

Day 1 : 22 May 2024 Plenary session 4  
Responsible sand and silicates: implications for  
due diligence





# Welcome



CREATE CHANGE



## Dr Louise Gallagher

Senior Fellow,  
Global Centre for  
Mineral Security,  
The University of  
Queensland





Global awareness of sand and sustainability challenges is rising. Momentum is building.

## International public policy, research

2021



2022



2023



2017



2018



2019




## Media and civil society

**The Guardian** How child labour in India makes the paving stones beneath our feet March 2024

**SCIENTIFIC AMERICAN** Feb 2024 Inside the Crime Rings Trafficking Sand

**PHYS ORG** Sand mining in Vietnam's Mekong Delta sinks homes, livelihoods Nov 2023

**WORLD ECONOMIC FORUM** Sand mining is close to being an environmental crisis. Here's why – and what can be done about it Sept 2023

**REUTERS GRAPHICS** Feb 2021 The messy business of sand mining explained

**FINANCIAL TIMES** Boom in illegal sand mining threatens vulnerable lakes and rivers April 2021

**Le Monde** Sept 2022

**YaleEnvironment360** Feb 2019 The Hidden Environmental Toll of Mining the World's Sand

**The Guardian** Sand mining: the global environmental crisis you've probably never heard of Feb 2017

## Private sector

**OECD** 2023 Forum on Responsible Mineral Supply Chains 26-27 April 2023 - Forum sessions 24-28 April 2023 - Partner sessions

**Mercedes-Benz** 2023 An Invitation to Explore Responsible Sourcing of Sand and Silicates 27 Apr 2023 | 08:30 - 10:00 Partner session - Auditorium

**IKEA** 2021 BES 6001 Framework Standard for Responsible Sourcing V4.0 2022

**Concrete Sustainability Council** 2016 RESPONSIBLE SOURCING PLEDGE 2012



## Coming Q4 2024

### An OECD baseline of social and environmental risks in sand and silicate supply chains

- Multi-stakeholder dialogue
- Annex II AND Environmental Handbook risks
- Desktop study





# Sand and silicates are *big* part of responsible minerals supply



Rumi (1207-1273) Townspeople, Who have Never Seen an Elephant, Examine its Appearance in the Dark, 1663 AD | Walters Art Gallery / Wikimedia Commons



Sand and silicates are significant because of the scale of their extraction, use and impacts around the world



Dr Uyanga Gankhuyang

ACP-EU  
Development  
Minerals  
Programme  
Manager, UNDP





Annual global sand and silicate production and consumption volumes are ~70,000x greater than other materials often discussed at the OECD Forum

Material	Annual volume (metric tons)
Gold <sup>1</sup>	740,800 mt
Cobalt <sup>2</sup>	
Lithium <sup>3</sup>	
Tin <sup>4</sup>	
Tantalum <sup>5</sup>	
Tungsten <sup>6</sup>	

Material	Annual volume (metric tons)
Sand and gravel <sup>1</sup>	~51.2 billion mt
Industrial sand and gravel <sup>2</sup>	
Clays (US only) <sup>3</sup>	
High purity quartz (US only) <sup>4</sup>	
Feldspar (US only) <sup>5</sup>	
Natural stone (internationally traded volumes only) <sup>6</sup>	



Sand and silicates are significant because of the scale of extraction, use and impacts

LSM production



SMEs, ASM production









Sand and silicates risks overlap strongly with the OECD Annex II and Environmental Handbook risks



Mr Rana Sengupta

CEO, Mine Labour  
Protection Campaign Trust  
Delve Exchange, South  
Asia Coordinator



