

What is happening in the
(international) world of ESG /
Sustainability in the Extractive
Industries?

Responsible Raw Materials



Responsible Raw Materials would like to thank GSSA for the invitation to speak at the 2021 ESG Inquisition online conference, held on the 10th and 11th August 2021.



RESPONSIBLE RAW MATERIALS

What is happening in the (international) world of ESG / Sustainability in the Extractive Industries?

Dr Sarah Gordon
Co-founder Responsible Raw Materials
www.responsibleawmaterials.com

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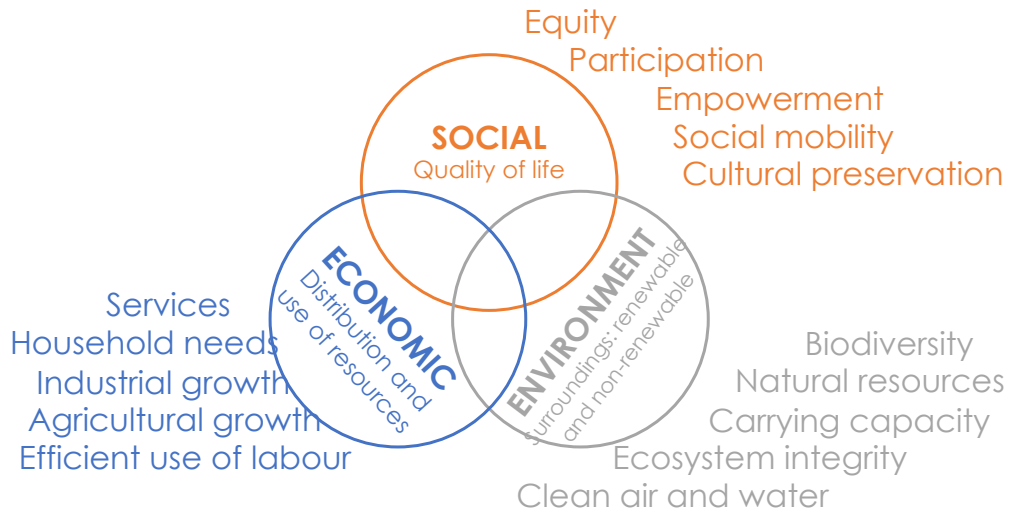
Sustainable development:
"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Brundtland Commission, 1987. *Report of the World Commission on Environment and Development: Our Common Future.* ("A global agenda for change").

www.sriid.com © CATARIA 2021

2

SUSTAINABLE DEVELOPMENT (1980'S) CONSISTS OF:



www.worldbank.org/depweb

www.sataria.com ©SATARLA 2020

3

SUSTAINABLE DEVELOPMENT GOALS (SDGs) (2015):



www.globalgoals.org/

<https://www.youtube.com/channel/UCRfuAYy7MesZmgOi1Ezy0ng/>

4

What is ESG?

Corporate Social Responsibility / Sustainability / ESG / etc...

Environment
Social
Governance

www.satara.com ©SATARA 2020

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Environmental

Land use
Biodiversity & nature conservation
Waste

Noise, visual and vibration
Water
Site access
Rehabilitation & closure
Climate change
Permits

www.satara.com ©SATARA 2020

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ESG – quick intro:

Tobias Kind-Rieper - Environmental impacts along the supply chain of metals

Updated 6 days ago
WWF Deutschland | Reinhardtstr. 18 | 10117 Berlin | DE



<https://www.responsibleawmaterials.com/post/tobias-kind-rieper-environmental-impacts-along-the-supply-chain-of-metals>

Susan Joyce - Understanding 'Social' in ESG

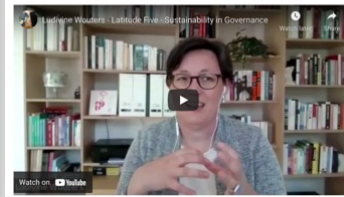
Updated 6 days ago
(Social Practice Forum)
7245 Clifford Road, Merville, BC Canada
Susan@soccommonground.ca



<https://www.responsibleawmaterials.com/post/susan-joyce-understanding-social-in-esg>

Ludivine Wouters - Sustainability in Governance

Updated 6 days ago
Managing Partner | Latitude Five
ludivine.wouters@latitudefive.com
www.latitudefive.com



<https://www.responsibleawmaterials.com/post/ludivine-wouters-sustainability-in-governance>

