



TOM BIDE

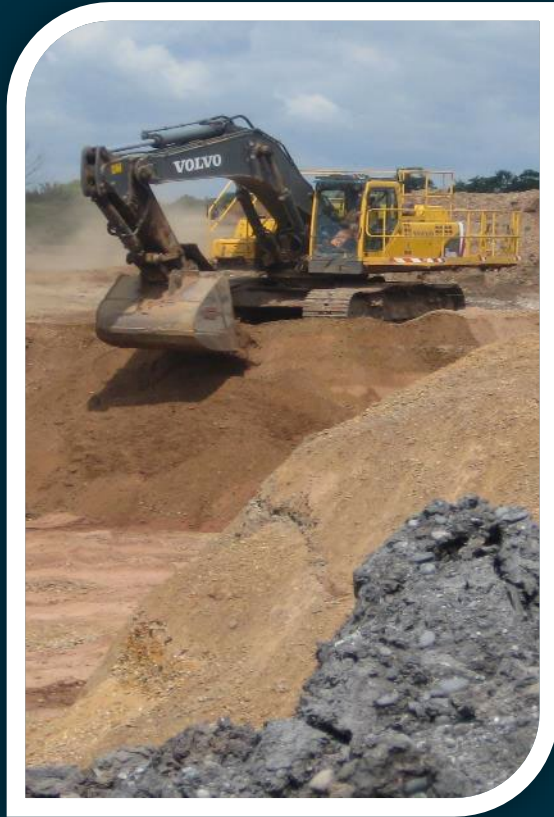
UNFC - A Blueprint for Managing Critical Raw Materials Sustainably



British
Geological
Survey

What's the problem?

- The need to ensure resource extraction / consumption aligns with SDGs
- The need for decarbonisation / net zero agenda
- Progression to a circular economy
- The need to reduce impacts of extraction on ecosystems, and the wider natural environment
- Diversity of supply for critical raw materials
- Maximise the value of natural resources



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Europe

1 minute read · December 13, 2022 1:25 PM GMT · Last Updated 2 months ago

Serbian PM sees no chance for reviving Rio Tinto lithium project

Reuters

Serbia revokes Rio Tinto lithium mine permits following protests

© 21 January 2022

Rio Tinto mine protests



GETTY IMAGES

For months, thousands of people have been demonstrating against Rio Tinto's plan to mine lithium in the country

Serbia has withdrawn the exploration licences of Anglo... company Rio Tinto following protests

"All permits were... Minister Ana Brnabić

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Local resistance, a major stumbling block for EU's critical raw materials plan

By Oliver Noyan | EURACTIV.com Jan 13, 2023

Supporters



India's Foray Into the EV Battery Market Lacks Some Key Ingredients

Shortages of raw materials from lithium to copper are hampering a multi-billion-dollar bid to circumvent China's hold on the supply chain.



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OPINION Published January 26, 2023 8:00am EST

China could shut down our military in a minute if we don't fix the looming rare earths supply crisis

If we examine most major weapons systems, they cannot function without using rare earth minerals. That's why the current supply crisis is a five-alarm fire

OPINION Fox News

f t p b m

WORLD ECONOMIC FORUM

The great minerals scramble: how can we provide the materials needed for the energy transition?

Jan 18, 2023

The World's Cobalt Supply Is In Jeopardy



Frank Holmes Contributor
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Elements in danger

Did you know that your mobile phone contains at least 30 different naturally-occurring elements? Six of these are set to run out within the next 100 years, with several more under rising threat from increased use.



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Concerns over shortage of rare metals

By Theo Leggett
Business reporter, BBC News
28 October 2010

You may never have heard of lanthanum, cerium or neodymium, but these and other so-called "rare earth" metals play a vital role in many modern technologies.

Cerium, for example, is an abrasive used in the manufacture of flat screen televisions.

Lanthanum is a catalyst used by the oil industry, while neodymium is found in computer hard drives.

A shortage...

The Telegraph

FTSE 100

7416.18 -0.28%

GBP/USD

\$1,290.9 +0.20%

GBP/EUR

€1,196.0 +0.14%

BRENT OIL

\$58.10 -1.63%

BITCOIN

\$9723.10 +1.08%

GOLD

\$1634.49 +0.93%

Are we in danger of running out of stuff?

