



Assessing social impacts of cobalt artisanal mining: the role of S-LCA

NEMO Project Webinar

27th November 2020

*Lucia Mancini, Serenella Sala, Fabrice Mathieux
EC Joint Research Centre – Land Resources Unit*

Joint
Research
Centre

Joint Research Centre

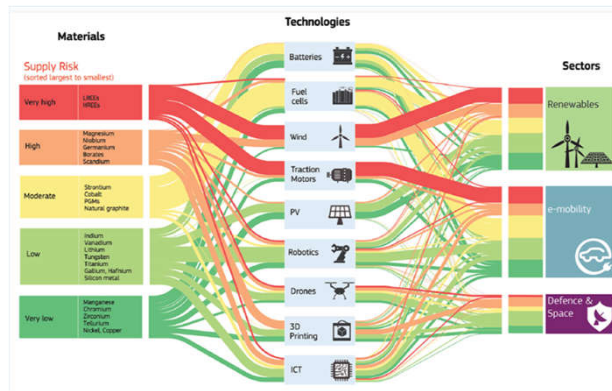
The European Commission's
science and knowledge service

*As the science and knowledge
service of the Commission our
mission is to support EU policies
with independent evidence
throughout the whole policy cycle*



JRC Land Resources Unit activities

Foresight analysis and strategic value chains



Life Cycle Assessment – Social Life Cycle Assessment and environmental footprint



Raw Materials Information System

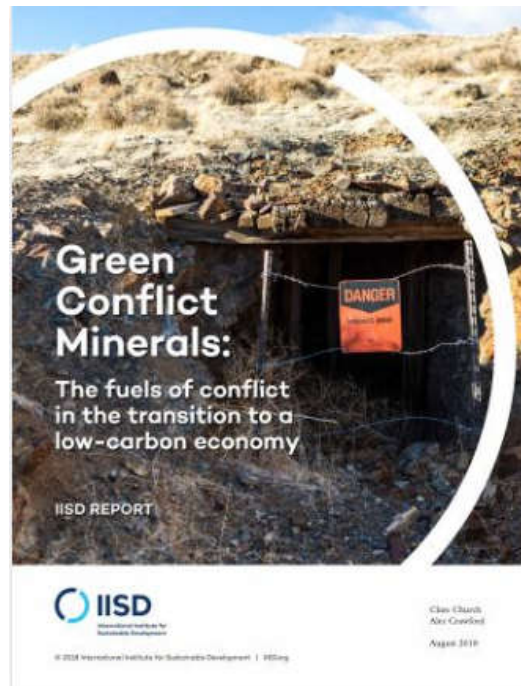
European Platform on Life Cycle Assessment

Responsible sourcing as a new emerging field of research



“THIS IS WHAT WE DIE FOR”

HUMAN RIGHTS ABUSES IN THE DEMOCRATIC REPUBLIC OF THE CONGO POWER THE GLOBAL TRADE IN COBALT



Forbes

Jan 13, 2020,

2,926 views | Jan 13, 2020, 05:12pm EST

Are These Tech Companies Complicit In Human Rights Abuses Of Child Cobalt Miners In Congo?

Harry Dempsey DECEMBER 16 2019

FINANCIAL TIMES

Tech giants sued over child deaths in DRC cobalt mining

Apple, Google and Tesla flout their own policies in sourcing material, says human rights group