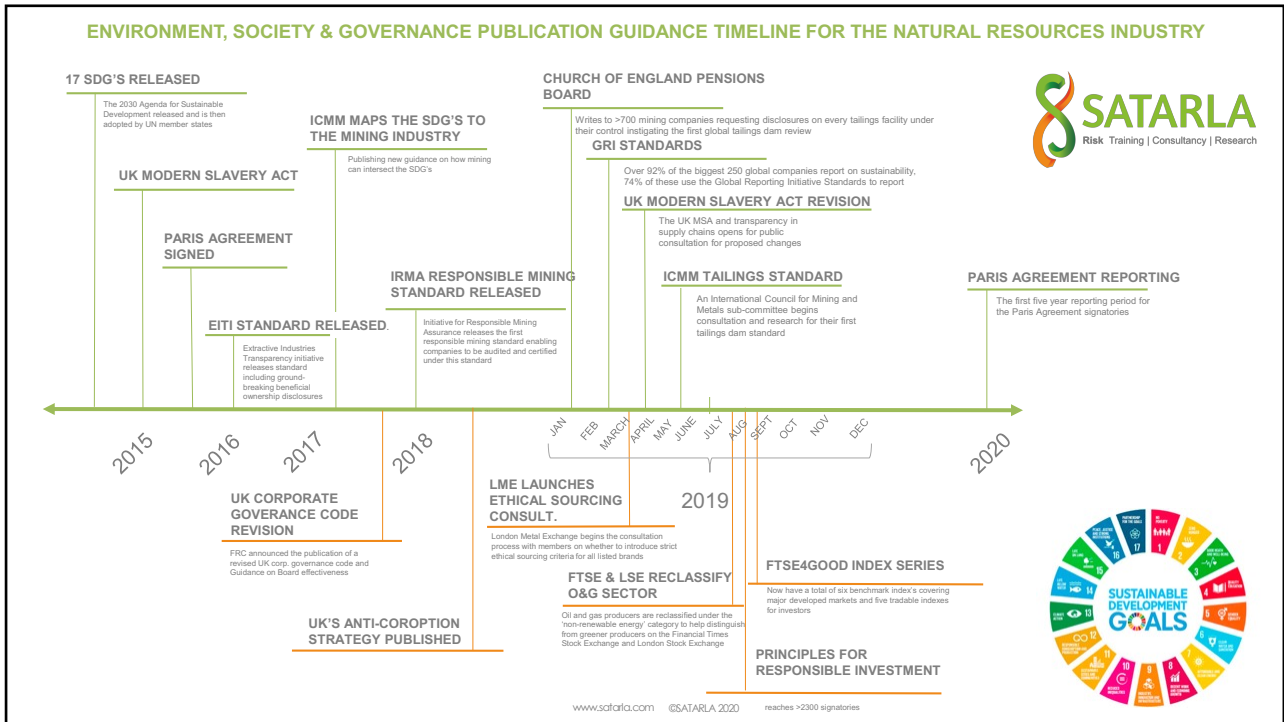
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Example frameworks / standards / principles

Focus	Organisation	Considerations	
Corporate Governance	OECD	• International standards (for 37 OECD countries)	
Project Governance	World Bank / IFC	• Project Finance	• 8 Principles
	Equator Principles	• Bank focused project finance	• 10 Principles
Framework	TCFD	• Climate specific corporate and portfolio scenario framework	• Voluntary framework with 3 disclosure metrics
Standard	GRI	• Outward looking sustainability reporting	• Focus on stakeholder issues
	SASB	• Inward looking sustainability reporting	• Focus on financial materiality
Industry Expectations	ICMM	• Performance Expectations : Major mining operator focused performance expectations – certification soon	• 10 Principles, 38 Expectations
	World Gold Council	• Responsible Gold Mining Principles : Gold mining operator and market development with required assurance	• 10 Principles, 51 Requirements
Investor specific	EBRD	• GET Framework : Development finance with regional specific ambition	• Screening tool with 11 Performance Indicators

