

SETTING-UP A EUROPEAN SUSTAINABILITY FRAMEWORK FOR THE EXTRACTIVE INDUSTRY



Policy brief #1

April 2021



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement n° 101003622



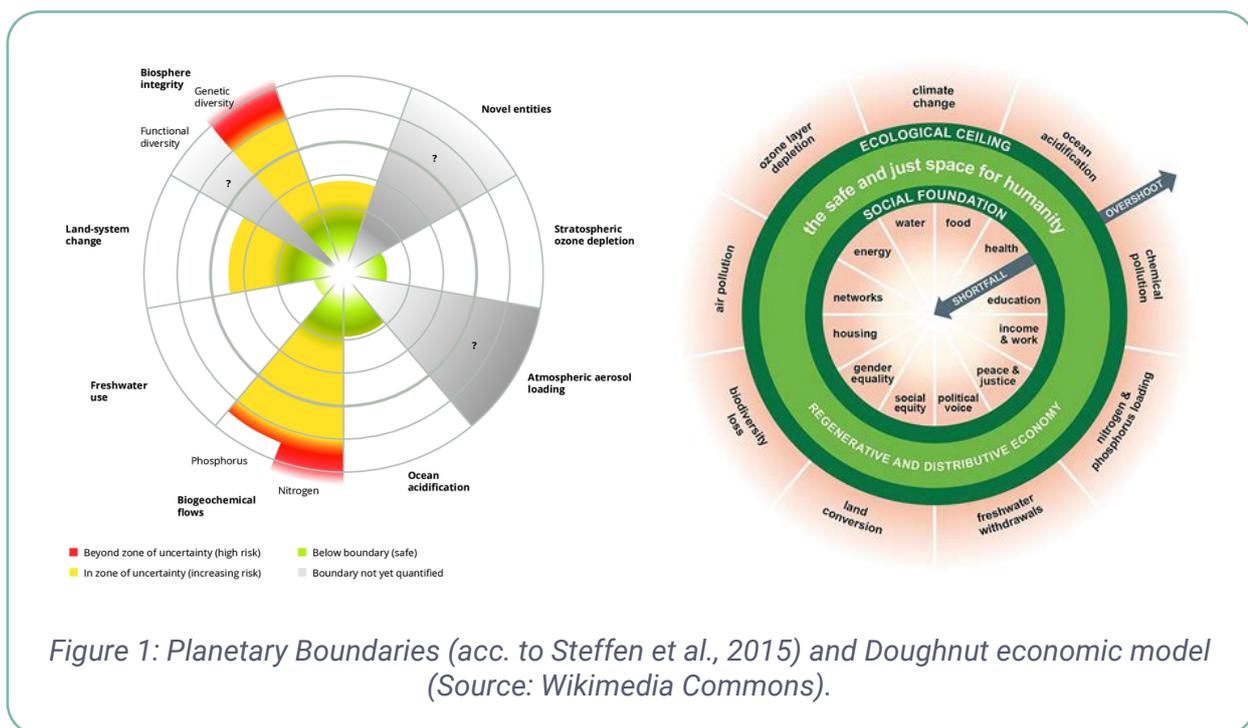
SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT

The definition of sustainability and sustainable development is not as simple as it may appear, as there are plenty of different definitions, as well as operationalisations of these definitions in the form of models, frameworks, policies, etc.

From the so-called Brundtland Commission's report *Our Common Future* (WCED, 1987), we know the definition that *"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"*.

It has since moved from a needs-based approach towards one where **the ultimate goal of sustainability is more generally "inclusive human development or flourishing"** (often-times coined as broader societal welfare or social well-being).

SUMEX's mandate is sustainable management in extractive industries, which we see as the ability of society to use mineral raw materials in a way to enhance well-being. This, however, needs to be done in a way that does not harm the environment.



We use the Planetary Boundaries and Doughnut Economy model as a starting point for our approach regarding sustainability. In the upcoming months in the SUMEX project, it will be investigated how these can be further operationalised in the context of sustainability aspects and correlating measures or other forms of operationalisation in general and, in particular, in the extractive sector.



SUSTAINABLE MANAGEMENT IN THE EXTRACTIVE INDUSTRY

To contribute to sustainable development, a mineral operation must minimise negative environmental and social impacts throughout its lifecycle. From an environmental perspective, this is best accomplished through effective environmental management. During exploration and development, effort must be made to avoid negatively impacting the biophysical integrity of the land. During operations, more environmentally-friendly extractive technologies (as defined as emitting less waste, treatment of effluent streams) need to be implemented through substitution or process modification. New concepts such as ‘temporary nature’ or biodiversity management plans should be developed and applied. During the closure and post-closure phases, technological measures must ensure air quality, that surface and groundwater resources are protected and that ecological production/alternate land use is accommodated. Economic sustainability involves creating economic value out of whatever decision is being acted upon and that decisions are made in the most equitable and fiscally sound manner while considering the other aspects of sustainability. In the extractive sector, economic sustainability generally applies to the notion of ‘shared value’, ‘economic equity’ or an equitable share of the economic benefits arising from the development. This may present as revenue sharing, job and business opportunity creation or local procurement of goods and services that the development would require. The economic connection to the communities of interest might be negotiated and secured under contract in the form of impacts and benefits agreements (Hitch, 2006).

