

RENEWABLE ENERGY AND THE SUSTAINABLE DEVELOPMENT GOALS

Exploring Links with Extractives, Agriculture, and Land Use

Outcome Document

Organized by: SDSN Thematic Network on the Good Governance of Extractive and Land Resources, Columbia Center on Sustainable Investment, the International Council on Mining and Metals, GIZ and the World Bank

THE EVENT

On Monday September 24, the UN Sustainable Development Solutions Network's Thematic Network on Good Governance of Extractive and Land Resources, the Columbia Center on Sustainable Investment (CCSI), the International Council on Mining and Metals (ICMM), GIZ, and the World Bank hosted a strategic meeting to discuss opportunities and challenges arising at the intersection of renewables and extractives, agriculture, and land use, in the context of the Sustainable Development Goals (SDGs). The event drew on the experiences of companies, civil society, communities, donor and multilateral organizations, and others to assess how the private sector can promote accessible, low-carbon energy use while at the same time fighting poverty and respecting human rights.

The event kicked off with a series of brief presentations that covered ongoing and recent work on:

- ▶ Mapping renewable company practices to the sustainable development goals,
- ▶ Deploying renewable energies to power mining projects and anchor rural electrification efforts,
- ▶ Improving planning and coordination to meet increased mineral demand for the clean energy transition,
- ▶ Empowering indigenous communities through renewable electrification efforts and ensuring respect for land tenure and rights to free, prior, and informed consent.

Attendees then discussed:

- ▶ How to promote responsible mining conduct and sustainable sourcing in the face of increased demand for critical minerals like manganese, lithium, cobalt, and copper;
- ▶ How to better encourage companies to integrate community participation into land and extractive project decision-making from the project planning stage, and how to empower other stakeholders to hold companies accountable for rights violations; and
- ▶ How technical, political, and cultural barriers can be surmounted to promote greater deployment of renewable energy by mining companies.

EXECUTIVE SUMMARY

Integration of renewable energy by large mining and agricultural investors is essential for the rapid deployment of affordable and clean energy. Communities are also increasingly hungry for renewables, seeing projects as a relatively non-intrusive means to expand access to electricity and create economic opportunities. That said, renewable energy projects have at times undermined the achievement of the SDGs and have been linked to allegations of human rights abuses, including threats, intimidation, and violence against human rights defenders; labor rights concerns; harms to indigenous peoples' lives and livelihoods; and dispossession of land.

Some key challenges related to SDG-aligned deployment of renewable energy by mining and land investors include:

- ▶ how to promote supply chain responsibility;
- ▶ how to plan, implement and monitor inclusive projects that share benefits equitably; and
- ▶ how to address the timescale and other incentive mismatches between rapid technological development and long-term mining projects to increase adoption of clean energy.

Addressing these challenges will require efforts to:

- ▶ design and promote multidisciplinary solutions that encourage technological innovation,
- ▶ improve legal and regulatory frameworks,
- ▶ better include indigenous and local communities in project planning,
- ▶ support social business ventures, and
- ▶ build company and community capacity to better account for social, environmental, and economic impacts in project design.

The work presented at this event aims to fill some of these gaps; the “Renewable Power of Mine” report, for example, seeks to change company thinking on renewable energy and encourage governments to adapt legal and regulatory frameworks at international and national levels that promote sustainability. Likewise, the Right Energy Partnership of the Indigenous Peoples Major Group for Sustainable Development promotes the inclusion of indigenous and local communities in individual project planning, while also mobilizing international finance for rural electrification efforts in indigenous communities.

Nevertheless, of course, far more work remains to be done. This event sought to seed future projects and initiatives to promote SDG-aligned use of renewable energy by mining and land investors.



MAIN TAKEAWAYS AND THE WAY FORWARD

MINERAL SUPPLY CHAINS, INNOVATION AND TECHNOLOGY

This group considered how to encourage consumers to integrate the SDGs into core business operations; how to enable the rapid deployment of affordable and clean energy without undermining other SDGs; how innovative new technologies like blockchain can be used to increase supply chain transparency and accountability; and how companies assess political stability and adapt to risk perceptions in planning projects.