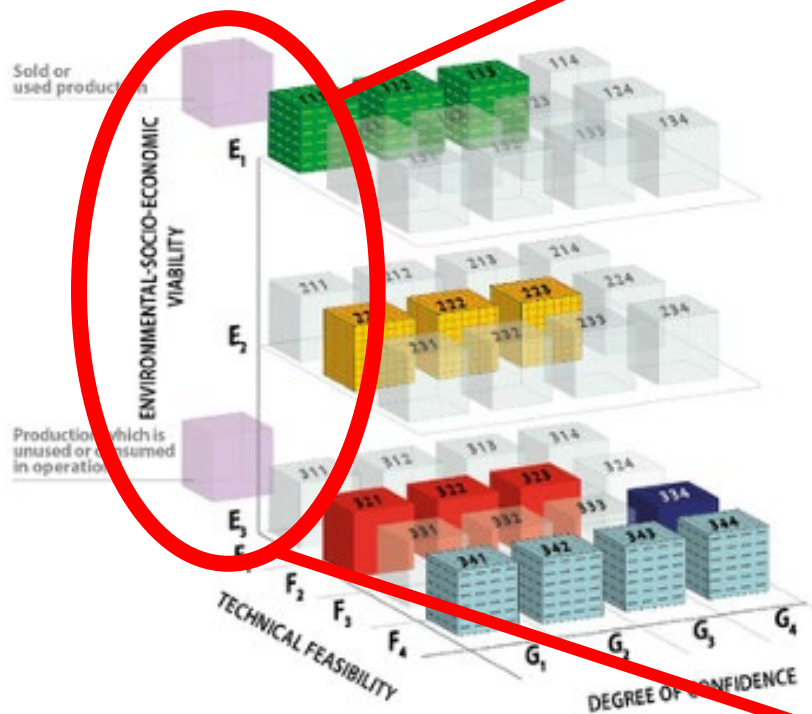
JON YEOMANS
ASSISTANT BUSINESS EDITOR

28 NOVEMBER 2019 - 7:00AM



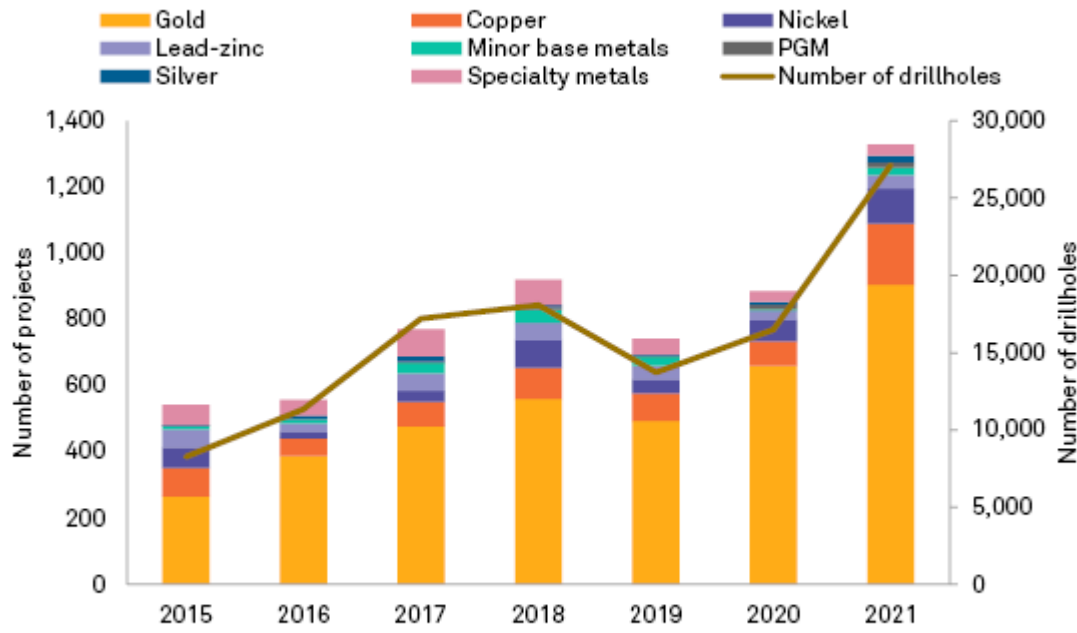
ESG considerations and the role of UNFC

UNFC Categories and Examples of Classes



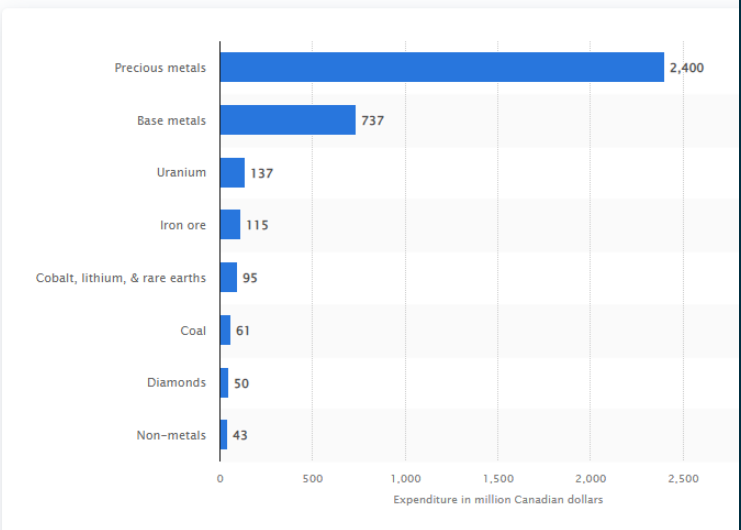
Category	Definition
E1	Development and operation are confirmed to be environmentally-socially-economically viable.
E2	Development and operation are expected to become environmentally-socially-economically viable in the foreseeable future.
E3	Development and operation are not expected to become environmentally-socially-economically viable in the foreseeable future or evaluation is at too early a stage to determine environmental-socio-economic viability.