www.satarla.com @SATARLA 2020

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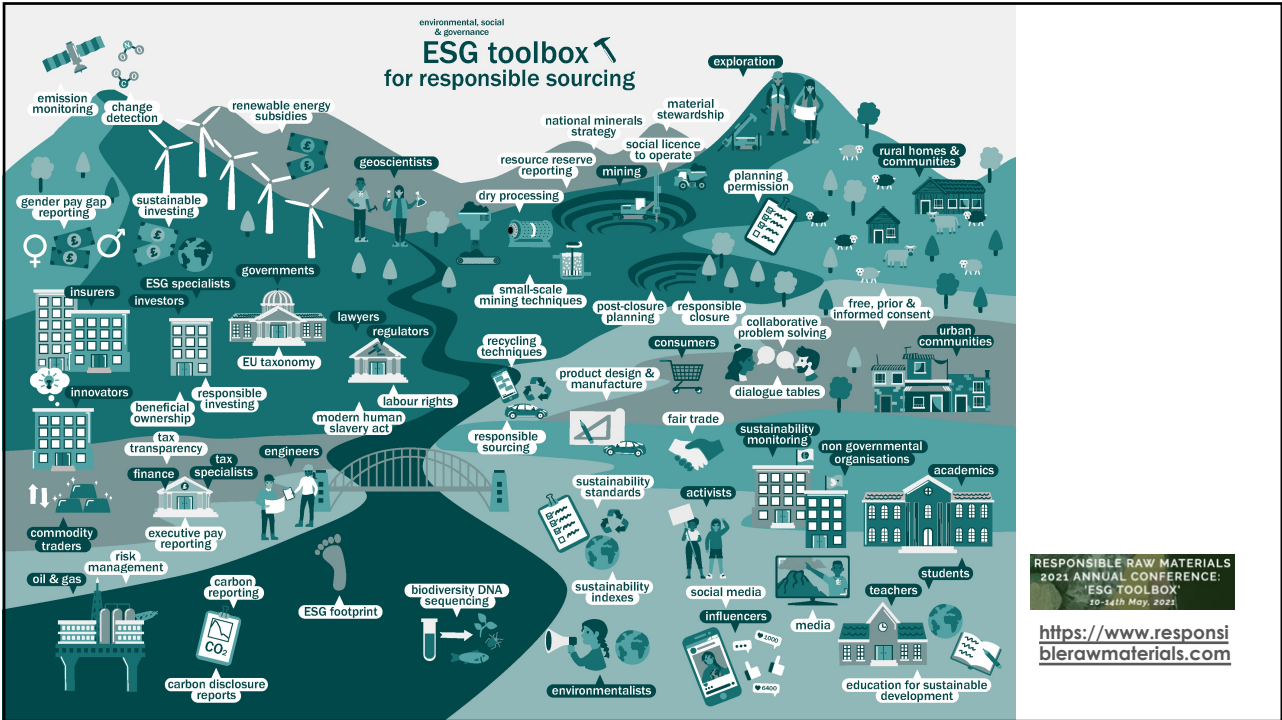
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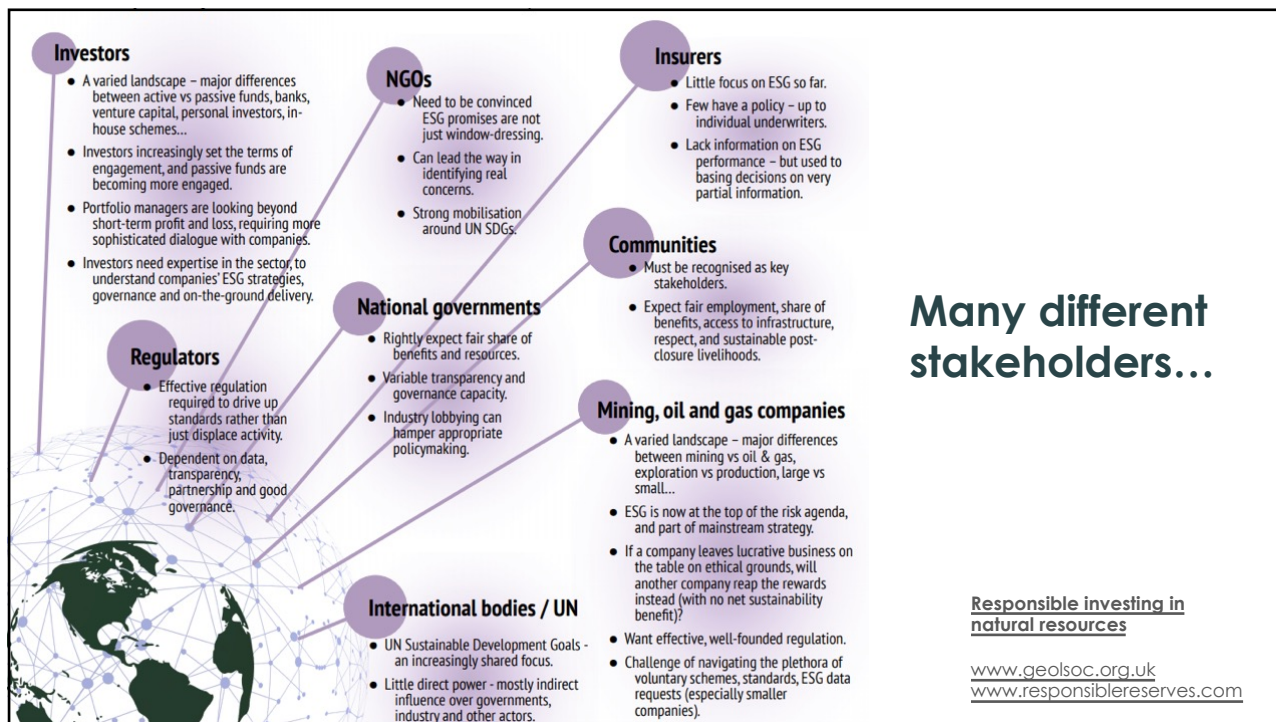
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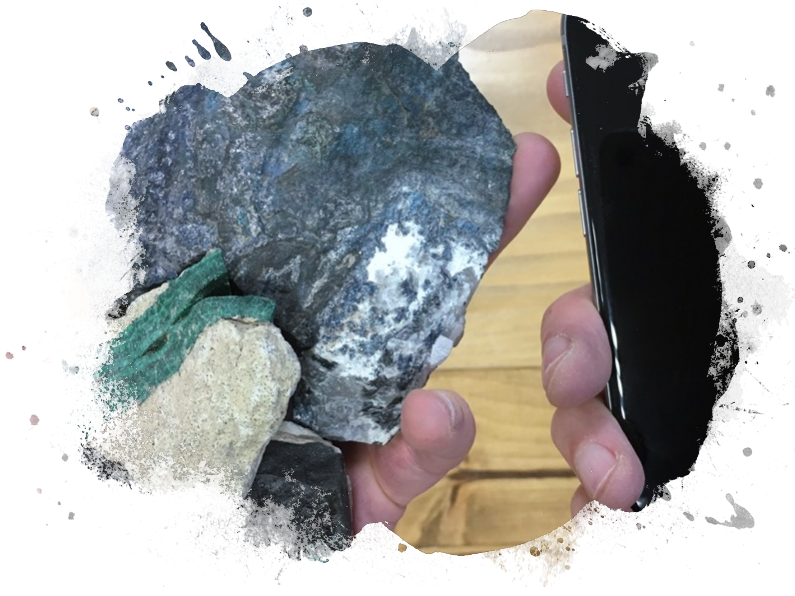
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1. The rocks! (and extraction itself...).

- will leave to all of the
experts in the
conference...



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Mineral codes updates – BIG thank you to SAMESG for leading the way

All mineral reporting codes are being updated in 2021 to ensure they truly include ESG.



TRAILER

Watch the 5 minute 'teaser trailer' from across both sessions



HIGHLIGHTS

Watch the condensed highlights reel from across both sessions

<https://www.responsibleawmaterials.com/rr-round-tables>

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2 Stewardship and Procurement

- REACH
- Procurement standards
- Dodd Frank
- Cobalt

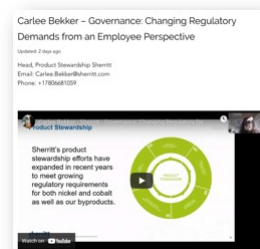


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REACH

REACH [\[EC 1907/2006\]](#) aims to improve the protection of human health and the environment through the better and earlier identification of the intrinsic properties of chemical substances. This is done by the four processes of REACH, namely the registration, evaluation, authorisation and restriction of chemicals.