The condition of social sustainability and how mineral resource development is reflected can be expressed in terms of ‘resilience’ and is subject to many factors from both of the other two spheres of sustainable development (i.e., economic and environmental). From the perspective of economic influence on social sustainability, such factors as economic market trends and the longevity of the resource being extracted affect how social sustainability persists (Black, 2005). How the various stakeholders perceive the environmental degradation or change influences their ability to accept extractive activity. Health concerns and other impacts on the community, occupational health and safety, loss of aesthetic, competing land use and inappropriate post-mining land use deeply affect social sustainability (Hitch, 2006) or, in other terms, an operation’s social license to operate. The social resilience of the economic impacts of mineral development can distort local and regional economies with the loss of traditional economic drivers, local or artisanal ways of life, etc.

SUMEX will add to this debate elements of strong sustainability, i.e. what the limitations on natural capital (expressed through Planetary Boundaries) and inclusive well-being (expressed through the Doughnut Economy) mean for the extractive industry.

CONCEPTUALISING SUSTAINABLE DEVELOPMENT

The United Nations (UN) adopted a set of 17 goals in September 2015 to guide global policy towards sustainable development – the Sustainable Development Goals or ‘SDGs’.

At first glance, there is no explicit mention of metals and extractives, except perhaps indirectly through energy and consumption. It takes a deeper assessment to realise that there are many aspects to work through. First, there are metals and minerals required for numerous renewable energy technologies (e.g., solar photovoltaics, solar thermal, wind, geothermal), energy storage systems (e.g., lithium storage cells), speciality alloys for infrastructure, medical technology, electronics and communications technology, and electric vehicles, and those metals and minerals required for agriculture.

Second, mines and extractive companies can make a meaningful contribution to helping a local area make substantial progress on most (if not all) of the SDGs, such as gender equality, economic activity and the revenue flows which support communities and host governments, environmental protection, education, water and so on. The Columbia Centre on Sustainable Investment (2016) demonstrated that extractive activity could advance all of the SDGs (see Figure 2a). Leading global extractive company AngloAmerican Ltd (AngloAmerican, 2018) believes that extraction interacts with all SDGs, with their framing of these relationships also shown in Figure 2b.

