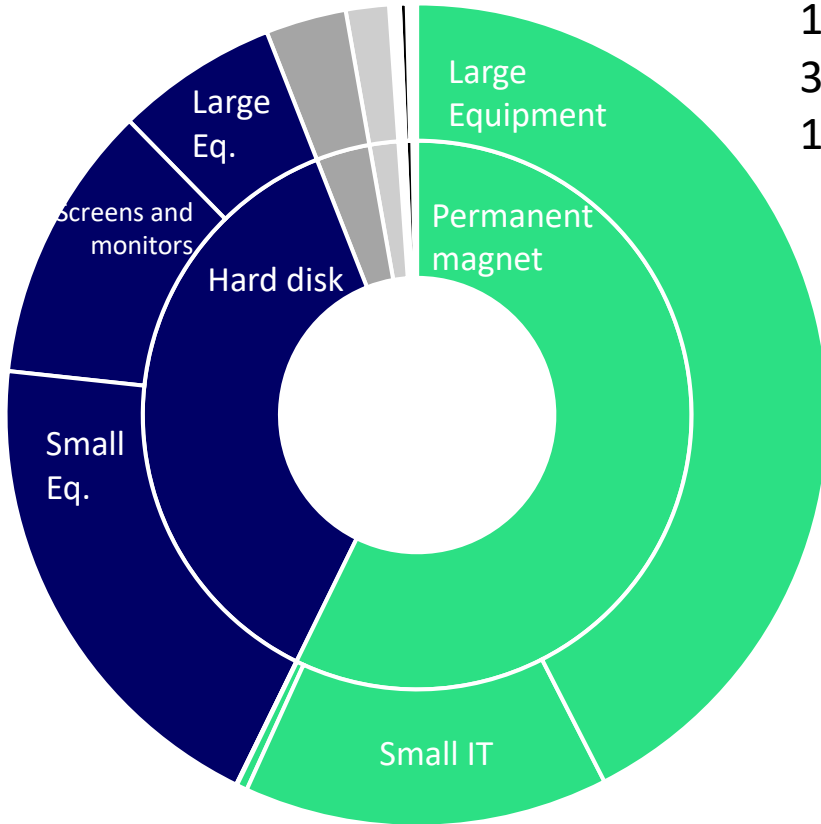
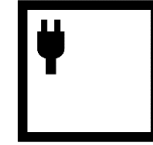
Legend:

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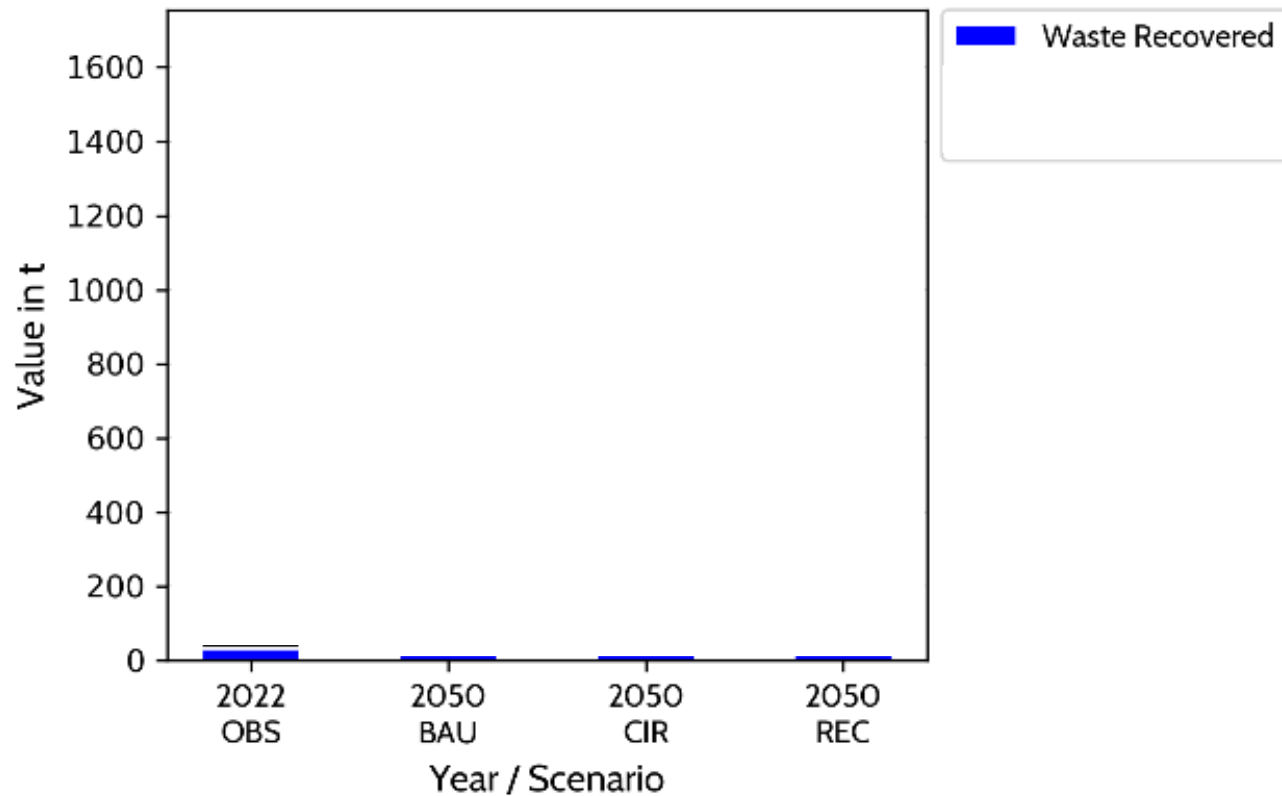
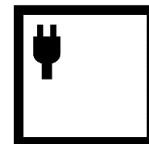
International trade flows of importance to the circular economy and the 3Rs

Availability of critical raw materials - Neodymium

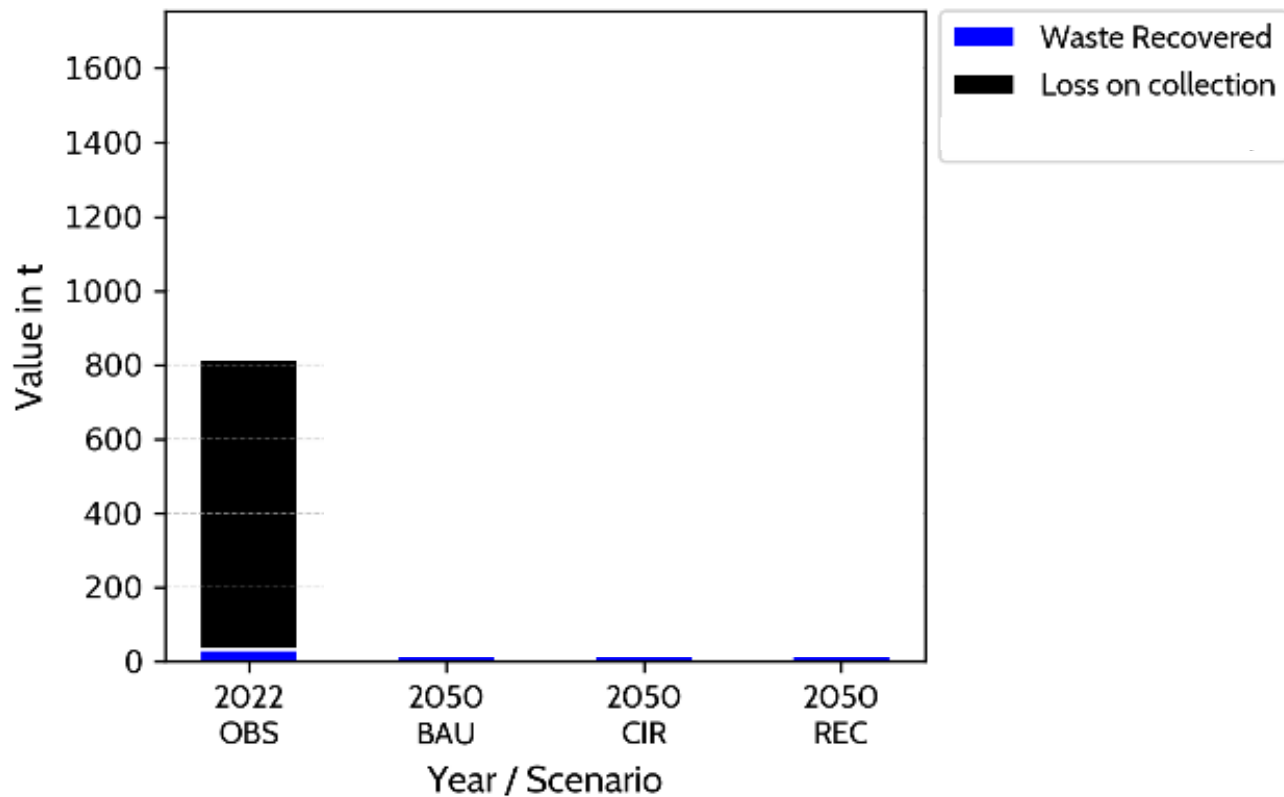
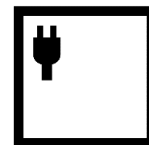


