Disruptive enclaves and risky politics. The challenges of making mining work for sustainable development

Views from several H2020 projects

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Can mining stimulate sustainable development?

It depends...

• What kind of mining?
  • What for?

• Management of impact of mining and minerals processing
  • Economic
  • Social
  • Environmental
  • Political and cultural
Overview

• Context
  • Demand for resources
  • Recycling
  • Mining: past, present and future

• Challenges of governance of mining

• Social License to Operate

• Final thoughts
Context

Demand for resources
Mining vs recycling
Present and future of mining

- Mineral resources extraction has increased at a **faster rate than economic growth**.
- Extractive sector could **struggle to meet demand** over next 2-3 decades for several minerals for which substitutes not readily available.
- Risk of **price volatility** that could hamper efforts to deliver enduring benefits for resource-rich countries, coupled with environmental and social risks.

**Figure 1**: Global material extraction in billion tonnes (left scale), global GDP (right scale) in trillion US dollars

Source: IRP 2017 - Resource Efficiency
Context

Increasing need for materials

• **Consumerism, capitalism**

• **Transition** to a low-carbon economy

• **Low recycling efficiencies**, especially for Critical Raw Materials (CRM).

• Even 100% **recycling** cannot address the current* need for (a lot of) primary mining

A parenthesis about recycling

- Recycling efficiency is increasing but still low
- Technological advances and barriers
- Process economics (recycling vs landfill)
- Material losses & exergy
- Design for recycling
- Product cycle & end of life
- Waste collection & transport
- Recycling vs reuse vs repair.

⇒ Is circular economy a myth?

For more information about circular economy, see: Ellen MacArthur Foundation
Mining

• **Bad reputation:** ‘dirty business’.
• Highly diverse sector
• Mining heritage
• (‘Highly publicized’) accidents (e.g. Brumadinho)

<< The industry is desperately trying to convince the public they have improved. New discourse: link to renewable energy and societal benefits.

⇒ Is the mining sector in denial?
   Precautionary principle? (too) large scale impact?
Cobre las Cruces (Sevilla, Spain)
## Has the ‘mining sector’ changed?

<table>
<thead>
<tr>
<th>Mining</th>
<th>Past</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>Profit making (e.g. gold)</td>
<td>Resources for applications</td>
</tr>
<tr>
<td>Owner</td>
<td>Mining company itself</td>
<td>Shareholders; large groups aim to control the value chain</td>
</tr>
<tr>
<td>Operations</td>
<td>One company, A-Z</td>
<td>Various subcontractors Multiple stakeholders</td>
</tr>
<tr>
<td>Resources</td>
<td>Reachable, higher % in the ‘simple’ ores</td>
<td>Difficult access, low(er) grade and complex ores; more varied elements</td>
</tr>
<tr>
<td>Scale</td>
<td>Underground, local artisanal mining to open pit</td>
<td>Super open pits; mixed</td>
</tr>
<tr>
<td>Opex – capex</td>
<td>Labour intensive</td>
<td>Capital intensive</td>
</tr>
</tbody>
</table>

# years from exploration to exploitation has increased; In EU, the process has generally become more bureaucratic
Has the mining sector changed?

- Increased efficiencies, but slow and costly process? Innovation vs risk averse?

Copper tankhouse

- 1955
  - small cells (440)
  - Starting sheets
  - Cathode harvesting with current off
  - Cast Pb-Sb anodes

2014
- High energy consumption
- Escalating costs
- Operational & HSEC challenges
European context

- **Critical Raw Materials list**
  - Economic importance x supply risk

- Import vs mining in EU?