Takeaways:

- ▶ Supply chain responsibility remains a challenge; many renewable companies have struggled to ensure that each mine and intermediate manufacturer is adhering to best practices.
- ▶ Because ensuring supply chain responsibility is difficult, some companies have halted operations and sourcing from entire countries and regions where regulations and enforcement are weaker, especially in the face of increased public pressure. This is not a sustainable solution, especially given the need for critically important renewable and battery minerals, many of which are most plentiful in less certain environments, like the abundance of cobalt in the Democratic Republic of the Congo.
- ▶ Companies need new strategies and tools to ensure supply chain responsibility, and otherwise promote responsible conduct.
- ▶ The environmental impact of renewable sourcing, manufacture, and potential waste need to be considered in assessing renewable sustainability. In particular, there is great need for advances in mineral and renewable module recycling programs. Are missing ingredients technological, economic, regulatory, or in lack of cooperation?

MINERAL SUPPLY CHAINS, INNOVATION AND TECHNOLOGY

Future Considerations for the Field:

- ▶ Improve traceability of materials for responsible sourcing through blockchain.
- ▶ Create and promote an international framework for sustainable sourcing and traceability of materials. This includes a more robust international regime around sustainable products.
- ▶ Integrate China into the sustainable supply chain dialogue, like the China Chamber of Commerce of Metals, Minerals & Chemicals Importers & Exporters (CCC MC) standard aims to, starting with Chinese companies.
- ▶ Promote the use of SDG labelling based on uniform criteria to allow consumers to compare performance and reward responsible sourcing.
- ▶ Help countries to improve regulatory stability and enforcement to reduce risk of supply chain abuses.

Action Items:

- ▶ Build a checklist with companies to certify that suppliers have complied with SDG-aligned regulations or best practice. If combined with certification scheme, can be used for company labeling too.
- ▶ Create sustainable investment guidelines for junior and small-scale mining companies.

ENGAGING LOCAL COMMUNITIES, BENEFIT SHARING AND LAND RIGHTS

This discussion touched upon how to engage local communities; how to assess and implement equitable benefit sharing in renewable project agreements; and how renewable energy projects can impact local communities' and indigenous peoples' land rights.

Takeaways:

- ▶ Communities are increasingly interested in renewable energies, seeing such projects as a potentially less environmentally disruptive means to generate power and create economic opportunities than traditional fossil fuel infrastructure. However, rights-based approaches need to feature more prominently in renewable project planning, alongside environmental and economic considerations, so that projects are designed to produce equitable benefits.
- ▶ Inclusive and participatory community engagement needs to start from the very beginning of project planning. Companies should provide accurate and accessible information on project impacts to allow communities to make informed decisions. If communities choose to enter into partnerships with companies, companies should be responsive to their community negotiating partners and look for mutually beneficial arrangements without making assumptions about what communities may want (for example, some communities or landowners may not want only monetary compensation for use of land, and may also have other desires that companies can help to meet).
- ▶ Some agreements between companies and communities have allocated a portion of project revenues to community development. But how those revenues are spent or distributed dictates whether communities in fact benefit from a project. Without being prescriptive, companies and communities should take steps to ensure that these funds are spent for community benefit, for example by taking steps to prevent corruption in payments to local governments.
- ▶ Companies must respect legitimate land tenure rights, even when those rights are not formally documented.

ENGAGING LOCAL COMMUNITIES, BENEFIT SHARING AND LAND RIGHTS

Future Considerations:

- ▶ Encourage companies and communities to adopt flexible agreements that allow for the possibility of renegotiations, if needed, as communities better understand project impacts. Funding for independent legal support for communities would be necessary if communities decide to partner with companies on renewable projects.
- ▶ Encourage companies to procure only the land needed for projects, and to return land that is used back to communities after a specific agreed upon period of time.
- ▶ Look for opportunities to ensure that rural and indigenous communities impacted by renewable energy projects share in project benefits, including electrification of nearby communities.

Action Items:

- ▶ Leverage the SDSN Thematic Network to support the Right Energy Partnership, including by supporting the Partnership's call to channel development finance for indigenous-led renewable electrification projects.
- ▶ Research options for creating "black box" funding to provide communities with the legal support they may need, including for negotiations or in cases of disputes associated with land-based investments.
- ▶ Identify best practices and risks related to mapping and recording the legitimate land rights of local community members in areas surrounding and/or impacted by investments and work with local government, NGOs, local civil society, and community members to capture, store and record rights, potentially as part of investment processes.