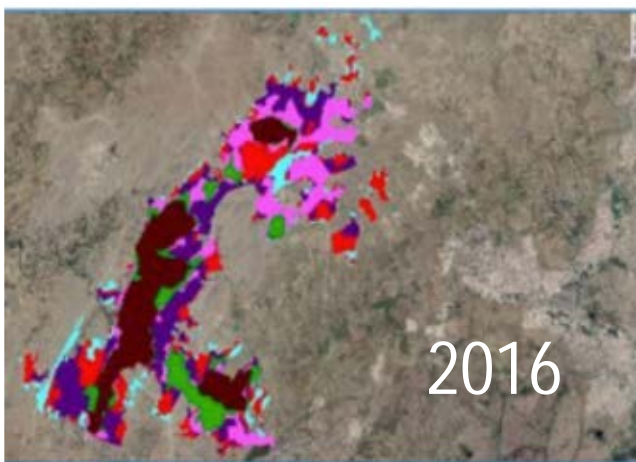




## Case study: Social and environmental risks in sandstone supply chains

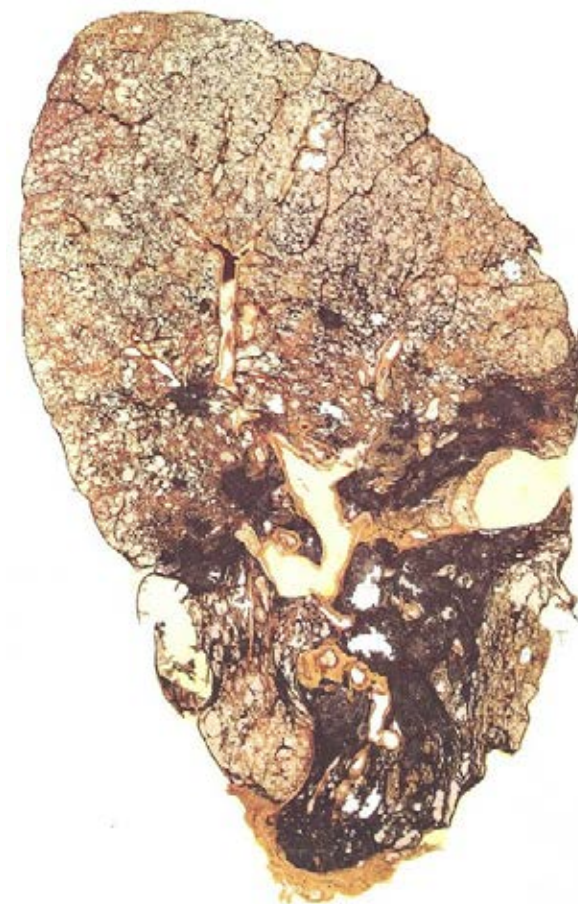


1990



2016

5 x growth in sandstone quarrying in 25 years in Jodhpur, India (Singhal and Goel, 2020)



Slice of a lung affected by silicosis (CC BY-SA 3.0)





Significant sectors are highly dependent on sand and silicates, and will need to pursue responsible sourcing soon



**Mr Mihai Popa**

Raw Material  
Leader for  
Inorganic materials,  
IKEA of Sweden





## Case study: Materiality of sand and silicates to IKEA's supply chains





The OECD Due Diligence instruments apply, and some efforts are already underway



Mr Jan Knacksterdt

Project Coordinator,  
Raw Materials &  
Human Rights,  
Mercedes-Benz AG







The OECD Due Diligence guidelines apply, and some efforts are already underway

## Sand and silicates contribute to car production in 7 ways



Photo  
credit | [360°  
Umweltcheck  
Mercedes-  
Benz EQS](#)

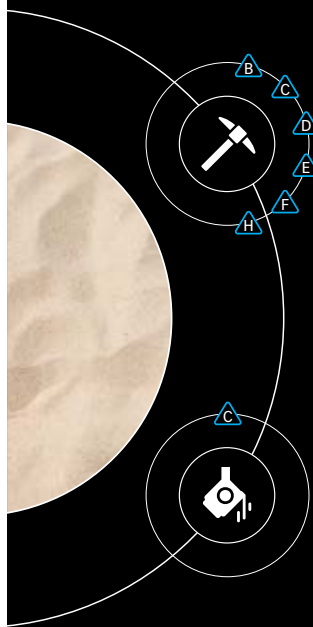


# Case study: Mercedes Benz's 2023 Raw Materials Report

## si Silica Sand & Silicon

In their processed form, silica sands are used in a wide variety of products in the automotive industry. This can range from high-purity quartz sands for glass production to further processing into metallurgical silicon for aluminum alloys. Silica sands naturally form from the weathering of many different minerals and rocks.

### Raw Material Risks



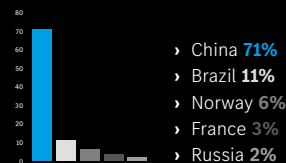
#### Mining and Beneficiation

Main silica sand mining countries according to global market share<sup>1</sup>

- › China
- › USA
- › Spain
- › Netherlands
- › Italy

#### Smelting and Refining

Metallurgical Silicon Production<sup>2</sup>



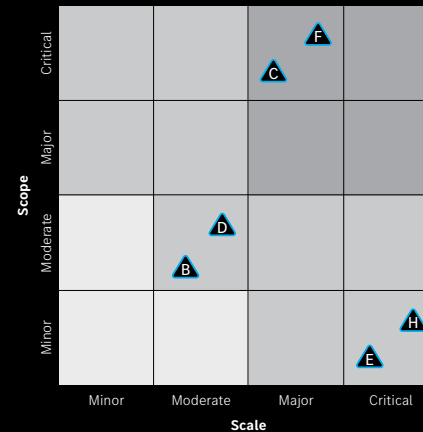
#### Identified Salient Risks

- B** Child labour
- C** Modern slavery, including forced labour
- D** Community and indigenous peoples' rights
- E** Excessive violence by private and public security forces
- F** Environmental risks with impact on human rights
- H** Serious human rights abuses

#### Focus Parts/Commodities

- › Glass
- › Aluminium silicon alloys
- › Semiconductors

#### Risk Analysis



<sup>1</sup> Due to the often very local and non-transparent sand market, it is not possible to give an exact percentage.  
<sup>2</sup> Due to the different glass applications, e.g. in the construction industry, it is not possible to make a prediction about the annual country capacities of glass for automotive industries.