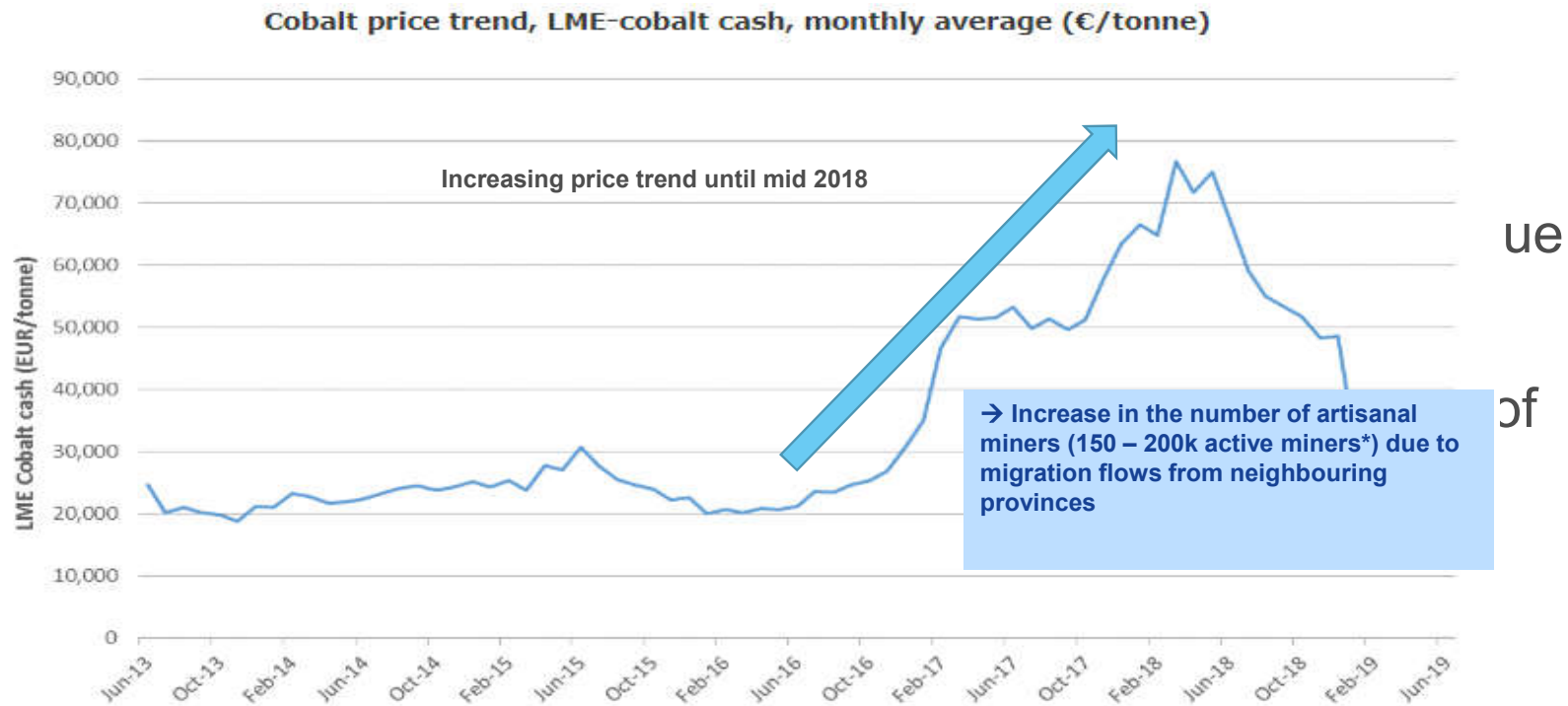
Responsible sourcing in the EU policy

- Ch. 4 «A stronger Europe in the world»
 - Free and fair trade: *zero tolerance on child labour*»
- EU Conflict Minerals Regulation (3TGs)
