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Mineral Resource Governance in the 21st Century

*A report by the
International Resource Panel*

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Member of the International Resource Panel

**Mineral Resource Governance
in the 21st Century**

GEARING EXTRACTIVE INDUSTRIES TOWARDS SUSTAINABLE DEVELOPMENT



SDG 1 Poverty eradication

Mining generates significant revenue streams through taxes, royalties and dividends for governments to invest in socioeconomic development.



SDG 6 Clean water and sanitation & SDG 15 Life on land

Mining requires access to land and water, which gives rise to significant and wide-ranging landscape impacts that must be managed responsibly.



SDG 7 Affordable and clean energy & SDG 13 Climate action

Mining activities are also energy- and emissions-intensive in terms of the production and downstream uses of mining products.



SDG 8 Decent work and economic growth

Mining can alter the lives of local communities, offering opportunities for jobs and training, while contributing to economic and social inequities if not appropriately managed.



SDG 9 Industry, innovation, and infrastructure

Mining can help drive economic development and diversification through direct and indirect economic benefits, the development of new technologies and by spurring the construction of new infrastructure for transport, communications, water and energy.



SDG 16 Peace, justice, and strong institutions

Mining can contribute to peaceful societies by avoiding and remedying company-community conflict, respecting human rights (including those of indigenous peoples) and by supporting the representative decision-making of citizens and communities in extractives development.

Mapping Mining to the Sustainable Development Goals: An Atlas

July 2016



MINING

and the SDGs

a 2020 status update



Mapping Artisanal and Small-Scale Mining to the Sustainable Development Goals

JORDEN DE HAAN, KIRSTEN DALES, JAMES MCQUILKEN



HIGHLIGHTS:

- Even in its informal state, ASM makes positive contributions to almost all SDGs, and particularly those concerned with social (SDGs 4, 5 and 10) and economic development (1 and 8), nutrition (2), clean energy, infrastructure, and sustainable cities (7, 9 and 11), adaptation to climate change (13), peace, justice and governance (16), and partnerships (17).
- ASM has negative impacts on the majority of the SDGs, and particularly those concerned with human health (SDGs 3 and 6), environment (13, 14 and 15), nutrition (2) social development (4, 5 and to some degree, 10), decent work (8), cleaner production (12), and peace, justice and governance (16).
- Depending on the way it is approached, formalization can help mitigate many of ASM's negative impacts and amplify its positive impacts on the SDGs.
- Given the myriad ASM-SDG interlinkages, ASM formalization needs to be planned in an inclusive and comprehensive manner with all 17 SDGs in mind and prioritized as part of post-COVID-19 reconstruction and broader sustainable development efforts.
- While the SDGs serve as a useful starting point, it remains essential to analyze ASM in relation to national and regional development priorities and integrate the sector into associated policy frameworks.

*Foreword by Antonio Pedro, UN Economic Commission for Africa

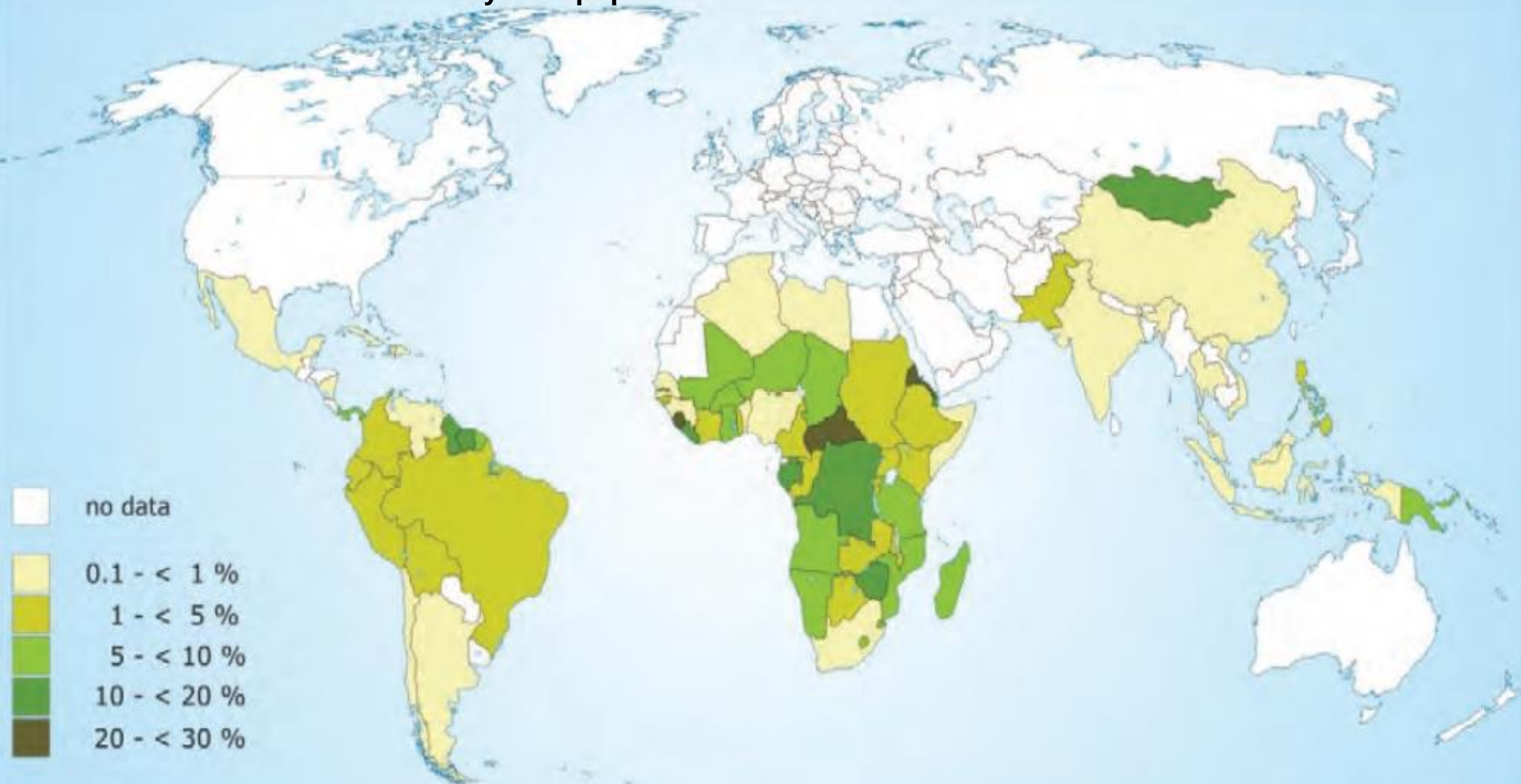
**Case study by Jorden de Haan (Pact), Peter Kapr Bangura (Director of Mines, Sierra Leone) and Mohamed Abdulal Kamara (Environmental Protection Agency, Sierra Leone)