RENEWABLE POWER FOR MINES

This table debated how to use extractive and agricultural projects to anchor and catalyze responsible renewable energy deployment both at the project site and at the community-level; which obstacles impede greater adoption of renewable energy by extractive and agricultural investors; and how governments, companies, investors, and NGOs can collaborate to promote renewable energy infrastructure sharing at mining sites to support community electrification efforts.

Takeaways:

- ▶ Mining sector ambition on clean energy use remains low, especially compared to the information technology sector. A portion of this limited adoption may reflect industry specific needs, concerns, and interests (for example, need for constant source of power or misalignment between renewable payoff periods and mining contract length, etc.), but industry inertia cannot be explained purely in terms of technical limitations. Perhaps the mining sector lags due to sociological or cultural factors, including that mining companies are business facing rather than consumer facing, or that mining company leadership is typically older than technology sector leadership?
- ▶ Mining sites may be natural fits for renewable development because they have often already secured land use agreements with communities and cleared and leveled land, providing attractive efficiencies for renewable installation. Companies should consider and prepare for renewable energy use throughout and post closure at the design stage of the mine.
- ▶ Regulatory frameworks may need to be adapted to promote renewable energy use by mines. For example, some legislation requires mines to reforest land after a project ends. While this may be good practice to ensure land rehabilitation, it also may prevent installation of renewables with payoff periods that extend past project lifespan, or the use of operating renewable deployments by communities after they are no longer needed by mines.
- ▶ Is there an opportunity to leverage climate funds to help to defray upfront capital costs of renewable adoption for mines?
- ▶ Where mining companies do install renewable projects, they should look for opportunities to involve communities in project ownership, to share grid infrastructure with neighboring communities, and to sell excess power generated by installations in order to lower electrification costs and earn and maintain their social licenses to operate.
- ▶ The misalignment between rapid technological development and long mining project timelines hinders adoption of renewables. What technological, economic, cultural, and regulatory incentives need to change to encourage companies not to defer integration of clean energy technology?

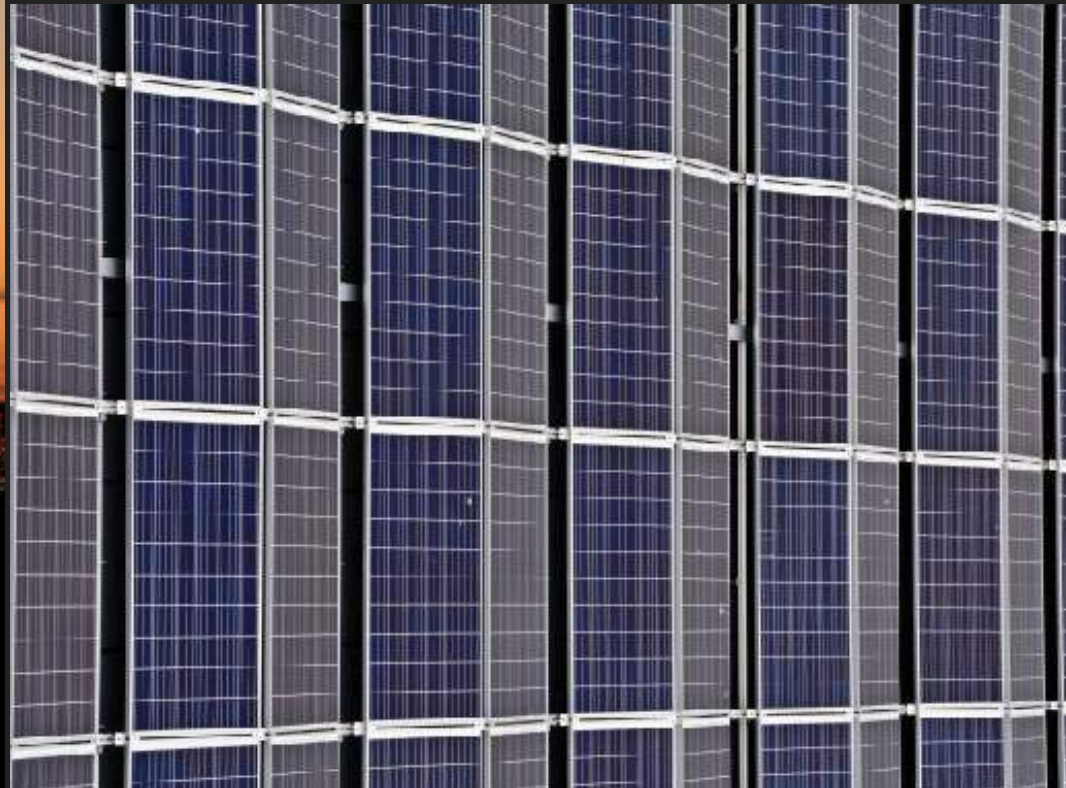
RENEWABLE POWER FOR MINES

Future Considerations:

- ▶ Change mining company culture around renewable adoption and encourage governments to adapt mining codes to promote synergies with renewable energy. Promote knowledge sharing among companies on feasibility/best practices for renewable integration.
- ▶ Engage civil society to research and advocate for renewable integration in mining.
- ▶ Support the operationalization of strategic frameworks for climate smart mining. Investigate renewable energy uptake in the mining industry while learning from other sectors.
- ▶ Examine existing legal codes to identify regulatory bottlenecks and propose solutions as needed.

Action items:

- ▶ Integrate renewable energy deployment considerations into existing extractive industries climate change initiatives, like the World Bank's Climate Smart Mining work.
- ▶ Create training materials that cover these climate smart mining and renewable energy integration at mine sites.
- ▶ Research/survey mining company leadership perceptions about renewable energy economics and impediments to adoption.
- ▶ Develop financing solutions that make renewable energy integration more attractive for mining companies and that support electrification for off-grid mining communities.
- ▶ Support distribution of the Renewable Power of the Mine study and its messages, including through in-country capacity building.



EVENT PRESENTATIONS

- Renewable Power of the Mine (Nicolas Maennling, enclosed)
- Climate Smart Mining (Kirsten Hund, enclosed)
- Mapping Renewables to the SDGs (Soledad Mills, enclosed)
- Right Energy Partnership (Joan Carling)
- Land Rights and Renewable Energy (Karol Boudreaux)
- Mineral supply chains (Tom Butler)



The Renewable Power of the Mine

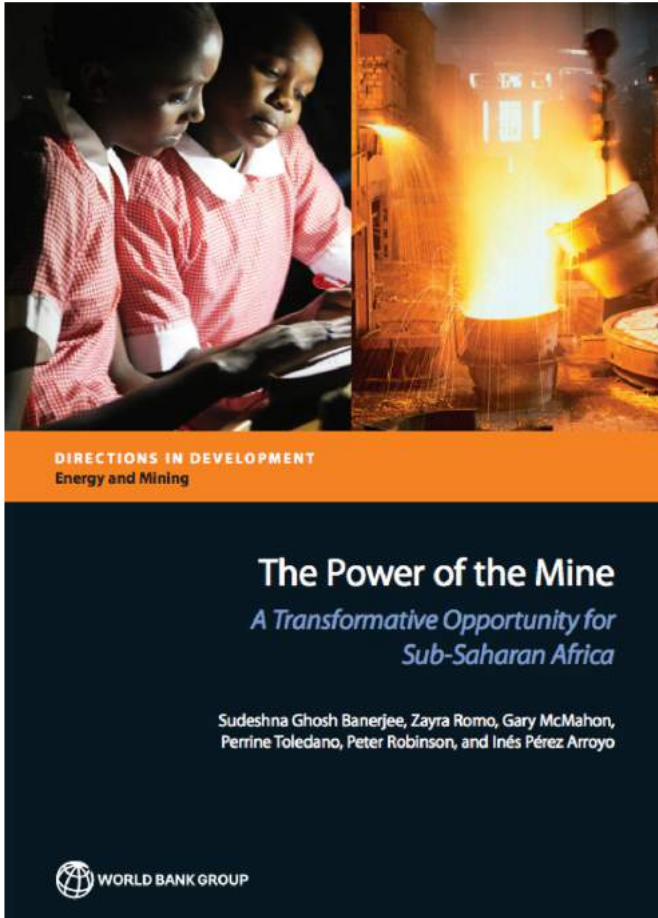
September 2018



Columbia Center
on Sustainable Investment

A JOINT CENTER OF COLUMBIA LAW SCHOOL
AND THE EARTH INSTITUTE, COLUMBIA UNIVERSITY

Project



- 🔥 Power arrangements
 - 🔥 Bottlenecks
 - 🔥 Drivers
 - 🔥 Methodology
 - 🔥 Literature review
 - 🔥 Case studies
 - 🔥 Interviews
 - 🔥 Consultations
 - 🔥 Target audience
 - 🔥 Host Governments
 - 🔥 Mining companies
 - 🔥 Independent Power Producers
 - 🔥 Donors
- }
- 🔥 Technical
 - 🔥 Expertise
 - 🔥 Financing
 - 🔥 Regulatory
 - 🔥 Interests