https://ec.europa.eu/environment/chemicals/reach/reach_en.htm

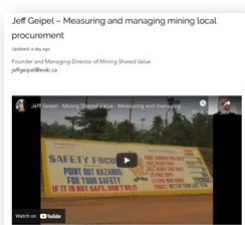


<https://www.responsibleawmaterials.com/post/carlee-bekker-governance-changing-regulatory-demands-from-an-employee-perspective>

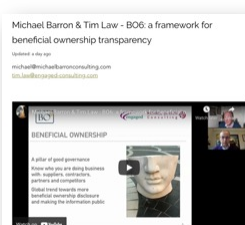
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Procurement standards / expectations

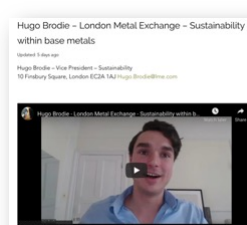
- Buyers / customers increasingly held to account for where they buy their minerals and metals.
E.g. Sanctions
E.g. Tesla / Apple – source of e.g. Cobalt
- Mining companies also need to ensure they are procuring responsibly.
E.g. Modern Human Slavery Act
E.g. Beneficial ownership
- Markets such as the London Metal Exchange is helping this process by including ESG criteria in their requirements to sell materials through their Exchange.



<https://www.responsiblewmaterials.com/post/jeff-geipel-measuring-and-managing-mining-local-procurement>



<https://www.responsiblewmaterials.com/post/michael-barron-tim-law-bo6-a-framework-for-beneficial-ownership-transparency>



<https://www.responsiblewmaterials.com/post/hugo-brodie-london-metal-exchange-sustainability-within-base-metals>

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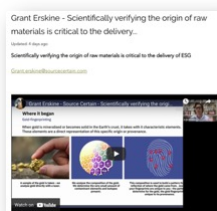
Dodd Frank

The **Dodd–Frank Wall Street Reform and Consumer Protection Act** (commonly referred to as **Dodd–Frank**) is a [United States federal law](#) that was enacted on July 21, 2010.

Section 1502 requires companies trading in the US to if their supply chains regarding Tin, Tungsten, Tantalum and Gold from DRC are conflict or not.

Organisations such as the [Responsible Minerals Initiative](#) support buyers in assuring that conflict minerals do not form part of their supply chain. <http://www.responsiblemineralsinitiative.org/>.

Responsible sourcing tools such as those using block chain technology have been funded in part due to required governance as a result of Dodd Frank.



<https://www.responsiblewmaterials.com/post/grant-erskine-scientifically-verifying-the-origin-of-raw-materials-is-critical-to-the-delivery>

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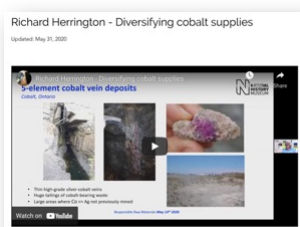
Cobalt

Cobalt is not included in Dodd Frank as is not a conflict mineral. Approximately 60% of all cobalt produced is extracted from the DRC. Cobalt is a critical mineral for e.g. lithium batteries.

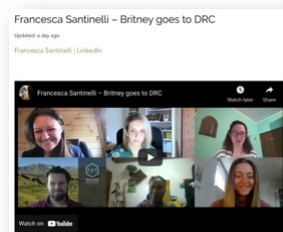
Multiple "fair cobalt" initiatives have been set up over the past 3 x years.

Many different schools of thought re. sourcing from ASM.

Many different initiatives put in place by Large Scale Miners re. how to work with ASM on / close to their properties.



<https://www.responsibleawmaterials.com/post/diversifying-cobalt-supplies>



<https://www.responsibleawmaterials.com/post/francesca-santinelli-britney-goes-to-drc>

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3 Design & circular economy

- Circular economy
- Designing our products for reuse and recycling.



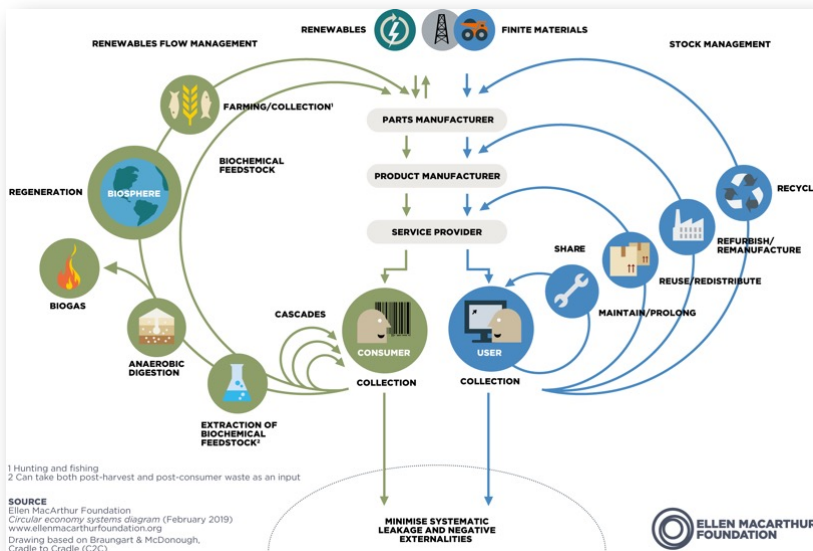
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Circular Economy

A **circular economy** is a systemic approach to **economic** development designed to benefit businesses, society, and the environment.



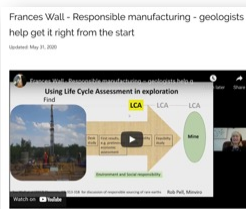
<https://www.responsibleawmaterials.com/post/frances-wall-integrating-primary-raw-materials-into-circular-economy-research>



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Circular Economy

Many different viewpoints for the circular economy.... But in essence = making best use of the materials we extract from the ground.