# Audience reflections

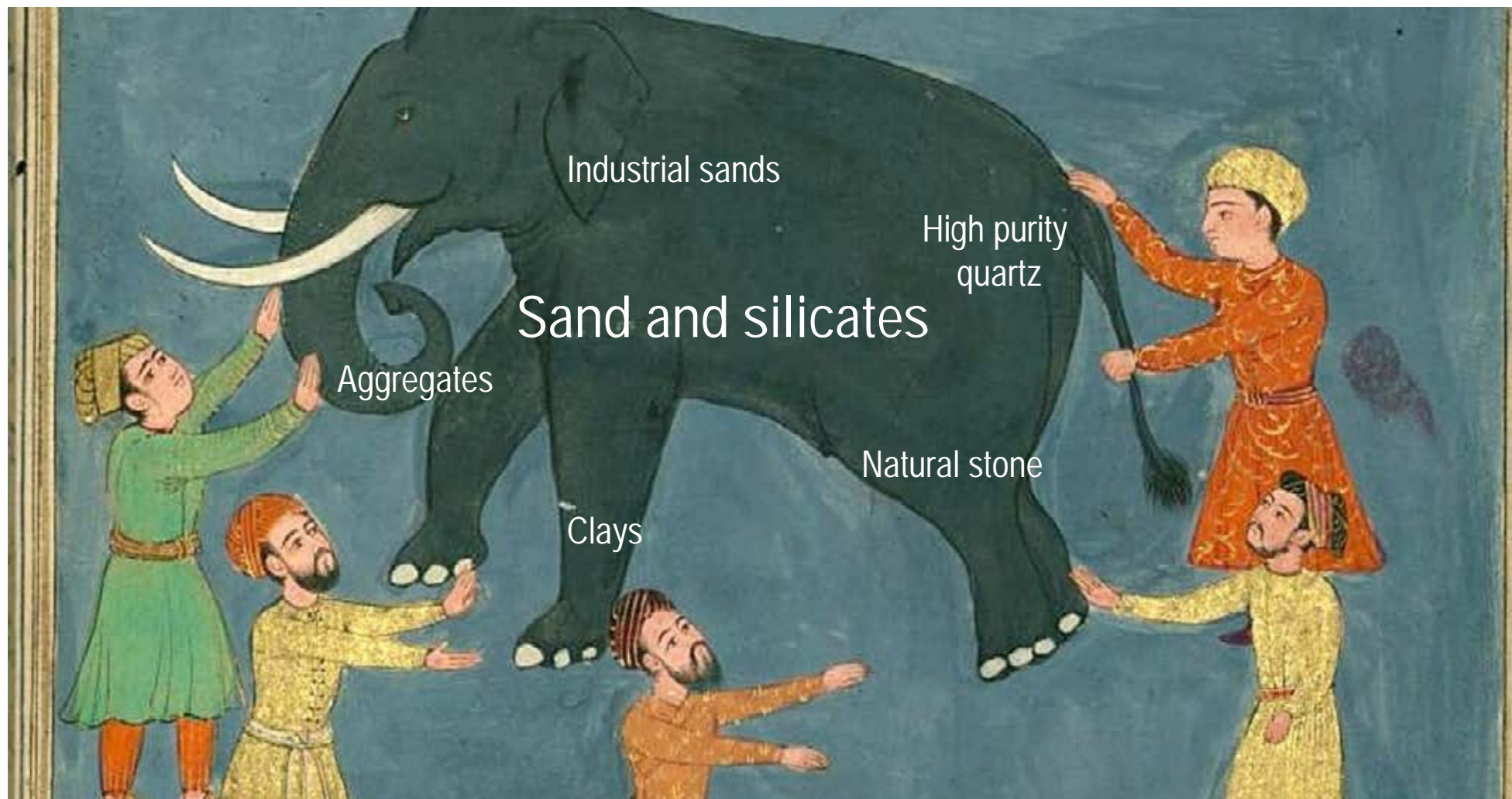
Panelists' reflections

One take away reflection?

What would you like to see happen next?



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Thank you!