- Strategic action plan for batteries and upcoming Battery Regulation



Cobalt in battery supply chain

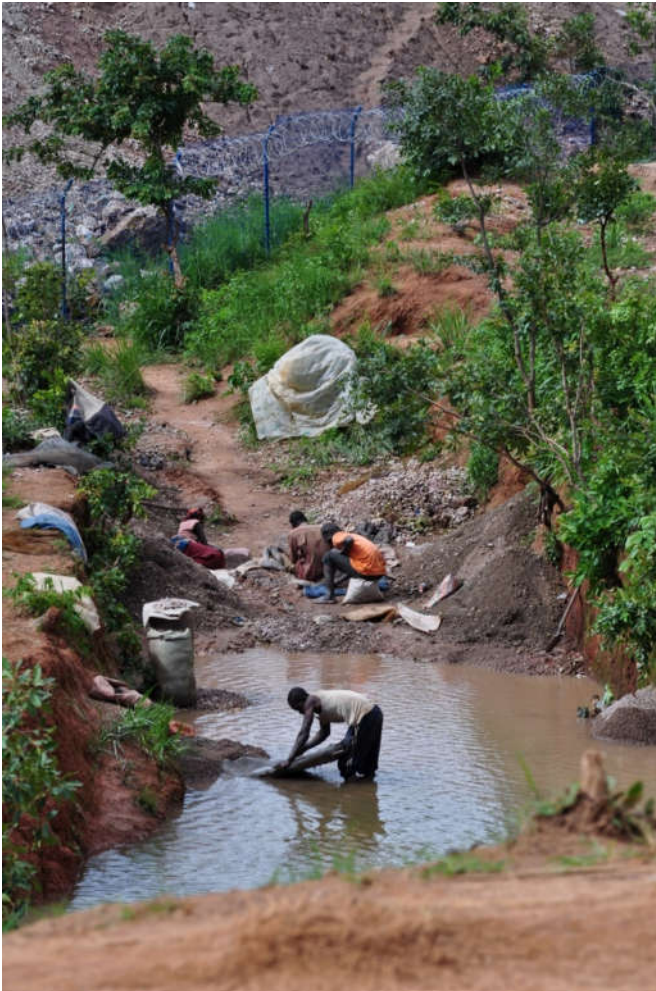
- Cobalt
- Demand to e.g.
- 62% of the Co
- DRC h
- 25% of