<https://www.responsibleawmaterials.com/post/responsible-manufacturing-geologists-help-get-it-right-from-the-start>

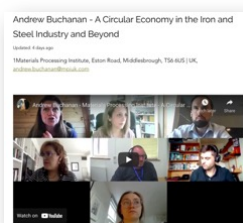


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Designing for the long term

Most of our products are not designed to be recycled, let alone repurposed or reused....

For example, almost no lithium batteries have been built to be recycled.



<https://www.responsibleRawMaterials.com/post/andrew-buchanan-a-circular-economy-in-the-iron-and-steel-industry-and-beyond>

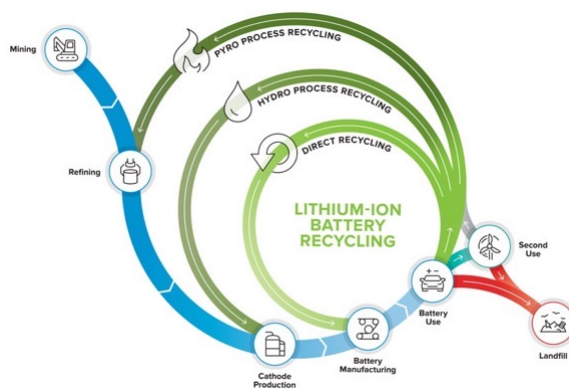


Image source: Argonne National Laboratory.

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4 Finance

- Investment
- Insurance
- Sustainable finance

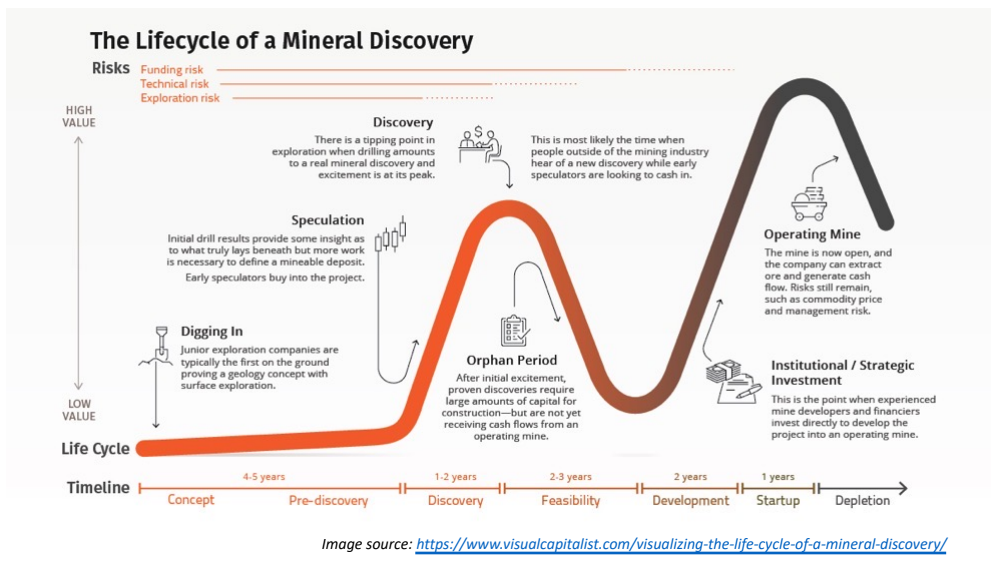


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Investment

Different types of investment in mining exist including financing debt through to purchasing equity in a project or even off-takes from a producing mine.

(Note what is missing from the risks in this diagram...)

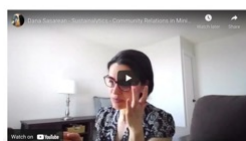


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Investors often make use of sustainability indices

Many different sustainability ranking indices exist. Most make use of publicly available data to rank companies against one another

Dana Sasarean - Community Relations in Mining: ESG Risk Rating



<https://www.responsibleRawMaterials.com/post/dana-sasarean-community-relations-in-mining-esg-risk-rating>

ELSEVIER Ecological Indicators 7 (2007) 299–314

ECOLOGICAL INDICATORS

This article is also available online at: www.elsevier.com/locate/ecolind

Contrasting and comparing sustainable development indicator metrics

Jeffrey Wilson^{a,*}, Peter Tyedmers^a, Ronald Pelot^b

^aSchool for Resource and Environmental Studies, Dalhousie University, Canada
^bDepartment of Industrial Engineering, Dalhousie University, Canada

Received 4 October 2005; received in revised form 17 February 2006; accepted 21 February 2006

Abstract

Despite the fact that it has been well over a decade since Agenda 21 first called for sustainable development indicators, there is no consensus regarding the best approach to the design and use of SDI models. It is important, therefore, to question the effectiveness of SDIs in an effort to continue advancing sustainability.