***Concrete policy recommendations for harnessing ASM-SDG interlinkages

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AND SOCIETY

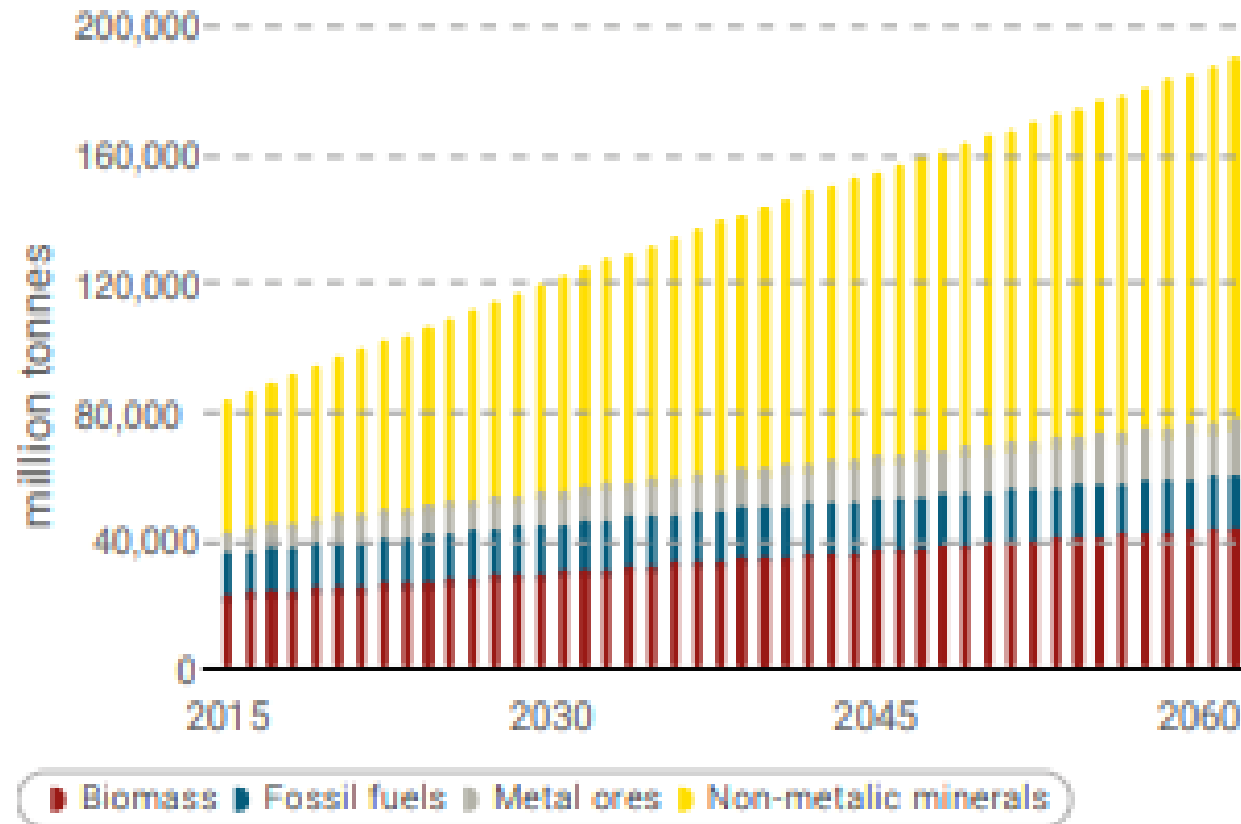


Distribution of ASM activities by % of population involved

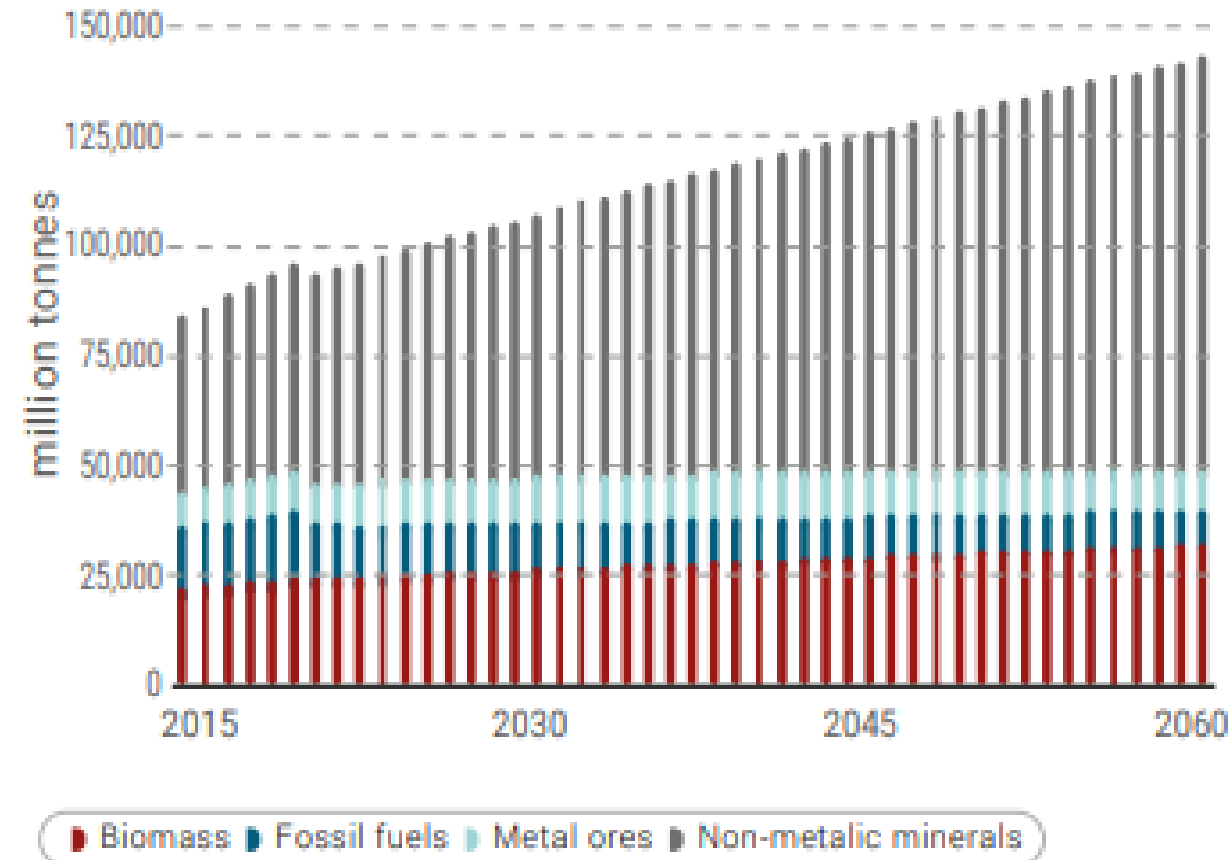


Source: Dorner et al. (2012) cited in IGF (2017).

Global material extraction by material categories, Historical Trends, 2015-2060



Global material extraction by material categories, Towards Sustainability, 2015-2060