Source: S&P Global (2019)

* Estimate based on various sources (incl. BGR 2019, EITI, expert consultation, etc.)

Artisanal mining in the Katanga Copperbelt (DRC)



- Manual extraction in open pit or underground galleries and first processing.
- Key livelihood option, low entry barrier
- For each mining job 1 to 3 indirect jobs are created (e.g. transport and food providers, etc...)
- Informality/illegality → human rights abuses

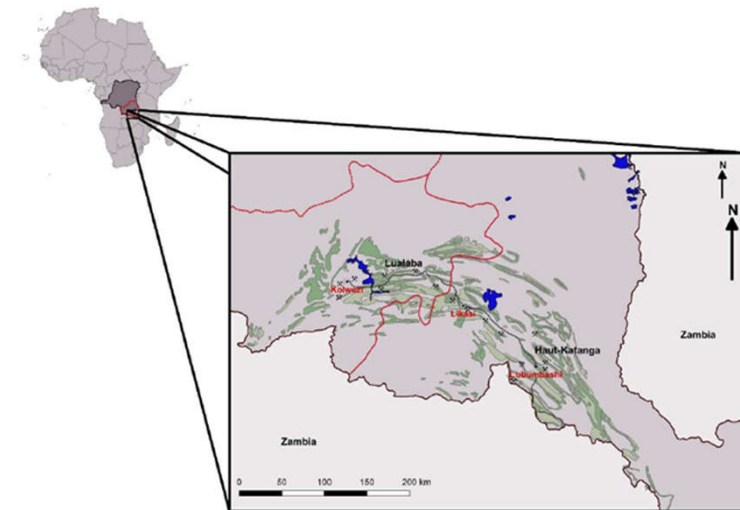


Photo credit: Nicolas Eslava, Afai Consulting

Responsible Sourcing (RS) of cobalt from artisanal mining in the DRC

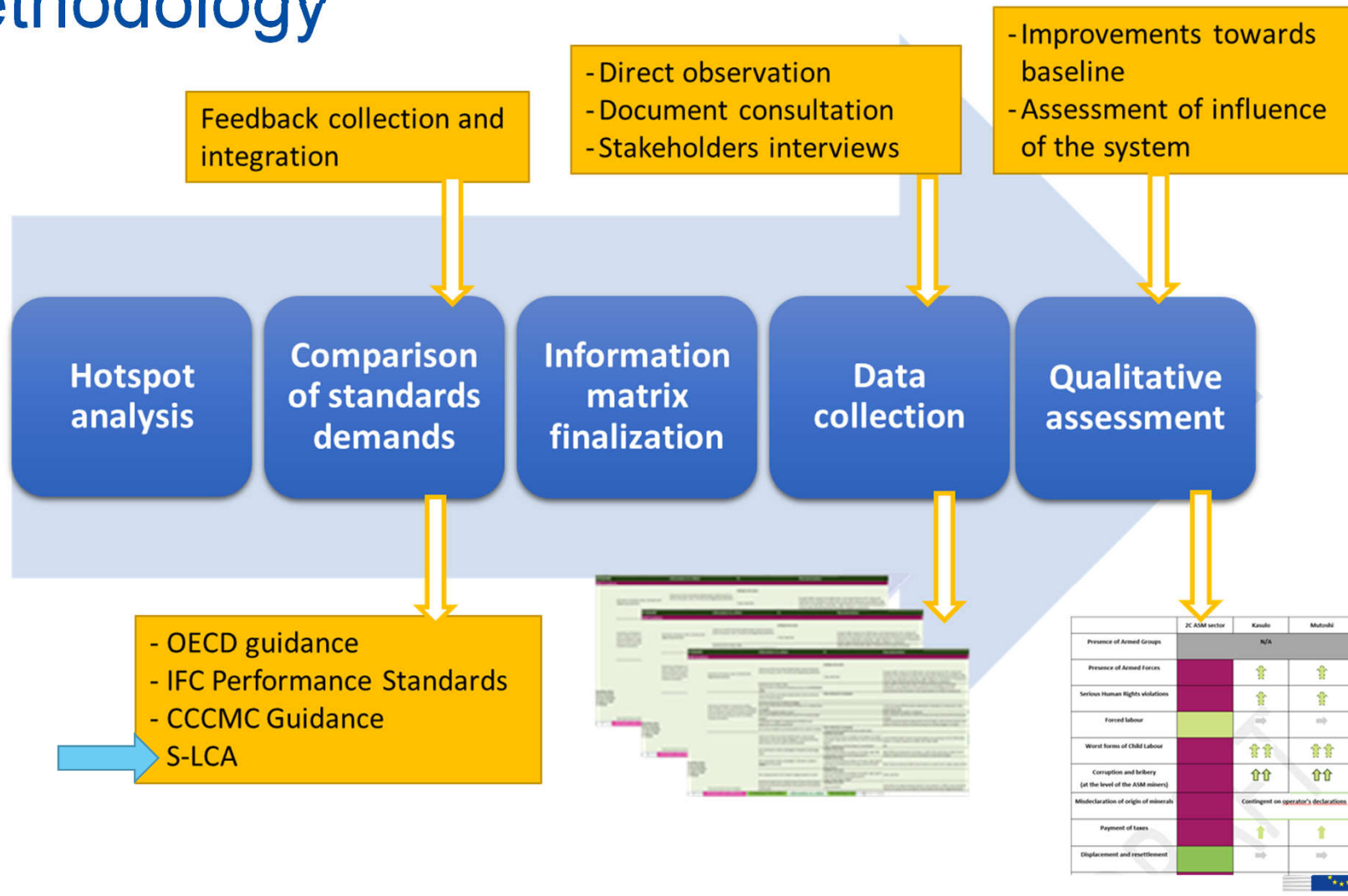


Research questions:

- *What is the impact of RS initiatives on the ground?*
- *Social conditions are improved?*
- *Are these improvements due to the implemented schemes?*