10.7 Mt WEEE generated
300 kt Components with neodymium
1.6 kt Neodymium

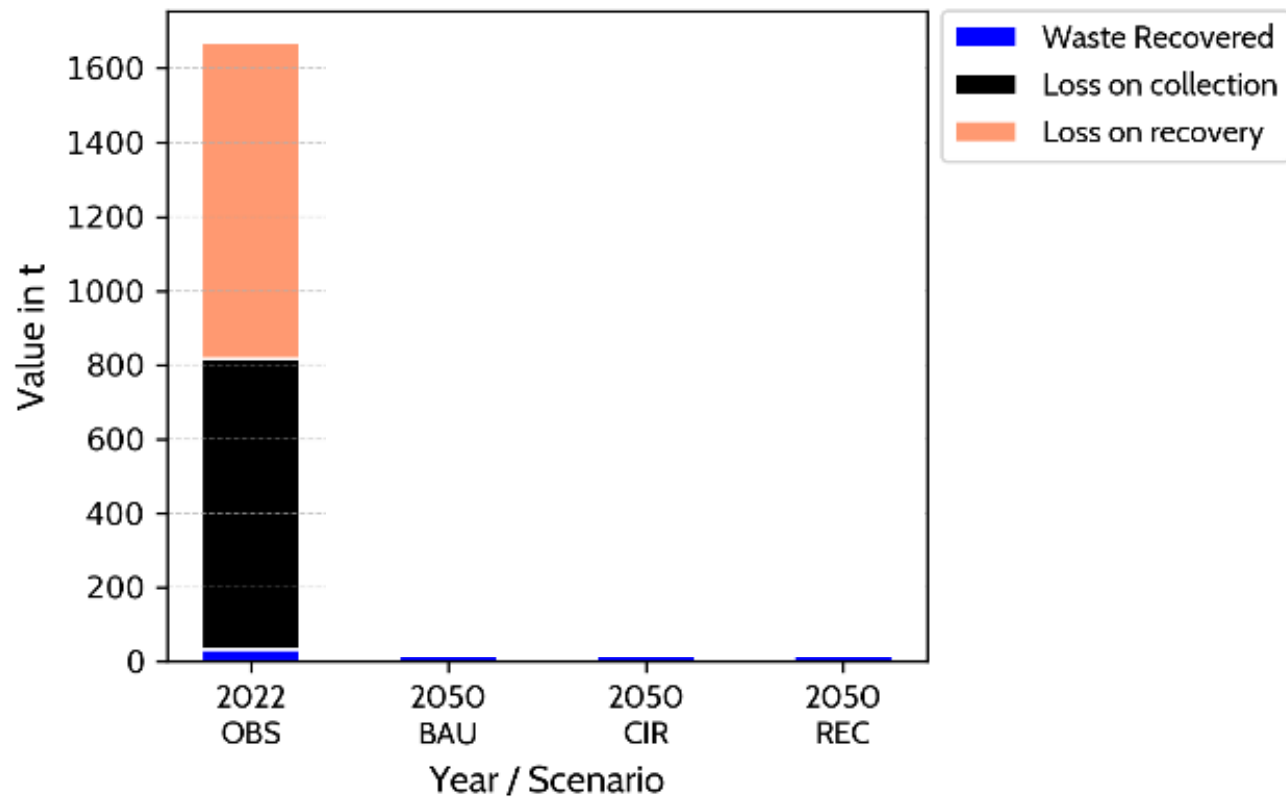
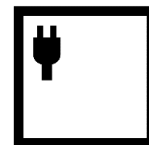
Neodymium