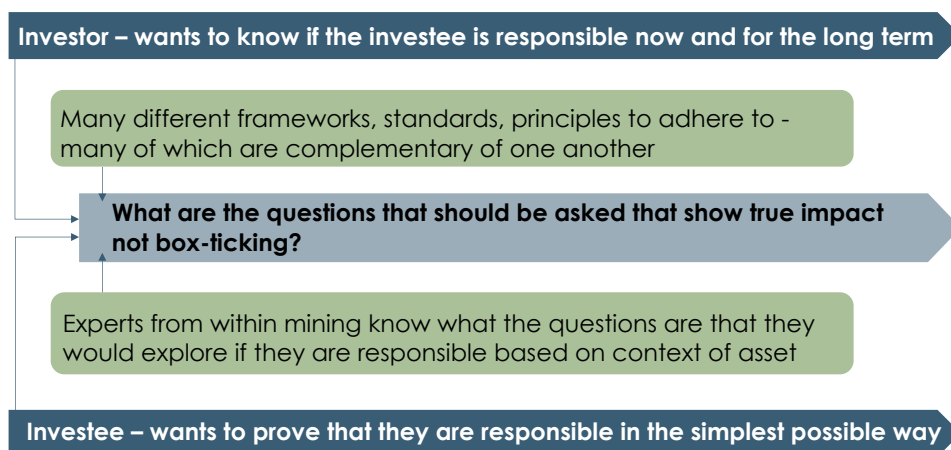
This paper addresses one aspect of this question by exploring whether our global SDI metrics are sending a clear message to guide us towards sustainable development. Six global SDI metrics are compared by relative ranking in colour coded tabular format and spatially in map format. The combined presentation of results clearly illustrates that the different metrics arrive at varying interpretations about the sustainability of nations. The degree of variability between the metrics is analyzed using correlation analysis. The variability in findings draws attention to the lack of a clear direction at the global level in how best to approach sustainable development. Canada is presented as a case study to highlight and explain the discrepancies between SDI measures.

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Keywords: Sustainability; Sustainable development; Indicators; Indicators of development; Ecological footprint; Environmental sustainability index; Wellbeing index

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Increasingly investors are taking sustainability more seriously – looking for reality.



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Increasingly investors are taking sustainability more seriously – looking for reality.

Investors are trying to steer away from "tick-box" sustainability and instead carrying out due diligence to ensure it is real.

Also, investors such as The Church of England led the call for a need for an investigation into Tailings Dam failures within the mining sector.

<https://www.responsiblematerials.com/post/friday-15th-may-10-00-10-20-gareth-morgan>

Gareth Morgan - Trust, but verify: reported vs. observed, keeping an objective eye on natural...

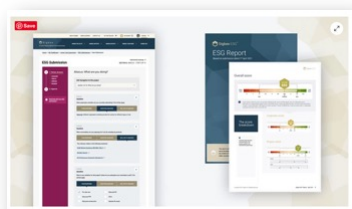
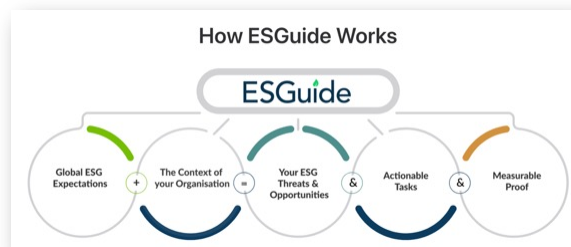
Updated: May 31, 2020

Trust, but verify: reported vs. observed, keeping an objective eye on natural resources production & supply using Earth Observing satellite data analytics

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Reporting & managing

A wide range of monitoring techniques have been developed in recent years including the ability to measure gas emissions using satellites to biodiversity monitoring from DNA sequencing from a water sample



<https://www.responsibleawmaterials.com/post/jamie-strauss-digbee-esg>



<https://esguide.org/>

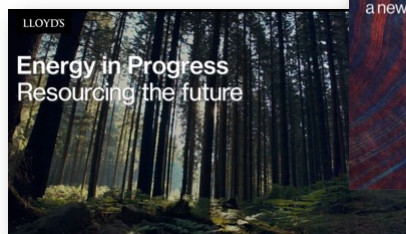
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Insurance

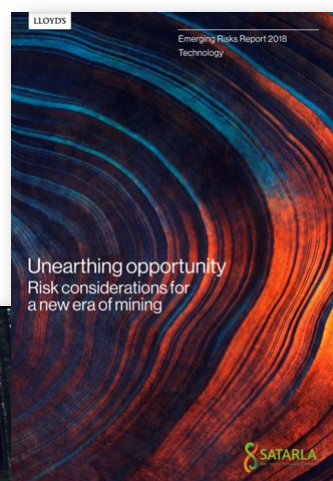
Having insurance is often critical to the funding and sometimes obtaining of sales contracts for a project. However, insurance is lagging behind the investment / banking ESG awareness.



<https://www.responsibleawmaterials.com/post/james-fryer-esg-can-insurers-become-the-good-guys>



<https://vimeo.com/user10379912/tmmfilms/video/283762624>



<https://www.lloyds.com/news-and-insights/risk-reports/library/unearthing-opportunity>

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Sustainable finance...

The world of finance is going through huge change at the moment. Driven by the need for the world to meet climate change targets, regulation such as TCFD (Taskforce on Carbon related Financial Disclosures (<https://www.fsb-tcf.org/>)) are now coming into being. These are being followed by financial guidance on biodiversity etc.

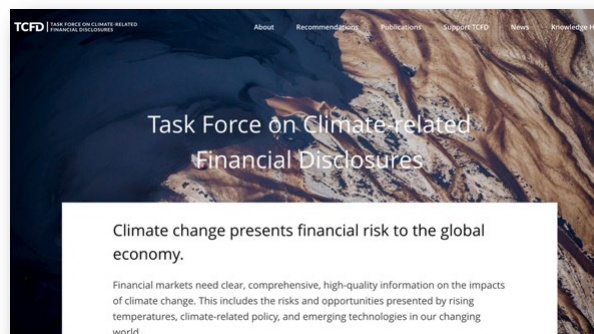
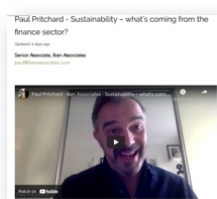


Image source: <https://www.fsb-tcf.org/>



<https://www.responsiblelawmaterials.com/post/paul-pritchard-sustainability-what-s-coming-from-the-finance-sector>