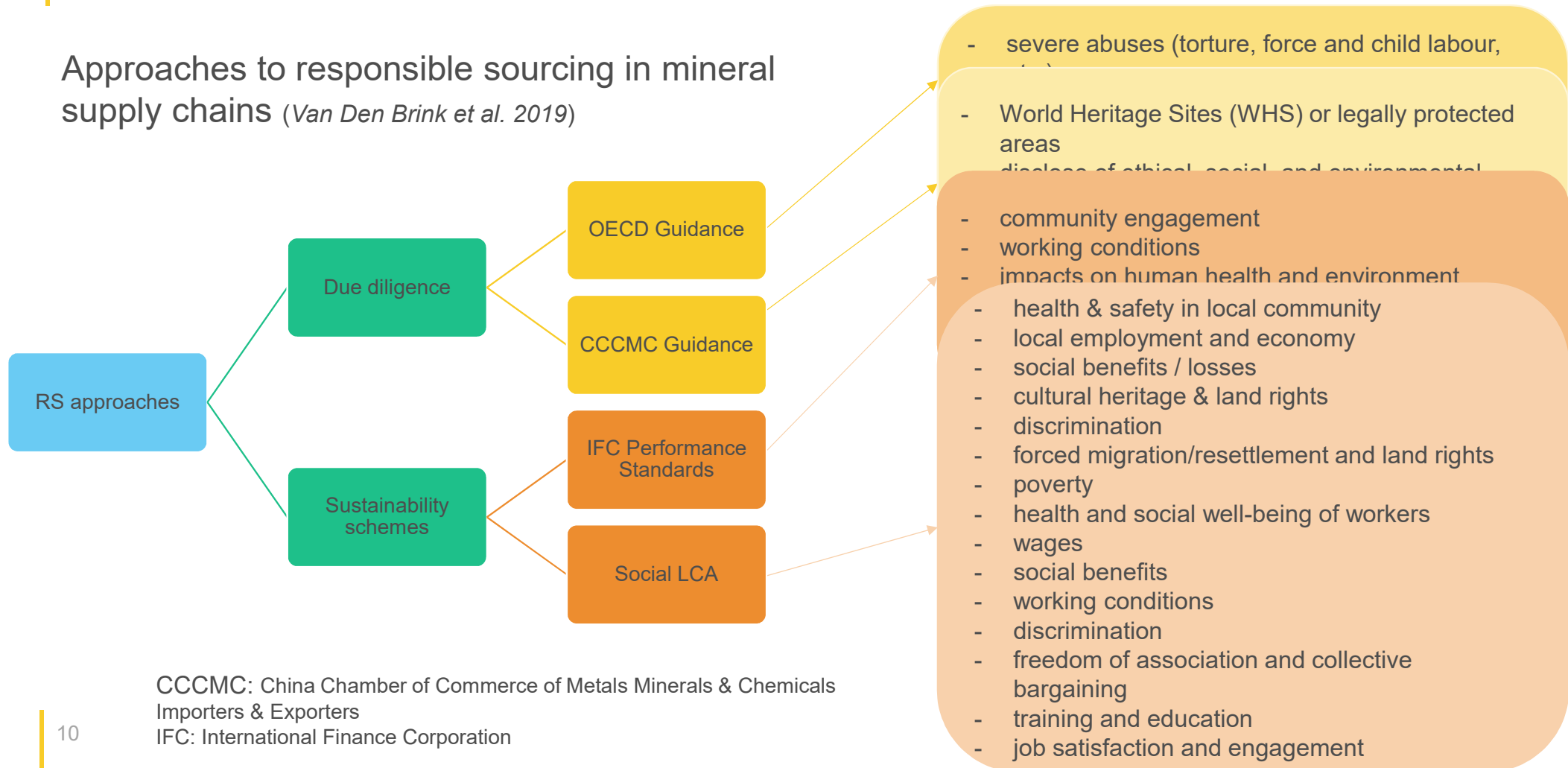


Methodology



Selection of frameworks

Approaches to responsible sourcing in mineral supply chains (Van Den Brink et al. 2019)



CCCMC: China Chamber of Commerce of Metals Minerals & Chemicals Importers & Exporters
 IFC: International Finance Corporation



Results of impact assessment

CATEGORY	ASM sector	Kasulo	Mutoshi
Presence of Armed Groups	N/A		
Presence of Armed Forces		+	+
Serious human rights violations		+	+
Forced labour		=	=
Worst forms of child labour		++	++
Corruption and bribery		++	++
Misdeclaration of origin of minerals		Contingent	
Payment of taxes		Unknown	
Displacement and resettlement		=	=
Occupational health and safety		+	++
Environmental and public health impacts		++	++
Indigenous peoples	N/A		
Minorities and discrimination		=	=
Gender		=	+