Australia drillholes highest on record; gold projects heavily favored



Data as of Jan. 17, 2022.
Source: S&P Global Market Intelligence

Mining exploration expenditures in Canada in 2021, (in million Canadian dollars)



UNRMS – an introduction

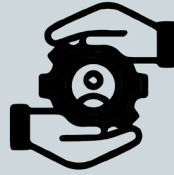
United Nations Resource Management System: Principles



State rights and responsibility in the management of resources



Responsibility to the Planet



Integrated and indivisible management of resources



Social contract on natural resources



Service orientation



Comprehensive resource recovery



Value addition



Circularity



Transparency



Innovation



Health and Safety



Continuous strengthening of core competencies and capabilities

“The government is committed to working with industry and with international partners to safeguard these supply chains and our future economic resilience. We are actively supporting the adoption of transparent, ethical and responsible mining practices, reflecting environmental, social and governance”

UK Government, Net Zero Strategy, 2021

Traceability and the circular economy - role of UNFC and UNRMS

Teck

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Main author
BRE Group
Researcher
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Updated 11 Feb 2021
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Traceability framework for the construction supply chain



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OPINION

What's stopping us from reusing materials?

By Anna Beckett | 4 November 2021



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In the first of a new series, engineer Anna Beckett shows how some fresh thinking could solve apparently intractable issues

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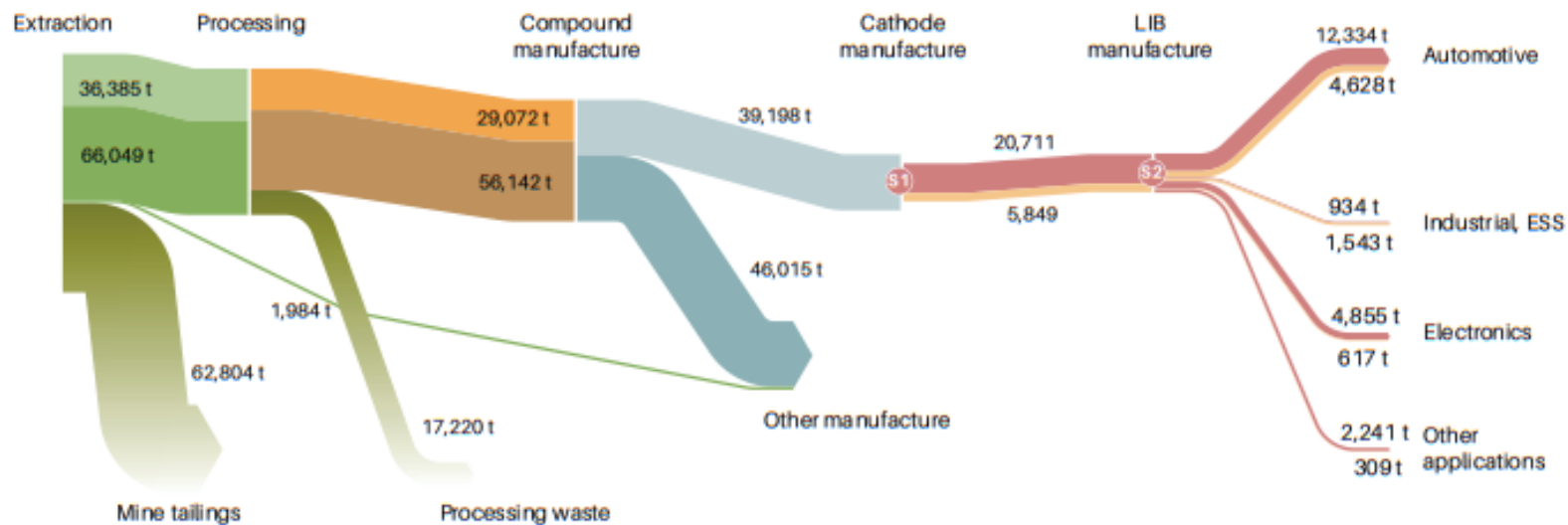
The Digital Traceability of mineral based construction materials