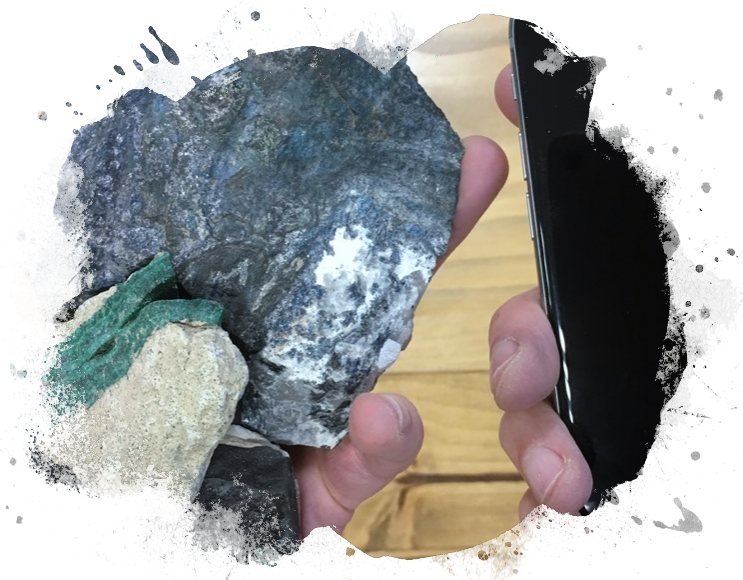


<https://www.inspiration-all.co.uk/paul>

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5 Governments & Regulators

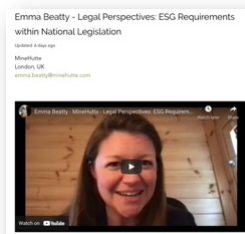
- Laws and legislation
- International guidance
- Commodity specifics
- Mineral reporting Codes



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National legislation

Most countries have a mining code or some sort of legislation that governs the extraction of material from the ground. The structure of this governance is different for each country. This governance is updated every so often.



<https://www.responsiblelawmaterials.com/post/emma-beatty-legal-perspectives-esg-requirements-within-national-legislation>



e.g. update to the DRC mining code in 2018

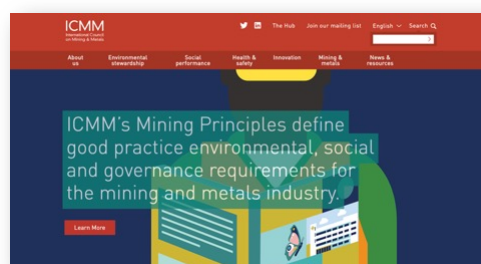
<https://www.mayerbrown.com/-/media/files/perspectives-events/publications/2018/03/update-on-the-mining-code-of-the-democratic-republ/files/mining-code-of-the-democratic-republic-of-congo/fileattachment/mining-code-of-the-democratic-republic-of-congo.pdf>

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International guidance

Many different groups and initiatives exist to support more responsible mining and sourcing of raw materials. E.g.

- Responsible Mining Initiative.
- OECD
- ICMM
- IRMA



<https://www.icmm.com/>



<https://www.responsiblelawmaterials.com/post/embedding-esg-and-the-sdgs-in-corporate-culture-not-just-in-reporting>

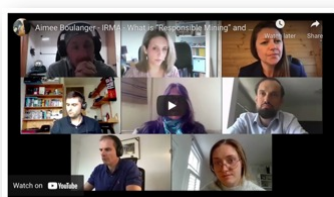


<https://www.responsiblelawmaterials.com/post/louis-mar%C3%A9chal-the-oecd-and-the-oecd-guidance-on-responsible-supply-chains-of-minerals>

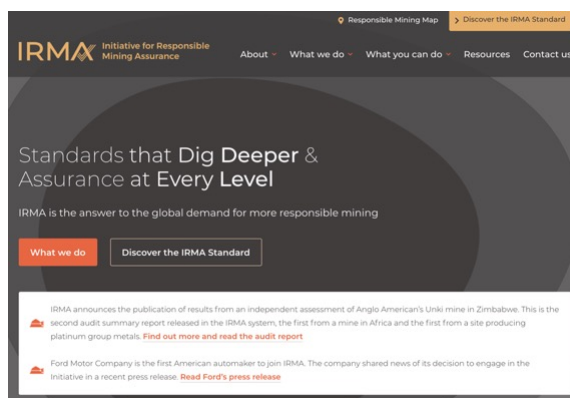
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Initiative for Responsible Mining Assurance

IRMA took >10 years to be launched and pools requirements from miners, customers, NGOs etc.



<https://www.responsibleawmaterials.com/post/aimee-boulanger-what-is-responsible-mining-and-who-decides>



<https://responsiblemining.net/>

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Commodity specific guidance

Different commodities have also developed their own guidance. E.g.

- Gold Council
- International Tin Association
- International Aluminium Institute
- Cobalt Institute

Stephen Taiwo - Responsible sourcing across the Tin supply chain
Wednesday, May 20, 2020



<https://www.responsibleawmaterials.com/post/responsible-sourcing-across-the-tin-supply-chain>



<https://www.cobaltinstitute.org/responsible-sourcing.html>

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Mineral codes updates

All mineral reporting codes are being updated in 2021 to ensure they truly include ESG.