Legend: situation in the general cobalt ASM sector

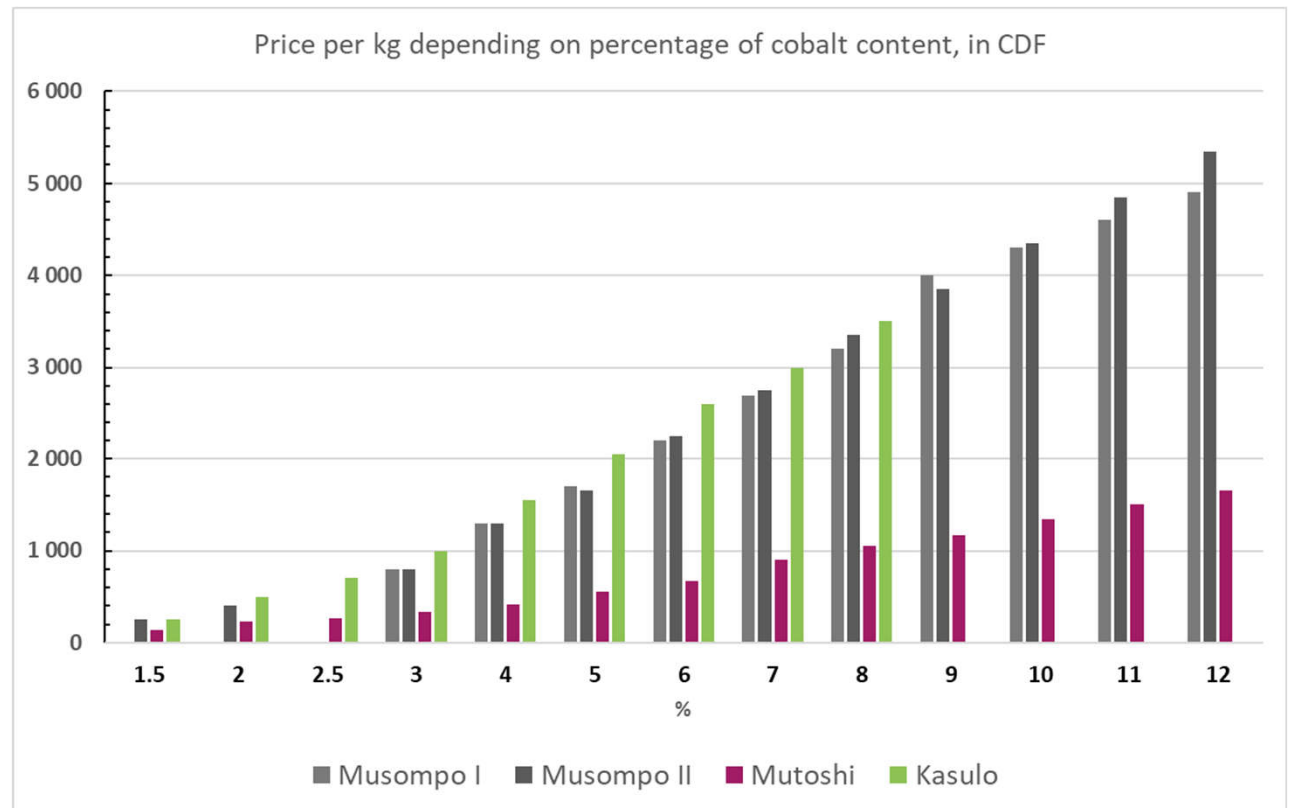
No noted risks
No noted risks, related issues remain
N/A (absence of underlying factors)
Systematic abuses
Systematic and grave abuses



- In **bold**, categories included also in **S-LCA**

The role of Social LCA: additional aspects

- Large set of categories
- Spotting relevant aspects for stakeholders: e.g. miners' income
- Inclusion of positive impacts → role of artisanal mining as a source of livelihood.



Social impact assessment in the mining sector

Literature review of social impacts in the mining sector

Comparison of **indicators** for social sustainability in business and policy context:

- SDGs framework
- EU policy: Better Regulation guidance
- Global Reporting Initiative (GRI – mining sector)
- **Social LCA databases (PSILCA – SHDB)**