Metals

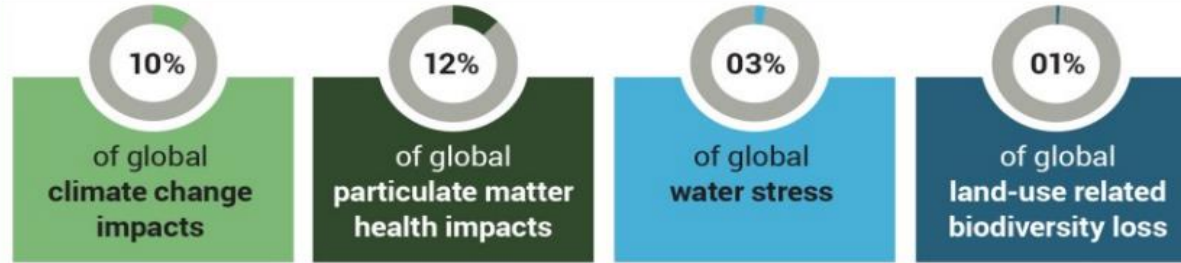
Use of metals 1970 and today (2017)

Extracted 1970 **2.6 billion tonnes**

Extracted 2017 **9.1 billion tonnes**

Metals extraction has **increased 3.5 times** between 1970 - 2017

Impacts of extraction and primary processing today (2017) - in shares of total global impact



Non-metallic minerals

(mainly sand, gravel and clay)

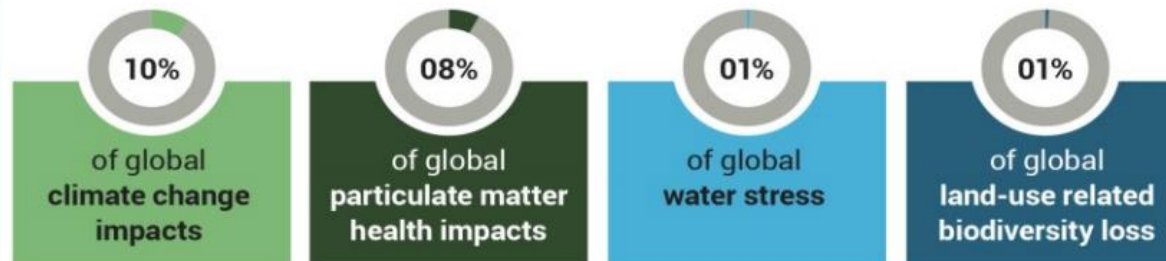
Use of non-metallic minerals 1970 and today (2017)