TRAILER

Watch the 5 minute 'teaser trailer' from across both sessions



HIGHLIGHTS

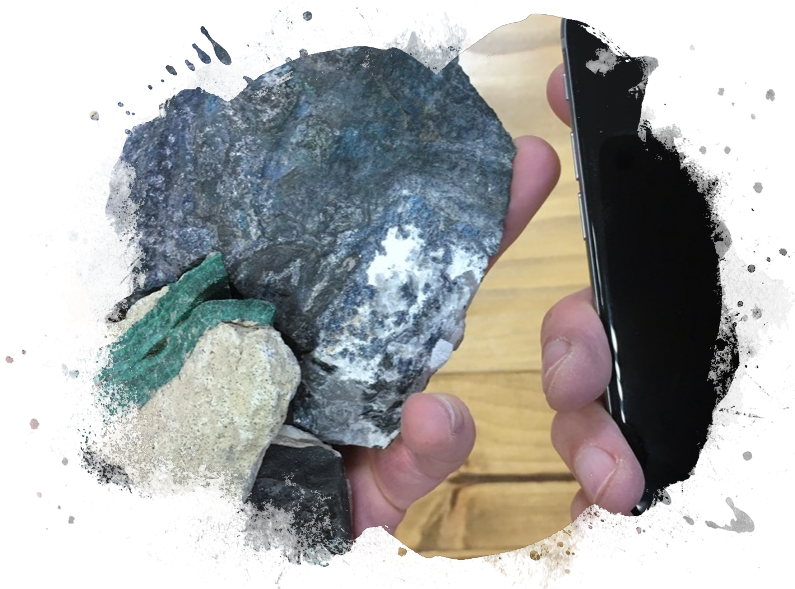
Watch the condensed highlights reel from across both sessions

<https://www.responsibleawmaterials.com/rr-round-tables>

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6 NGOs and activists

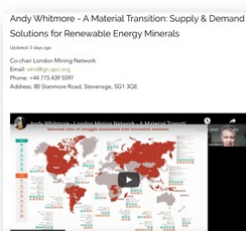
- Holding industry and investors to account.



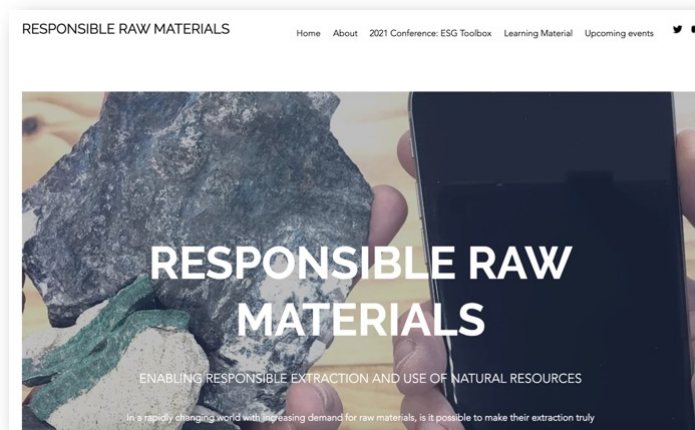
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Holding industry and investors to account

Range from anti-mining groups to those who actively work with raw materials companies to help them improve.



<https://www.responsibleawmaterials.com/post/andy-whitmore-a-material-transition-supply-demand-solutions-for-renewable-energy-minerals>

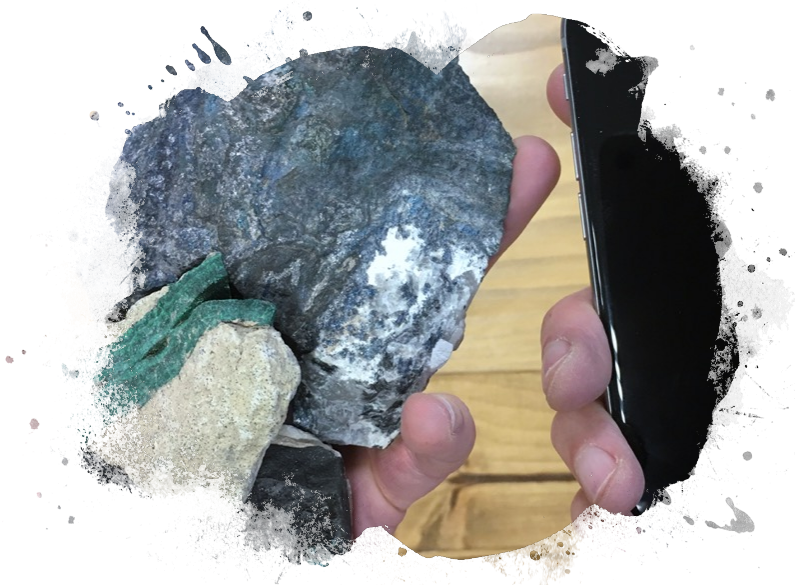


<https://www.responsibleawmaterials.com/>

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7 Society

- Perception
- Engagement and co-creation



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Perception of mining and raw materials

The normal perception of mining is that it is bad. However.... necessary

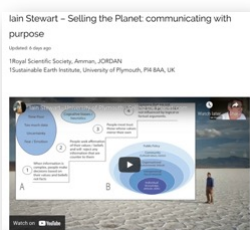


<https://www.responsibleawmaterials.com/post/bursting-the-bubble-panel-session-hosted-by-asa-borsson>

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Engagement and co-creation

Many different initiatives are underway to try and better engage with society to increase awareness.



<https://www.responsibleawmaterials.com/post/iain-stewart-selling-the-planet-communicating-with-purpose>



<https://www.responsibleawmaterials.com/post/lucy-crane-ben-lepley-public-perception-of-the-minerals-industry-communicate-through-connection>

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RESPONSIBLE RAW MATERIALS

IN SUMMARY:

- If we are to achieve our green industrial revolution, we need to focus more on extraction
- The circular economy can help but it can't do it all
- Huge number of standards, guidance, principles available – all of which need to be navigated.
- Focus on measuring reality (not tick boxing) – drive responsibility.
- We all need to step up – every single stakeholder

www.responsiblerawmaterials.com. hello@responsiblerawmaterials.com

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RESPONSIBLE RAW MATERIALS

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