- EC calls for strategies to engage civil society to build trust in the EU mining and recycling sector:
  
  ⇒ 'Social License to Operate'
Governance challenges of mining
Governance challenges of mining

- Negative and **enduring impacts** of mining: environmental, social, economic, cultural and political.
- **Uneven distribution** and **finite nature** of mineral resources, feeding geo-political risks.
- **Enclaved** nature of the mining sector in many countries.
- **Volatility** of commodity prices, macro-economic effects.
- Difficulty of managing large and **volatile capital inflows**.
- **Information and power asymmetries** between governments and companies, technical complexities of large-scale projects.
- **Lack of accountability and transparency**.
The way forward?

Companies in the extractives sectors can adjust their approach to societal issues.

**From**
- Making one-off, reactive social investments
- Setting organizational structures that separate social investment staff from business staff
- Incentivizing on-time, low-cost delivery
- Measuring investments in communities by dollars spent
- Trying to address societal issues by going at it alone

**To**
- Building a portfolio of strategic programs with a long-term economic development strategy
- Creating processes that help integrate social investment and the business
- Incorporating social performance into compensation packages
- Measuring investments in communities by societal and business outcomes
- Building partnerships with government, NGOs, and other companies to solve societal issues
Governance of mining today

• UNEP IRP: “Growing recognition that a well-managed mining sector can potentially support wide range of development outcomes across the SDGs” (e.g. Development Minerals Programme)

• Variety of governance frameworks and instruments at multiple scales that seek to reinforce the social, environmental and economic outcomes of mining: e.g. Africa Mining Vision, EITI, GRI, Model Mining Development Agreement, IRMA, Natural Resource Charter, ICMM, etc.

  >> represent only piecemeal efforts
  << often fail to be implemented at the national level

• ‘Social License to Operate’ (SLO) processes are more commonly used to secure consent and involvement of local community stakeholders.

  • EY considered SLO the #1 business risk in 2019-2020
License to Operate as a ‘business risk’
From CSR to Social License to Operate

Green washing or a true opportunity?
Social License to Operate

• ‘90s: bad reputation + increasing **cost of conflict**: poor environmental practices => social perception and reputation => financial performance.

• Jim Cooney: “Social License to Operate”: **desire to control** the relationship with project stakeholders (e.g. reputation management, information gathering and provision, strategic planning tools).

• Range from voluntary governance schemes (CSR?) to legally binding.

• Perceived overlap with the impact assessment (EIA public consultation)

• 2000s onwards: SLO expands: energy, agriculture, forestry, paper industry, etc.

(Moffat et al., 2016)
Social License to Operate

• Definition: “the ongoing acceptance and/or approval of an industrial activity by a set of relevant stakeholders”

• Acceptance? Approval? Permission?
• Granted by who?
• How/Who can revoke?

⇒ Metaphor, ‘soft law’: the level of ‘acceptance’ that companies receive from local communities, broader society and public bodies.

(Moffat et al., 2016)
Social License to Operate

- **Inclusive** concept; depends on **relationships**: local communities and **participation** of civil society in the management and regulation of natural resource exploitation.
- Rooted in the **beliefs and perceptions** a local community and other stakeholders.
  - Trust, confidence, knowledge; demands and expectations; dependence on operations?
  - SLO reviews performance of company + involvement of citizens in decision making
  - **Dynamic** and changing reflection of the quality and strength of the **relationship** between an industry and a community of stakeholders.

(Moffat et al., 2016)
SLO Models

SLO Models

BENEFIT SHARING
Relationship Type: Collaborative
- Co-planning of project, ongoing cooperation, partnership in ‘decision-finding’ process
- Enhance well-being (cohesiveness, stability) and livelihoods of communities (local procurement/salaries) realized through agreements
- Generating additional income for community/local government
- Passive joint monitoring (shows confident engagement)
- Training programs for the new skills needed in the mining workforce

ENGAGEMENT
Relationship Type: Transactional
- Community feels contact with company is high
- Community believes they have a voice in the environmental/permitting processes and can influence economic/social outcomes of project
- Active joint monitoring (indicates skeptical tolerance or passion independent of project)