Extracted 1970 **9 billion tonnes**

Extracted 2017 **44 billion tonnes**

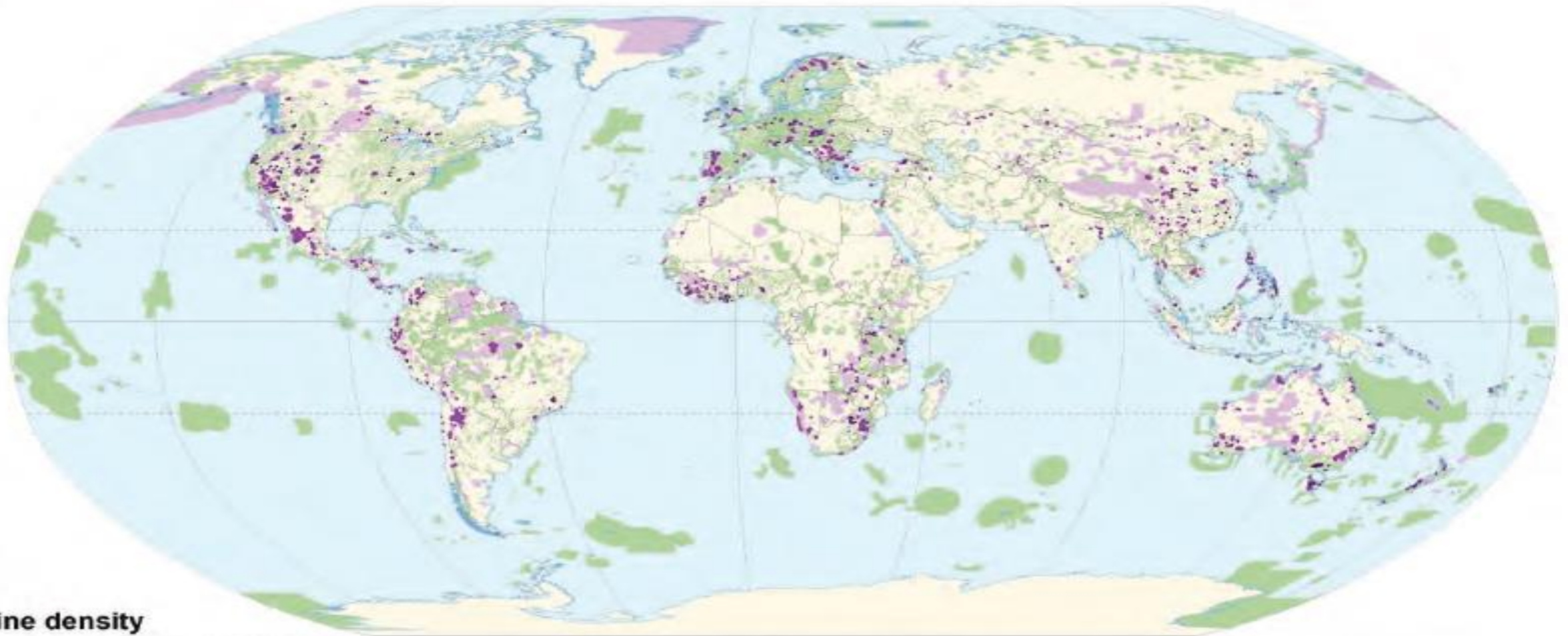
Non-metallic minerals extraction was **4.9 times higher in 2017** than in 1970, which represents the highest growth rate of all resource groups

Impacts of extraction and primary processing today (2017) - in shares of total global impact







Source: IRP (2019) Global Resources Outlook 2019

Areas of biodiversity importance containing mines



Mine density

(per km2 of biodiversity area)

	High	> 0.005
	Medium	0.001 - 0.005
	Low	< 0.001
	Does not contain mine/s	

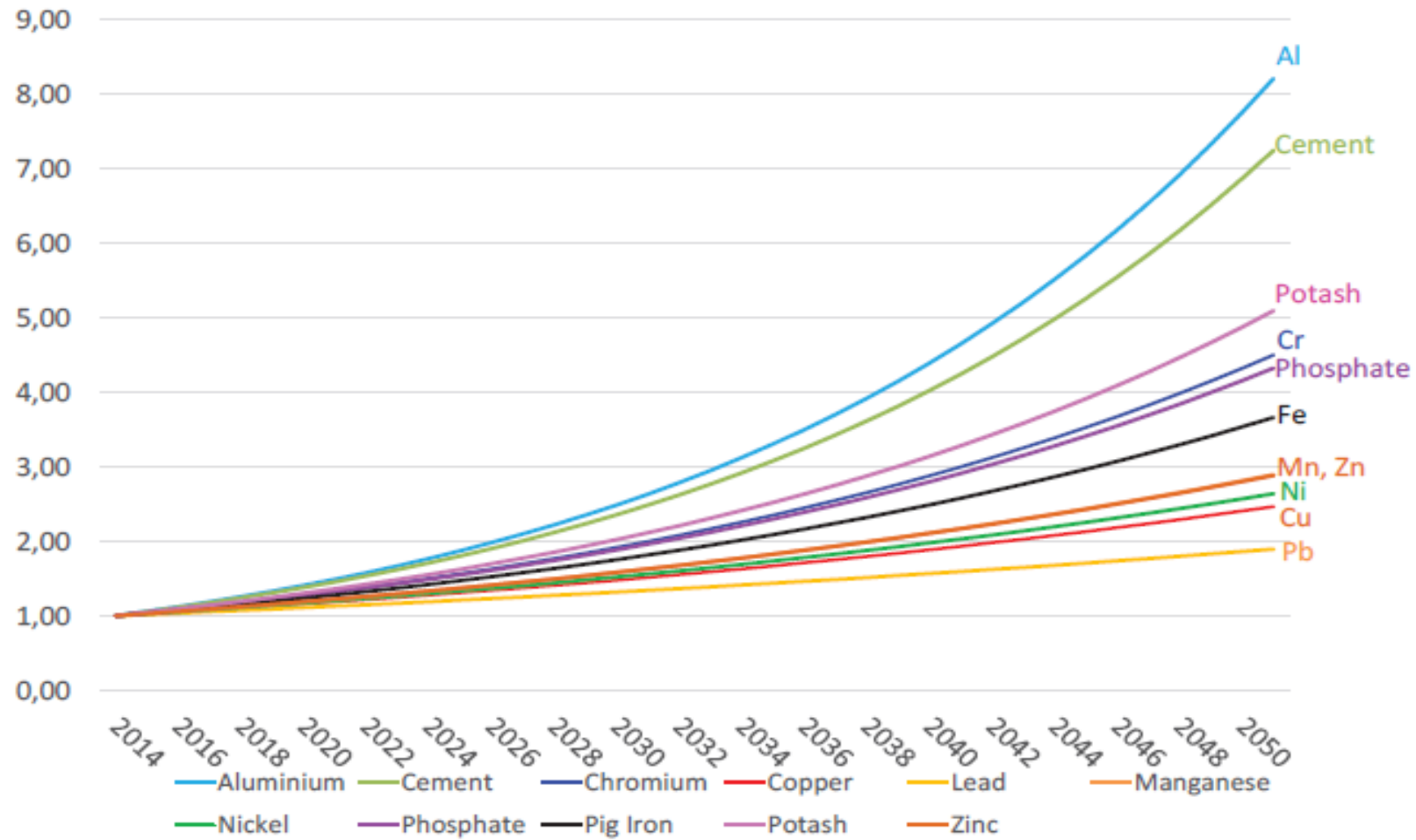
Mining locational data: Global Mining Data from SNL Metals and Mining's Metals Economics Group. Data extracted 24th April 2018.