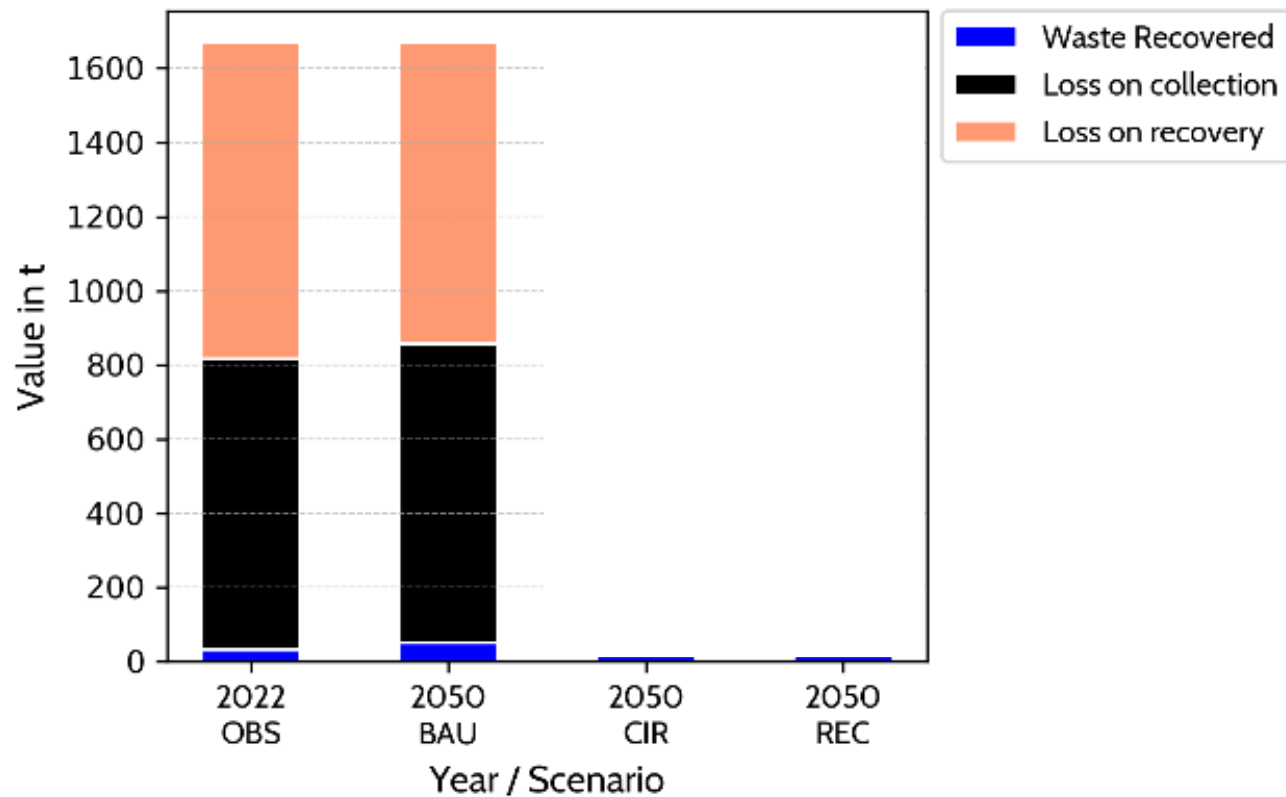
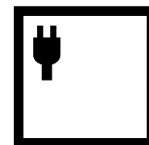
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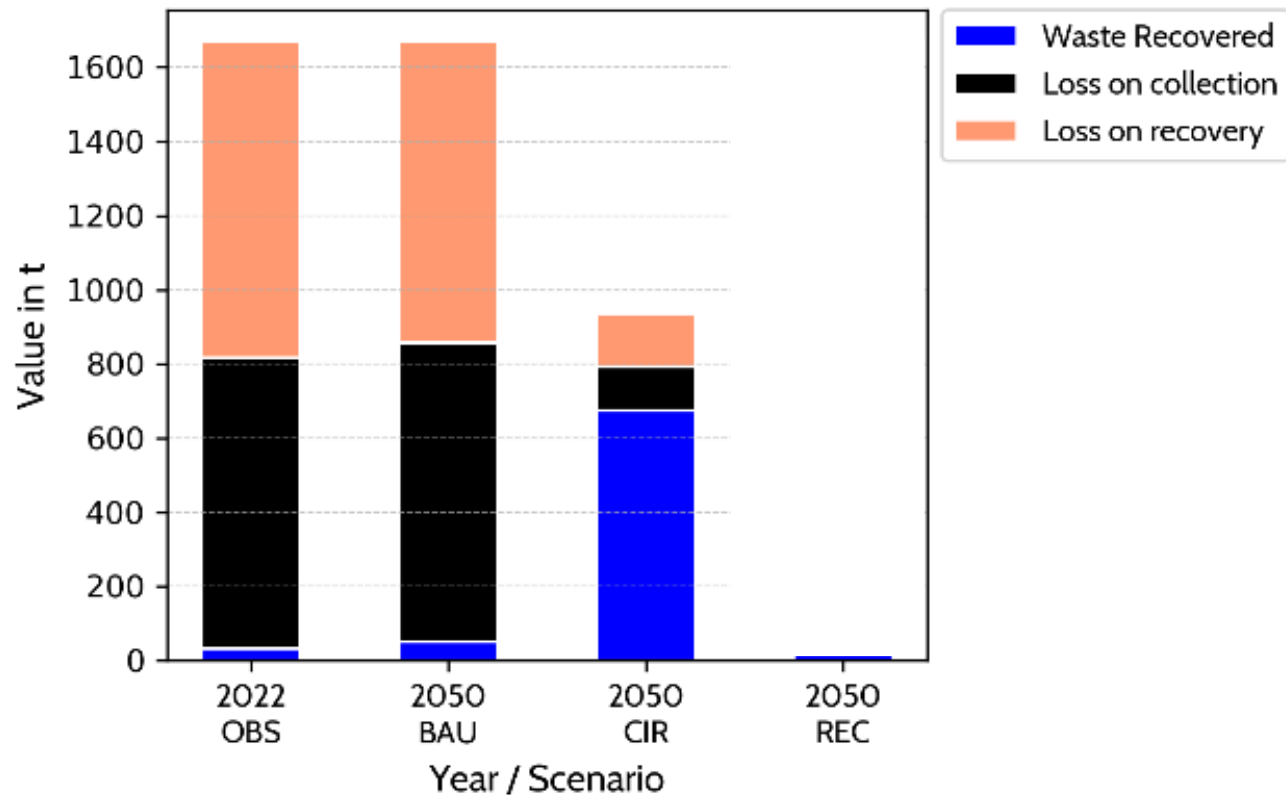
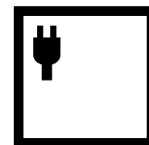
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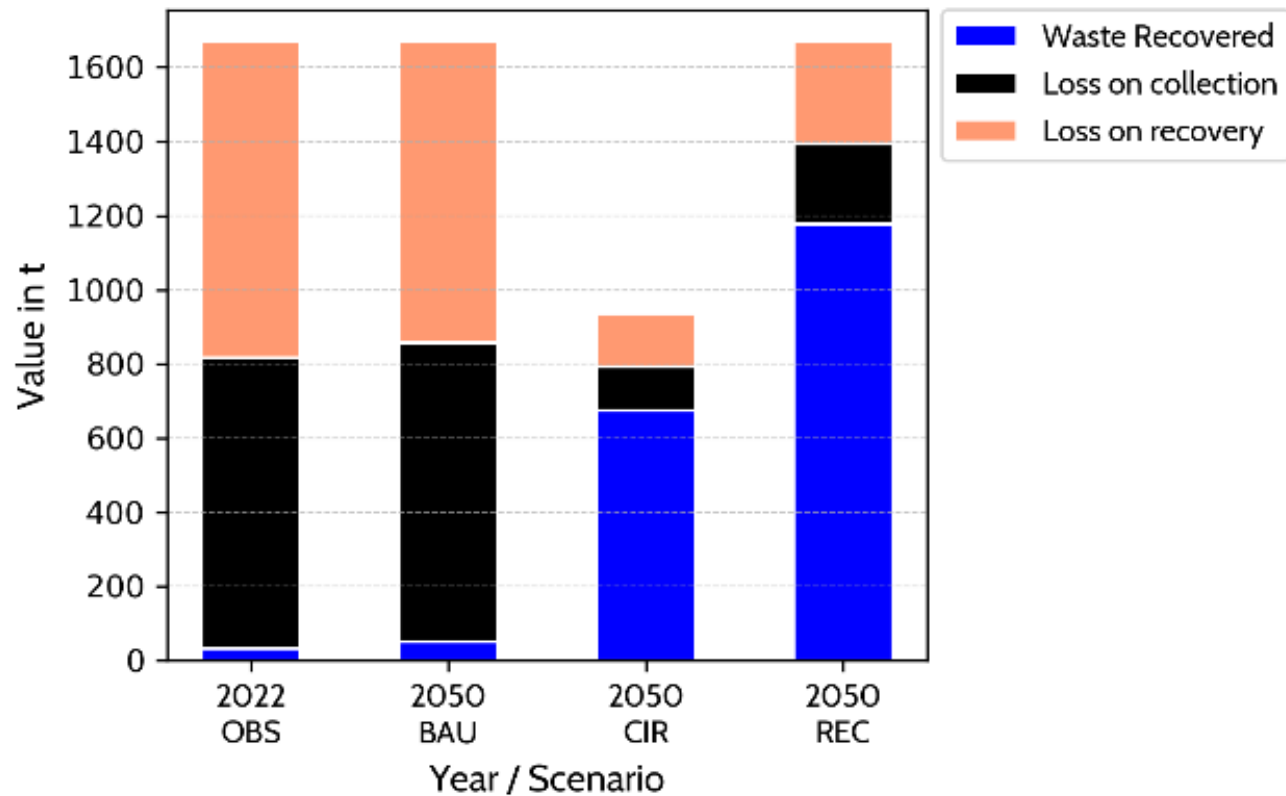
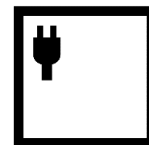
Neodymium



Neodymium



Neodymium



What is FutuRaM going to do

- Publish results at national level at the urban mine platform in November 2025 - urbanmineplatform.eu
- Write a deliverable on “proposal for Secondary Raw Material Statistics. Published in 2026
 - Proposal Chapter on FuturaM approach by waste stream and analysis when an approach is useful for statistics
 - Review ProdCOM and LoW codes
 - Draft few methodological chapters for batteries to be used for guidelines to statistical guidelines later

In summary

- E-waste is a fast growing waste stream
 - [Home - E-Waste Monitor](#)
- Improve data quality on that
 - Training: see here including statistical toolkits, methods for e-waste and plastics: [Home - Scycle Academy for Circular Economy \(ACE\)](#)
- Need better data on secondary resources in waste
- FutuRaM project makes advances on this
 - Publishing statistics
 - Proposals for secondary raw material statistics
- Contact: Kees Baldé – balde@unitar.org

Contacts



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United Nations Institute for Training and Research

Sustainable Cycles (SCYCLE) Programme



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