LEGAL & PROCEDURAL FAIRNESS
Relationship Type: Transactional
- Company behavior toward the community is fair, transparent, respectful and observes legal/regulatory processes
- Company informs the public as required and conducts requisite consultations
- Community feels the burden of impacts is outweighed by the project’s benefits
- Jobs in the community and revenue for the municipality will be created

SOCIO-ECOLOGICAL INTEGRATION
- Levels of SLO in European Mining
- Relationship Type: Transactional
  - Government has legitimacy
  - Public trust in environmental/permitting/licensing processes, which are seen to have adequate public consultation opportunities
  - UNDRIP mandates incorporated into national mining legislation
  - Government is accountable to public and will support regulations over politics

Drivers of Trust & Acceptance
COMMUNITY LEVEL

DISPUTES
Relationship Type: Withholding or withdrawal of SLO (mining possible)
- Poor company engagement (from non-contact to overriding community wishes) and no (functioning) grievance mechanisms
- Disregarding most marginalized groups or those with little visibility
- Fear of air/water pollution and inadequate/too technologically complex mitigation
- Commodity and type of mine development
- Land use conflicts, threat to livelihoods and no go zones (nature conservation, indigenous peoples’ lands, cultural heritage)

CONFlicts
Relationship Type: No mining possible
- Important individual and community values are disregarded by government and company
- Community has historically been lied to and there is deep distrust
- Severe historic mining incidents

Adapted from Thomson and Becicler’s SLO Model

Pamela Lesser & MIREU project (2019).
Review SLO literature

• Focus on ‘S’
  >> often ignores diversity within ‘local community’
  >> but S includes/implies economic, environmental, cultural, political impact

• Confusion about ‘L’: it is a relationship, not a ‘license’

• Little consideration of ‘O’

• (UNEP IRP: towards ‘Sustainable Development License to Operate’? )

Meesters, M. et al. (in preparation)
Critique on SLO

• Leida Rijnhout: “empty-container concept, which is too voluntaristic and is prone to greenwashing activities by international mining co-operations.”

• Meesters: “SLO is too ambiguous; its translation 'in the field' remains problematic.”

In **Global South**: SLO influenced by power relations and democratic structures (=> “the poor sell cheap”).

<> In **Western context**: strong(er) democratic structures; highly organized civil society. The SLO concept might be more relevant in an EU mining context?

SLO in practice

• ~Example: Community Development Agreements

• Extremely sensitive

• Confusing SLO vs awareness raising

• Product vs process

• Willingness for a long term dialogue? Who is at the table? CSO vs NGO vs industry? Common ground for dialogue?

• “The industry needs the resources from the territory of a local community... more than the local community needs the industry.”
Case study - SLO in Belgium

• Constructive interaction between company, researchers and local community
• Long term process: the trust of the local communities has steadily grown.
  ⇒ The ‘De Locals’ group co-designs and co-implements the project + bridge to community.

But dialogue is not enough!?  
⇔ A small group of people continues to resist the project.
• Whose business? Which stakeholders/shareholders?

• Can SLO evolve from risk management towards value creation? Towards a pro-active stakeholder engagement?

• A quieter processes of negotiation, persuasion, manipulation and seduction? Or
  A true opening for mining companies to stimulate locally based, comprehensive sustainable development?
Final thoughts

• Sustainable development needs mining (*resources*)
  • Transition to low-carbon economy ↔ Climate breakdown
  • Governance issues of primary mining
  • Opportunities of Social License to Operate?
  • The *way* mining is done is not questioned (enough)

⇒ Sustainable development needs...
  • Less demand for materials
  • More re-use, repair and recycling + truly circular economy
  • System change, degrowth & stakeholder dialogue
References


• Lesser et al., (in preparation). Modeling the Social License to Operate – experiences from the Mireu project.


Other sources

- Belgian organization tackling the mining issue: catapa.be/en/
- ACP-EU Development Minerals Programme: developmentminerals.org/
- UNEP International Resource Panel