Protected Areas: UNEP-WCMC and IUCN (2017), Protected Planet: The World Database on Protected Areas (WDPA), March 2017, Cambridge, UK: UNEP-WCMC and IUCN Available at: www.protectedplanet.net

Key Biodiversity Areas (KBAs): BirdLife International ([September 2017]). World Database of Key Biodiversity Areas. Developed by the KBA Partnership. Available at www.keybiodiversityareas.org. Accessed 26th September 2017.

Boundaries: United Nations Cartographic Section (UNGIWG), 2016.

Figure 4.2. Growth scenario for the most widely used minerals and metals



Source: Christmann (2017), using data from Kelly & Matos (2018).

GLOBAL RESOURCES OUTLOOK 2019

Key messages

01. The use of natural resources has more than tripled from 1970 and continues to grow.

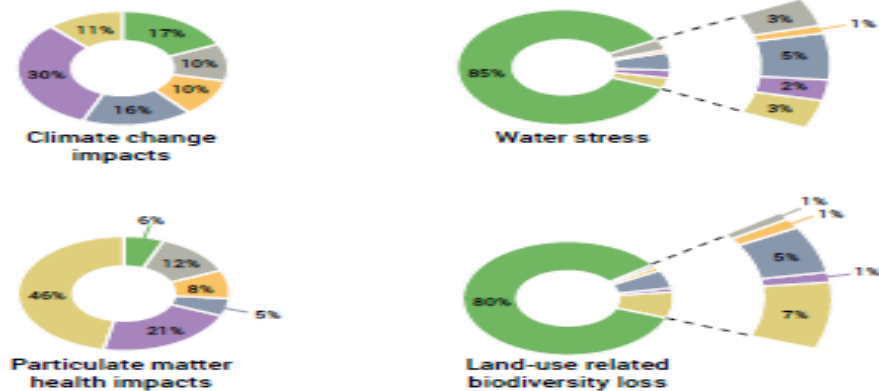


02. Historical and current patterns of natural resource use are resulting in increasingly negative impacts on the environment and human health.

The extraction and processing* of materials, fuels and food make up about half of total global greenhouse gas emissions (not including climate impacts related to land use) and more than 90 % of biodiversity loss and water stress.

An estimated 11 % of global species were lost by 2010 due to global land use.

* The focus is on resource extraction and processing up to "ready-to-use" materials and fuels (including waste disposal processes in the extraction and processing phase). This is also termed "cradle-to-gate".



03. The use of natural resources and the related benefits and environmental impacts are unevenly distributed across countries and regions.

The ratio of high-income countries' per capita GDP to low-income countries' per capita GDP doubled over the period as a whole, signalling rising income and wealth inequality among and within wealthy and poor economies.

Domestic Material Consumption tonnes per capita



Material Footprint tonnes per capita



Impacts ► Per capita impacts of consumption in high-income countries are, depending on the impact category, between three and six times larger than those of low-income countries.

04. In the absence of urgent and concerted action, rapid growth and inefficient use of natural resources will continue to create unsustainable pressures on the environment.

From 2015 to 2060, *Historical Trends*:

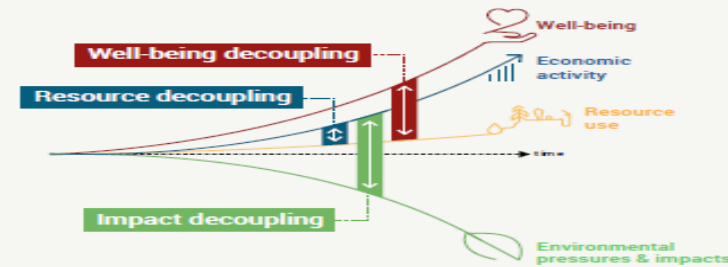


05. The decoupling of natural resource use and environmental impacts from economic activity and human well-being is an essential element in the transition to a sustainable future.

Absolute decoupling in high-income countries can lower average resource consumption, distribute prosperity equally and maintain a high quality of life.

Relative decoupling in developing economies and economies in transition can raise average income levels and eliminate poverty, while still increasing levels of natural resource consumption until a socially acceptable quality of life is achieved.

Decoupling will not happen spontaneously, but will require well-designed and concerted policy packages.



06. Achieving decoupling is possible and can deliver substantial social and environmental benefits, including repair of past environmental damage, while also supporting economic growth and human well-being.

Well-designed and concerted policy packages can lead to:



07. Policymakers and decision makers have tools at their disposal to advance worthwhile change, including transformational change at local, national and global scales.



08. International exchanges and cooperation can make important contributions to achieving systemic change.

International exchanges and cross-country cooperation can accelerate transitions towards sustainable natural resource use, support national decision-making and create a level playing field for goods and services from different countries.

These different aspects call for a global discussion.