emissions

digital tracing can reduce industrial carbon

Climate Change | SDG 09: Industry, Innovation and Infrastructure

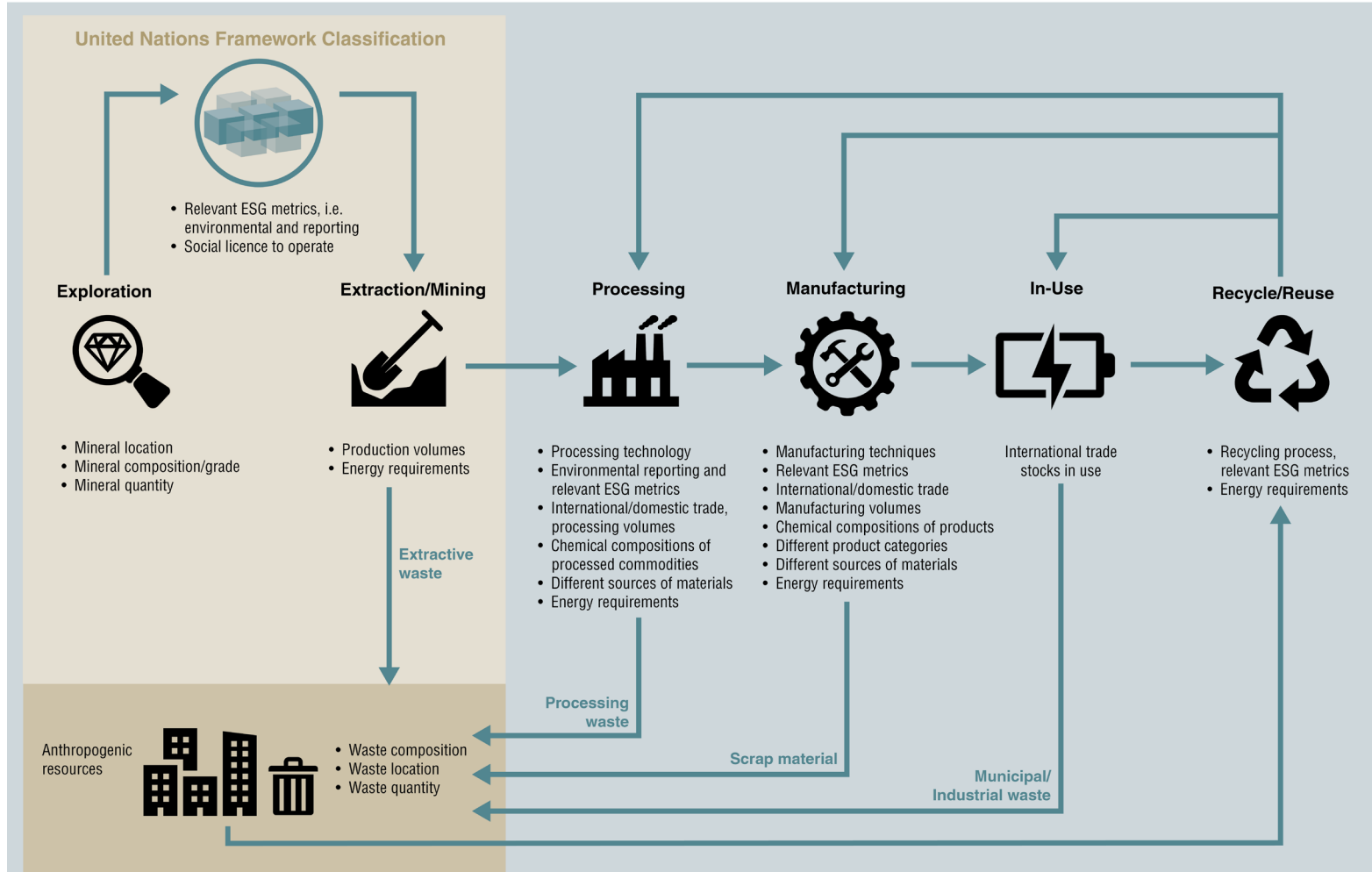




Legend

- Li brine
- Li hard rock mineral production
- Waste
- Li carbonate brine
- Li carbonate spodumene
- Li compounds_battery grade
- Li compounds_other grade
- LIB cathodes/batteries
- LFP cathodes/batteries
- S1: 18,000 t
- S2: 6,750 t

United Nations Resource Management System



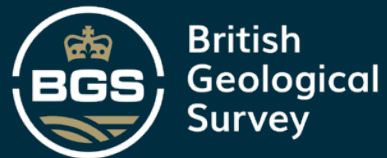
SUMMARY

There is an increased need for holistic resource management and resource data

new ways of thinking, frameworks and classifications are needed

The UNFC and UNRMS are appropriate tools for this





THANK YOU

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