Financed by:

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH


german
cooperation
DEUTSCHE ZUSAMMENARBEIT



Power sourcing arrangements

Self-Generation

The renewable energy project is built by mining company to serve operations.



1

Power Purchase Agreement

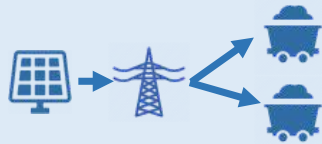
The mine contracts the energy from an Independent Power Producer through a PPA



2

Industrial Pooling

Independent Power Producer supplies to several mining companies through PPAs



3

Grid-connected sourcing green energy

Mining company buys green premium products or pays green tariffs to utility

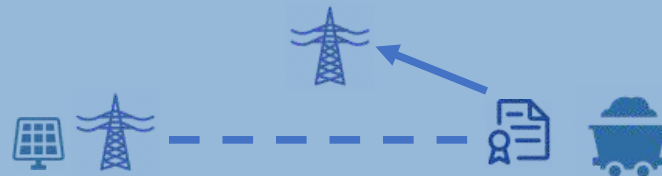


4

Energy Attribute Credits (EAC)

5

Mining company purchases credits produced by renewable energy power plants



Power sale arrangements

Grid-connected, selling power into grid

1

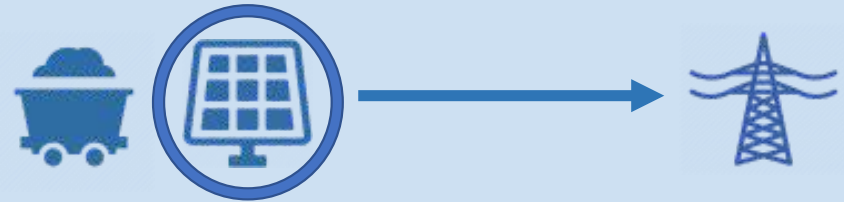
The excess capacity generated by the power plant is sold to the utility.



Grid-connected, using mining concession for renewables project

2

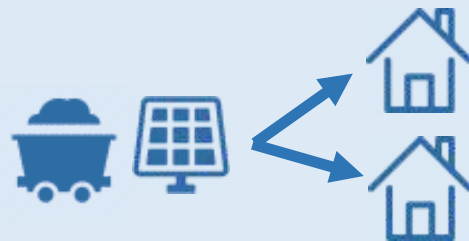
Renewable project is built on mining concession or rehabilitated mine site feeding into the grid.



Off-grid, electrifying surrounding communities

3

Off-grid renewable project serves the mine site and surrounding communities.



For discussion

- What are the best leverage points to push the mining/agriculture sector to become more proactive with renewable power integration?
 - Renewable energy targets of mining companies less ambitious than other sectors.
- What is the future potential for renewable projects linked to large-scale mining/agriculture investments to electrify remote regions that don't have access to the grid?
 - Interviewees very skeptical of this power arrangement due to complexities and additional costs, but access to electricity one of key drivers for development. Large potential to help with the 'shared value' proposition of large-scale investments.



Thank you!



nmaenn@law.columbia.edu



[@nmaennling](https://twitter.com/nmaennling)



INTRODUCING 'CLIMATE SMART MINING'

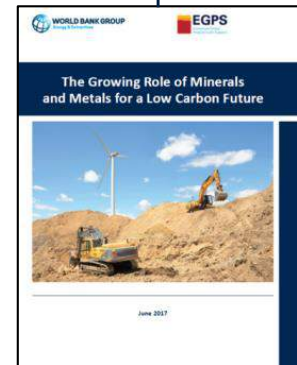
**Renewable Energy and the SDGs:
Exploring Links with Extractives, Agriculture, and Land Use - CCSI**