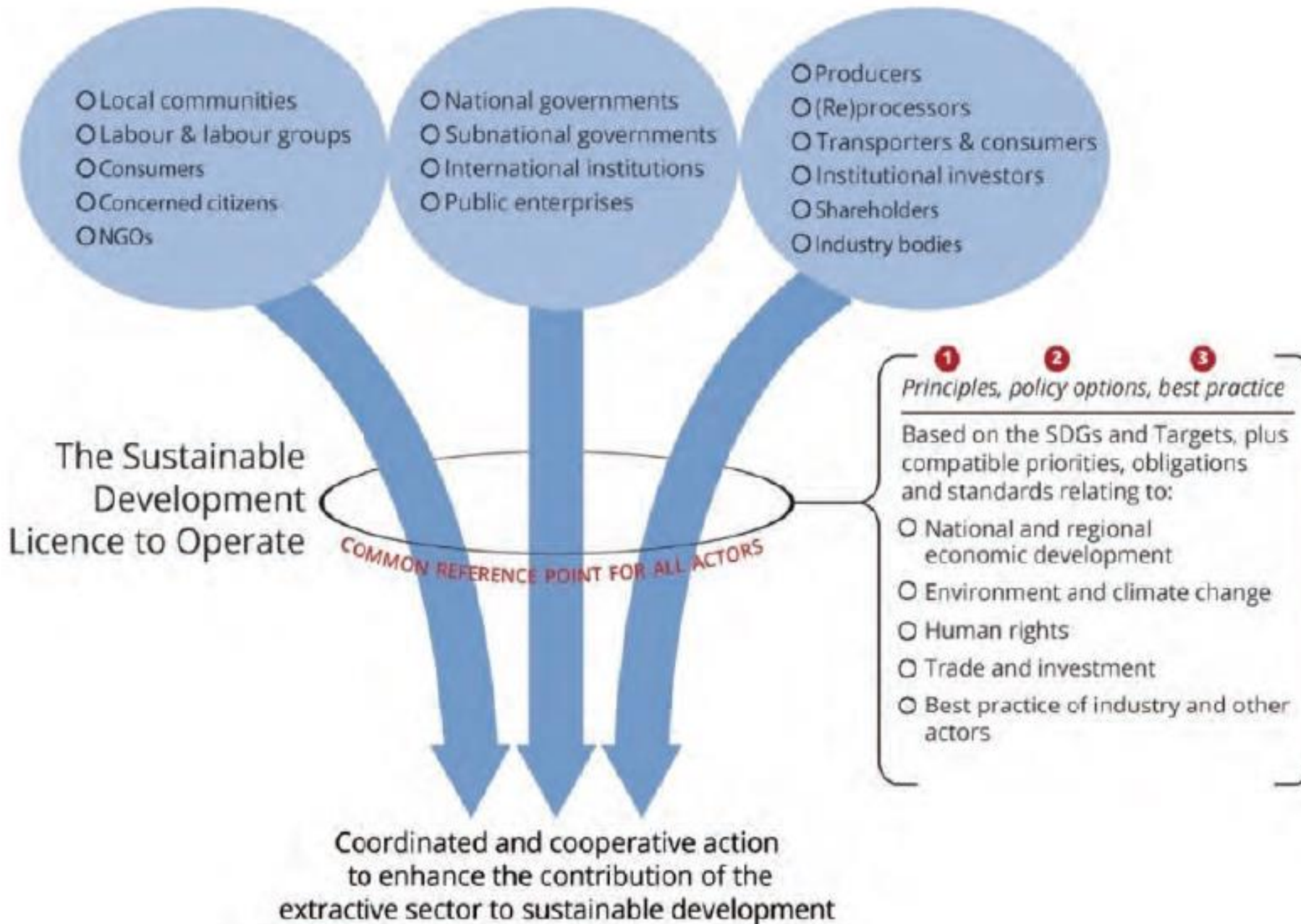
Governance of mining today

- Growing recognition that a **well-managed mining sector can support wide range of development outcomes** across the Sustainable Development Goals
- There are a **plethora of governance frameworks 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
- **Social License to Operate** processes are now commonly used to secure consent and involvement of local community stakeholders. How to secure it is not a straightforward exercise. It does not come as a surprise that EY considered it the **#1 business risk** in 2019-2020

The imperative for change

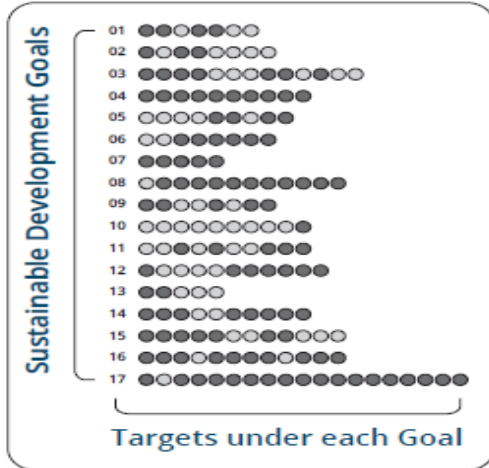
- The adoption of the **Sustainable Development Goals** represents a paradigm shift—a political consensus on holistic outcomes that the mining sector should support
- The **sector-specific and fragmented nature of current mining governance** is incompatible with the holistic decision-making needed to implement the SDGs
- The **Social License to Operate** approach does not accommodate the nexus of environmental, social and economic concerns at multiple levels of spatial and temporal scales

The Sustainable Development License to Operate



Processes to develop normative content of SDLO

1 Derive principles for sustainable development of mining from the SDGs and other instruments



Other relevant instruments
Targets relevant to mining

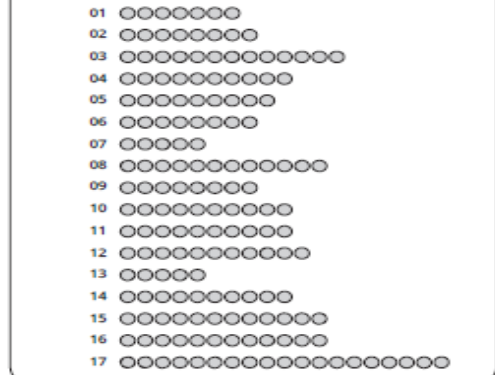
Detailed set of principles for sustainable development of mining

Core principles for sustainable development of mining (see illustrative list in body text above)

2 Identify policy options for sustainable development of mining

Existing policy frameworks, instruments and initiatives relevant to mining (see e.g. list in Figure 2 above).