Resources Policy
Volume 57, August 2018, Pages 98-111

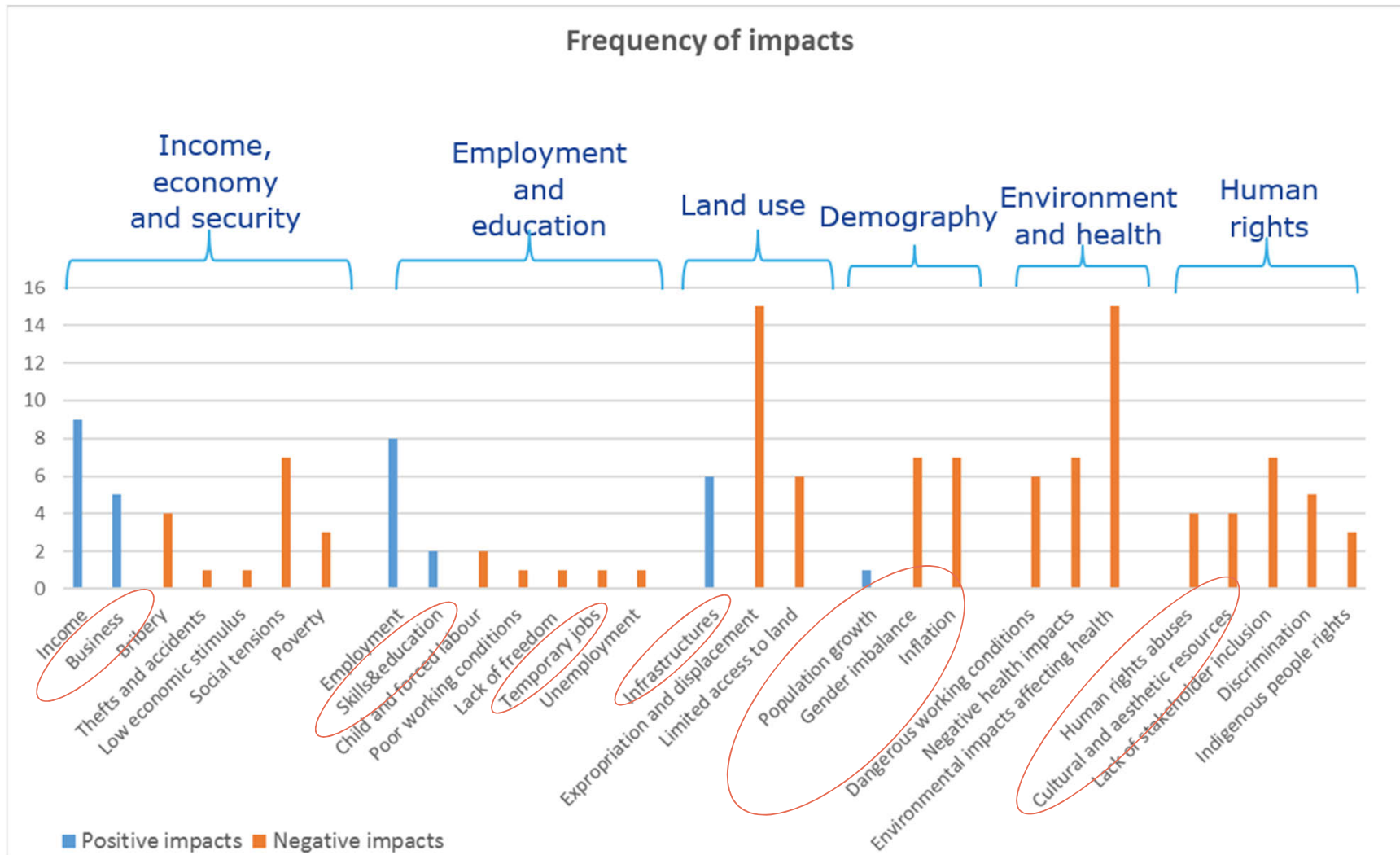


Social impact assessment in the mining sector: Review and comparison of indicators frameworks

Lucia Mancini ^a  , Serenella Sala ^b

Source: Mancini & Sala (2018) Social impact assessment in the mining sector: Review and comparison of indicators frameworks. *Resources Policy* 57 (2018) 98–111

Literature review on social impacts of mining



Conclusions and key lessons learnt

Improvements from RS initiatives

Detection of important aspects for local stakeholders: **price** and **fairness**

Gaps of S-LCA databases: land competition and demographic aspects

Measuring positive impacts important also for social acceptance

Integrating top-down and bottom up approaches



Thank you

lucia.mancini@ec.europa.eu



© European Union 2020

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.

The speaker: Lucia Mancini



Lucia Mancini is a scientific officer at the European Commission Joint Research Centre (JRC). Within the Raw Materials team, she works to support the EU raw materials policy, for what concern social sustainability and responsible sourcing. She contributed to the revision of the methodology for the identification of the critical raw materials for the EU, and to the development of the [Raw Materials Scoreboard](#) and the [EC Raw Materials Information System](#).

She is part of the Advisory Committee of the UN Life Cycle Initiative project on Social Life Cycle Assessment and contributors of the upcoming revision of Social LCA Guidelines.

Among others, she has published articles on the [social impacts of mining \(2018\)](#), [supply risk-based characterization of raw materials \(2016\)](#), and [resource footprint \(2015\)](#). She published JRC reports on [responsible sourcing of battery materials \(2020\)](#); on the [role of raw materials in achieving Sustainable Development Goal \(2018\)](#) and on [social assessment of raw materials supply chains \(2018\)](#).

Lucia has an academic background in agricultural economics and ecological economics. She was visiting scientist at Wuppertal Institute for Climate, Environment and Energy (Germany), where she performed her Ph.D thesis on the agri-food chains' sustainability and material intensity analysis.