September 24, 2018 – New York, NY

Kirsten Hund, Senior Mining Specialist (khund@worldbank.org)
Daniele La Porta, Senior Mining Specialist (dlaporta@worldbank.org)
Thao P. Nguyen, Consultant (tnguyen32@worldbank.org)

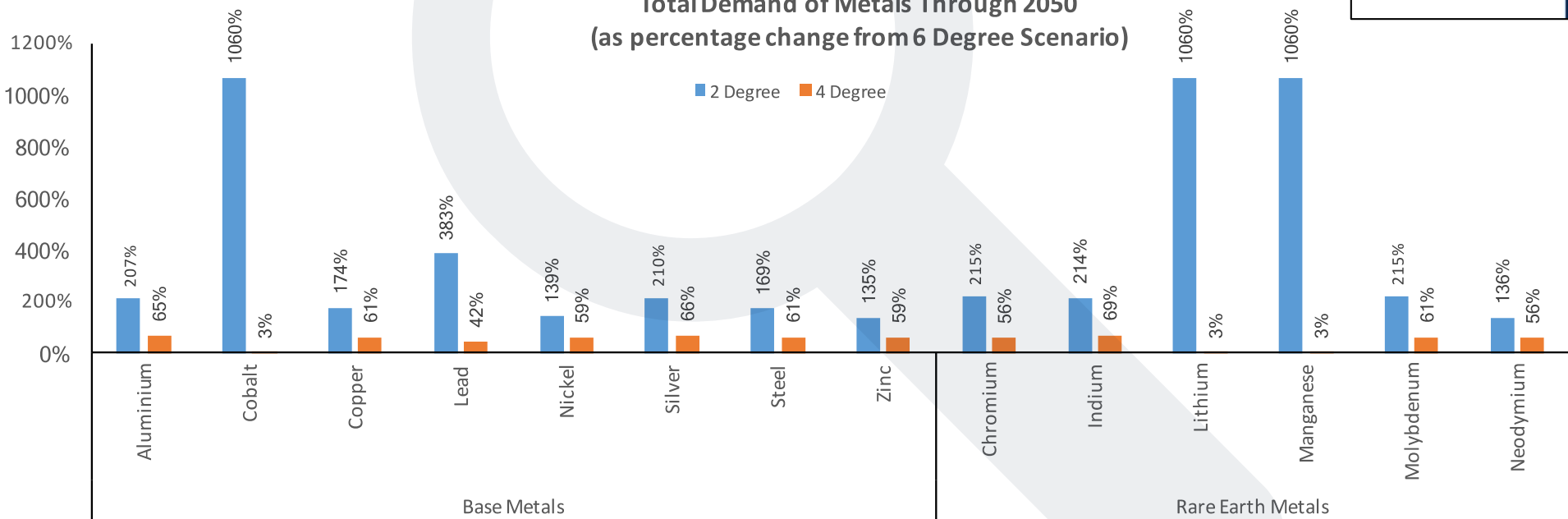
MINERALS ARE ESSENTIAL FOR A LOW CARBON FUTURE

In June 2017, the World Bank EEX team released the report 'The Growing Role Minerals and Metals for a Low Carbon Future' (data update in progress).