Assess against SDGs and Targets to identify policy options, gaps and barriers:



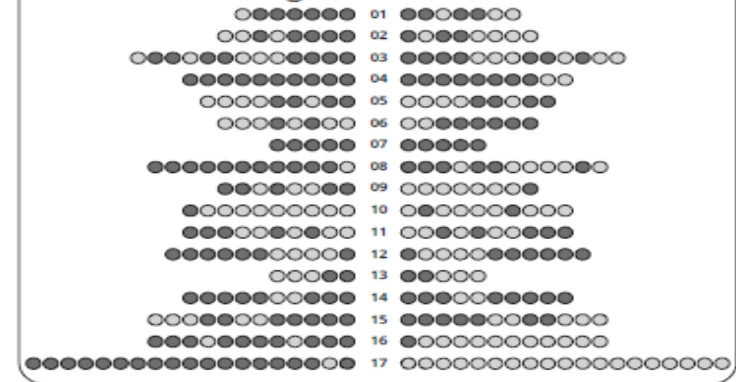
Policy gaps & opportunities

Flexible set of policy options for sustainable development of mining

Internal compatibility links within the SDLO

3 Identify best practice for managing synergies & tradeoffs between mining and other development objectives

Review published evidence of synergies & tradeoffs between mining and specific SDGs and Targets:



Synergies between mining and specific SDG Targets

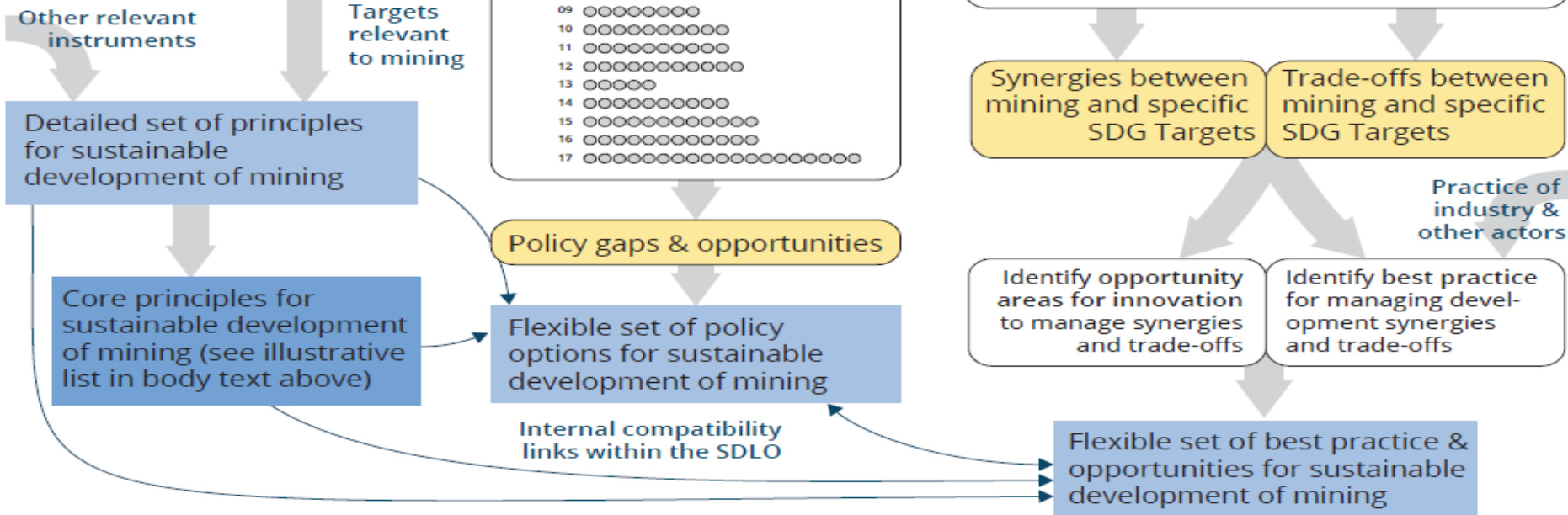
Trade-offs between mining and specific SDG Targets

Practice of industry & other actors

Identify opportunity areas for innovation to manage synergies and trade-offs

Identify best practice for managing development synergies and trade-offs

Flexible set of best practice & opportunities for sustainable development of mining



More on principles and policy options to operationalize the SDLO

❖ Detailed principles (derived from all 17 SDGs and 169 Targets):

Decisions about mining should ...

- ❖ Contribute to **better infrastructure**
- ❖ Maximise **health and well-being for all**
- ❖ Deliver long-term **growth and innovation**
- ❖ Minimise **impacts on other resources**
- ❖ Maintain or enhance **ecosystems and biodiversity**
- ❖ Involve **engagement and collaboration**
- ❖ Be **transparent and accountable**
- ❖ Ensure **policy coherence** with other issues/sectors

❖ Policy options and opportunities:

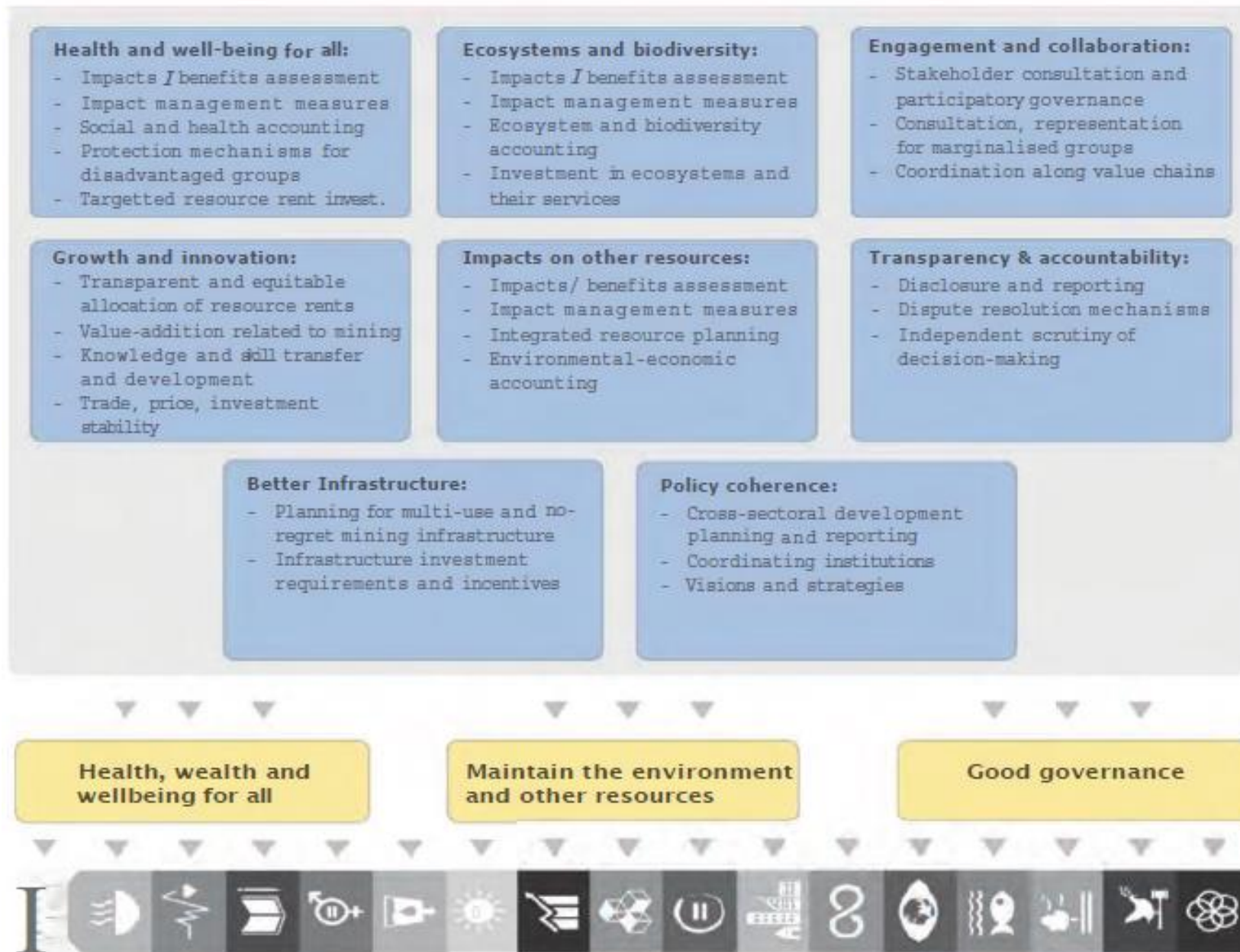
- ❖ **Wide variety of policy options available** to implement above principles, across mining value chains
- ❖ Key opportunities for policy innovation focus on: greater **transparency and accountability; resource nexus planning** (balancing mining with other resources); and **international cooperation** between exporting and importing countries

Source: World Bank (2009)

❖ Best practice:

- ❖ **Upwards harmonisation** of international standards along mining value chains

Illustrative policy options for sustainable development of the extractive sector



Sustainable Development Goals and associated Targets

Practical implications in diverse contexts



- **Security of supply** — need for coherent governance across the whole value chain with overarching sustainable development objectives
- **Artisanal and small-scale mining** — needs to be recognized as a distinct and legitimate sector that requires a specific governance approach
- **Development minerals** — acute need for strategic policy and legal frameworks, principally at the national level, derived from the SDGs and Targets
- **Integrated resources governance** — need for holistic governance underpinned by strategic environmental impact assessment, spatial or landscape planning, and mainstreaming of natural capital accounting

UNEA-4 Resolution on Mineral Resource Governance

Requests UNEP, alongside relevant UN entities and stakeholders, to:

- Based inter alia on IRP report on Mineral Resource Governance, to **collect information on sustainable practices, identify knowledge gaps & options for implementation strategies**
- **Undertake an overview of existing assessments** of different governance initiatives and approaches on sustainable management of metal and mineral resources
- Report to UNEA-5 in February 2021

Specific options for next steps



- **Global international agreements (International Minerals Agency?)** — focusing on mainstreaming of sustainable development across mining value chains (e.g. price stability coupled with sustainability standards).
- **Global platform** — for continued dialogue and advocacy on cross-cutting issues illuminated by the SDLO.
- **Regional platforms** — to engage host and home regions on issues of sustainable development and security of supply, reconciled through commitments such as the Africa Mining Vision and EU Raw Materials Initiative.
- **National level** — voluntary definition of paths to the SDLO (starting with SDLO gap analysis and benchmarking to determine the extent to which existing national policies, laws and regulations are aligned to the SDLO principles and aspirational goals)

Recommendations for practical near-term actions to improve global mining governance, informed by and compatible with the SDLO: Build on selected initiatives



- **94 Equator Principles Financial Institutions (EPFIs)** — towards upward harmonization of global standards of good practice anchored on the SDLO
- **Global Pact for the Environment)** — add extractives dimension
- **CMVs** — national determined paths for SDLO for continued dialogue and advocacy on cross-cutting issues illuminated by the SDLO.
- **OECD Guiding Principles for Durable Extractive Contracts** — to secure fairer deals
- **WEF RMDI (MVM), Shared Value Initiative** — to align views on what constitutes shared value
- **Principals Group (GRI, RMDI, IGF, WRF, IRP, EITI, ICMM, etc)** — consolidation of existing instruments

Deep diving on the upward consolidation of MRG

Initiatives: The value proposition

- ▶ More collective investment on systemic issues and understanding the pathways to change would improve policy uptake and rate of compliance: From process-oriented outcomes to real change
- ▶ Greater effort to find synergies between voluntary instruments and regulatory (mandatory) ones could contribute to the design and piloting of “smart regulation” especially in a pre-regulatory environment
- ▶ Linking an initiative to other well-known initiatives would strengthen buy-in. This confers legitimacy and improves the branding potential of a scheme
- ▶ Co-creation of repositories of knowledge, information, good practices improves efficiency and avoids duplication of efforts
- ▶ Greater coordination offer opportunities to provide the same level of focus throughout the entire MRG value chain
- ▶ The development of a core set of cross-cutting standards could curb initiative fatigue and proliferation of standards
- ▶ Common metrics would boost inter-operability among MRG instruments
- ▶ Reduction of the cost of compliance, administrative burden and the potential of a race to the lowest common denominator: A common interest of all the parties concerned



Thank you

The full report, Summary for Policymakers, Factsheet, Infographic and video can be accessed at:
<https://www.resourcepanel.org/reports/mineral-resource-governance-21st-century>