**Total Demand of Metals Through 2050
(as percentage change from 6 Degree Scenario)**

■ 2 Degree ■ 4 Degree

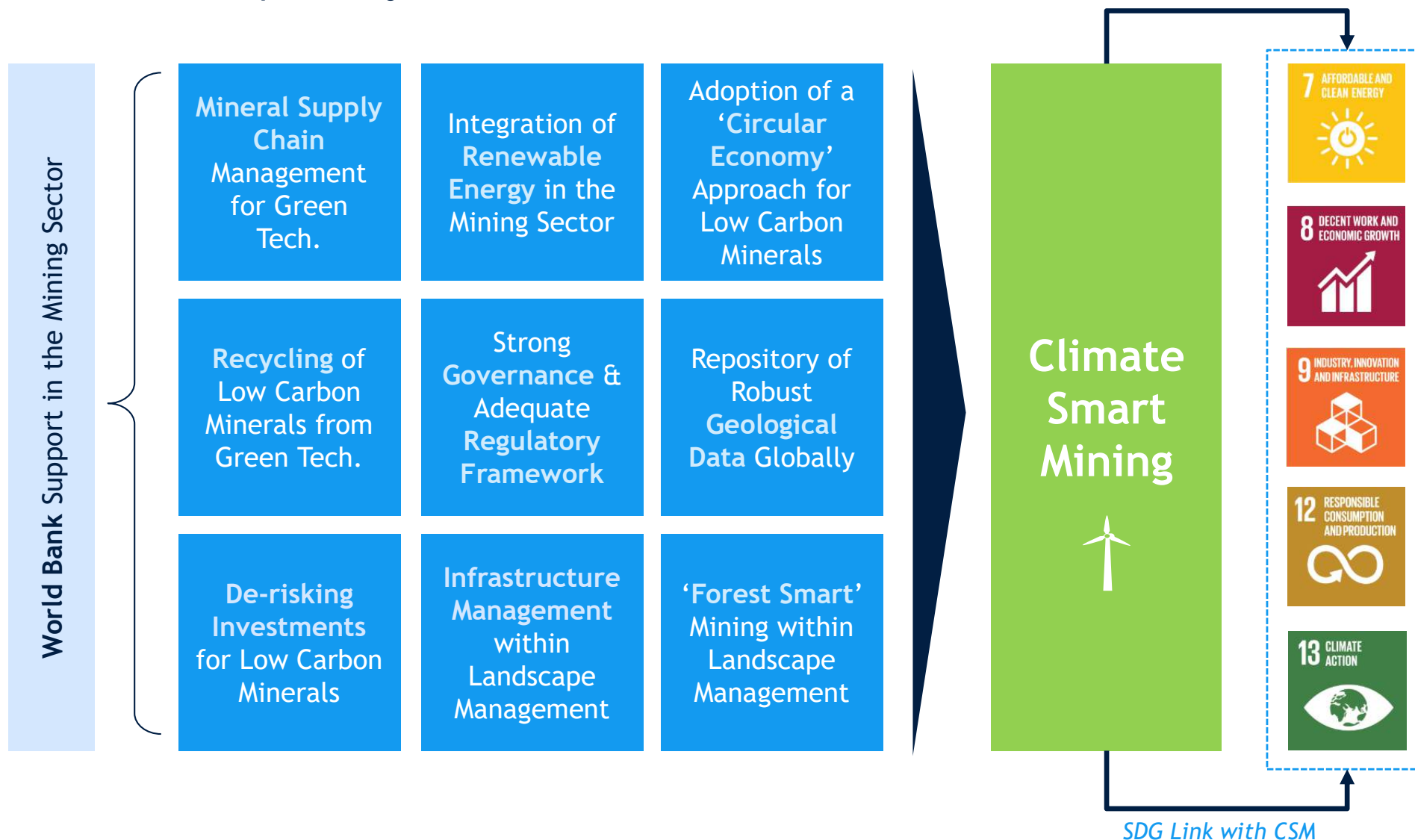


Source: WB Analysis, June 2017

Note: Values are derived from mean value of 'metal per MW' demand

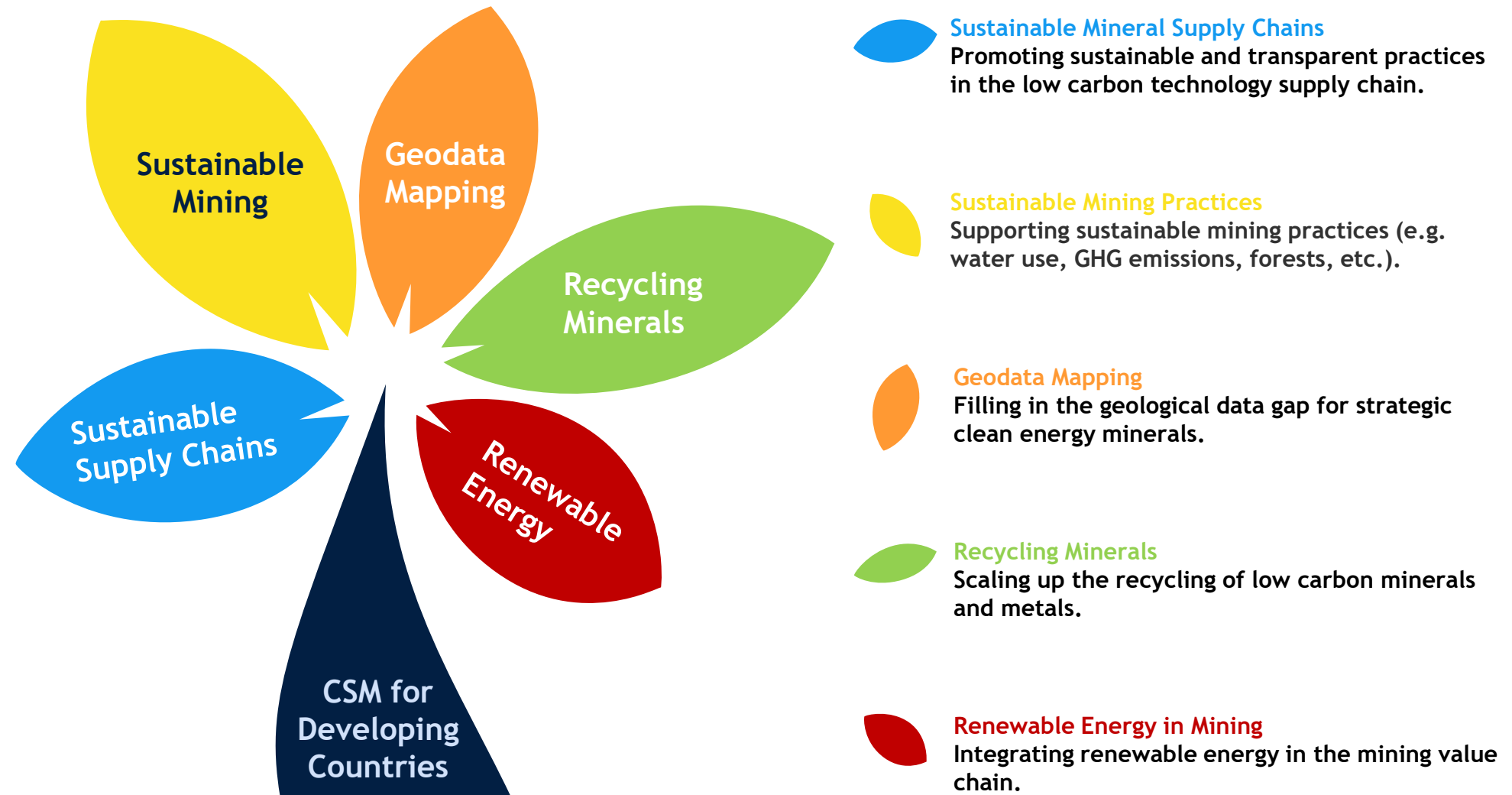
WHAT IS 'CLIMATE SMART MINING'?

'Climate Smart Mining' (CSM) aims to promote the integration of **mineral development** with the full array of **climate change** considerations. It intends to ensure an effective and efficient supply of critical materials required for a low carbon future that **minimizes material impacts** throughout the value chain of those materials.



FOCUS: BRINGING CSM PRACTICES TO EMERGING AND DEVELOPING COUNTRIES

The World Bank wants to ensure that **resource-rich developing countries** also **benefit** from this new mineral demand by de-risking investments using sustainable and responsible resource development strategies.



Mapping Renewable Energy to the Sustainable Development Goals: An Atlas



Renewable Energy and the SDGs

- The renewable energy industry is instrumental to the achievement of the SDGs
- Renewable energy is core to the implementation of
 - SDG 7: access to affordable, reliable, and sustainable energy
 - SDG 13: urgent action to combat climate change.
- Renewable companies can also make critical contributions to the other 15 SDGs
- Companies can positively contribute to the achievement of the SDGs by respecting human rights





Recommendations

- Adopt and promote **human rights policies and due diligence** practices in line with the UN Guiding Principles on Business and Human Rights.
- Complete inclusive **community consultations**
- Respect **land tenure** and rights to free prior and informed consent (FPIC).
- **Share the benefits** of renewable development
- Collaborate with governments to **displace reliance on fossil fuels**
- Adopt strong **labor policies**
- Conduct comprehensive environmental, social, and human rights **impact assessments**
- Identify and monitor **supply chains** for human rights impacts
- Introduce **grievance mechanisms**

Get Involved!

- Provide a peer review
- Host a consultation
- Submit a case study
- Receive notice upon publication of a consultative draft

For more information, please contact:

Nathan.lobel@law.columbia.edu