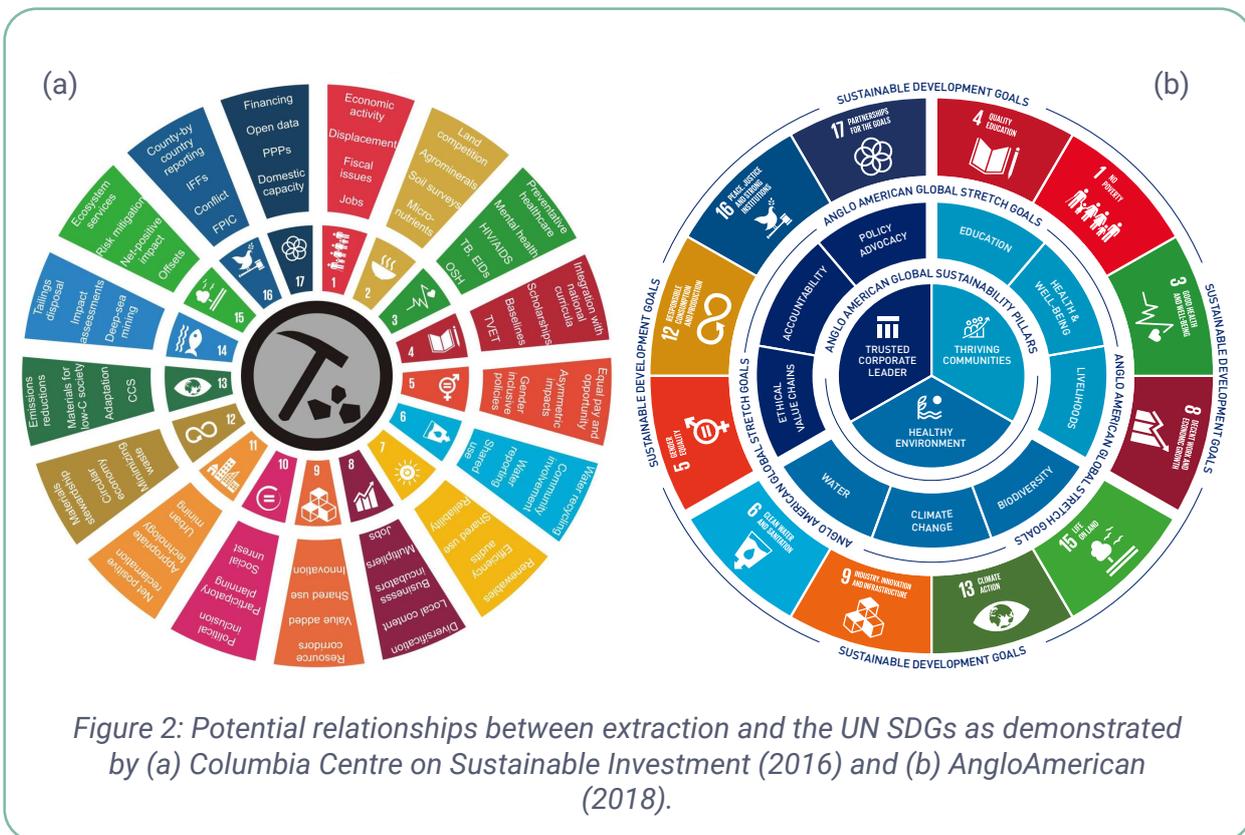


Figure 2: Potential relationships between extraction and the UN SDGs as demonstrated by (a) Columbia Centre on Sustainable Investment (2016) and (b) AngloAmerican (2018).



With the **European Green Deal**, climate change and environmental degradation will be counteracted through a new growth strategy. Moreover, by 2050, zero net greenhouse gas emissions are to be released, economic growth is to be detached from resource use, as well as all people and all regions are to be supported. Through the European Green Deal's action plan, the efficient use of resources is promoted by shifting from a linear economy to a clean and circular one. Restoring biodiversity and combating pollution are also included in this action plan (European Commission, 2021).

Looking at the European Green Deal from a raw materials perspective, it pursues access to resources of strategic importance that contribute to the achievement of the goals that have been set. This covers both primary and secondary raw materials which are to be sustainably extracted. (European Commission, 2019).

THE SUMEX SUSTAINABLE MANAGEMENT PRIORITIES

SUMEX suggests the following Sustainable Development priorities for the extractive industry in Europe. These should be seen as future-oriented, to some extent still aspirational and going beyond current legal requirements, which are the baseline.

Reinventing the economy (i.e. considering the Green Deal)

- Understanding of the role and indicators for extractives in an inclusive Green Economy that exists within Planetary Boundaries
- Valuing natural and social capital
- Defining what Benefit Sharing (or Shared Value) means (beyond taxes and jobs)
- Accountability (i.e., life-cycle considerations, various capitals, reporting)
- Extractives' role in closing cycles, both biological and technological (beyond recycling, focus on reduction/dematerialisation, multiple use and redesign of products)
- Planning beyond the mine life

Social and societal responsibility

- Developing value together with society, i.e. communities
- Taking responsibility for goods and services needed in a Green Economy
- Sustainable learning (systems thinking, distinguish between fact, opinion and supposition, and the ability to learn from mistakes)
- Share knowledge and information transparently
- Improving workers' well-being (zero harm, improved skills)

Environmental sustainability

- Integrated water management
- Efficient energy consumption, based on renewable energy and zero greenhouse gas emissions
- Multiple, co-operative land use and net positive impact on ecosystem services and biodiversity
- Enlightened waste management that considers secondary resources from traditional waste by-products



NEXT STEPS IN SUMEX

The SUMEX framework of priorities is preliminary to set the scene for a consultation process with stakeholders. After this consultation, SUMEX will develop a final framework that would be operationalised and will serve as a guide to identify good practise examples from other EU, national and regional projects, as well as from industry, focusing on five focus areas – permitting, environmental and social impact assessments, land use, health & safety and reporting.



REFERENCES

- AngloAmerican (2018) Sustainability Report 2018. Anglo American Plc, London, <http://www.angloamerian.com>
- Black, A. (2005) Rural communities and sustainability. In C. Cocklin & J. Dibdens (Eds.), Sustainability and change in rural Australia. Sydney, Australia: UNSW Press.
- Columbia Centre for Sustainable Investment (2016) Mapping Mining to the Sustainable Development Goals: An Atlas. Columbia Centre on Sustainable Development, A joint center of Columbia Law School and the Earth Institute at Columbia University, New York, 77
- European Commission (2019), Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions – The European Green Deal. COM(2019) 640 final
- European Commission (2021) A European Green Deal, https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en (accessed 04/02/2021)
- Hitch, M. (2006) Impact and benefit agreements and the political ecology of mineral development in Nunavut. Unpublished PhD thesis, University of Waterloo
- Steffen et al. (2015). Planetary Boundaries: Guiding human development on a changing planet. Science Vol. 347 no. 6223
- World Commission on Environment and Development (1987) Our Common Future. <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf> (accessed 05/02/2021)



ABOUT SUMEX

SUMEX is a 36-month project funded by the European Commission that started on 1 November 2020. The project aims to establish a sustainability framework for the extractive industry in Europe, with the involvement of stakeholders from civil society, academia, industry and government backgrounds from all across the EU.

The SUMEX consortium includes:



For more information on the topic described in this policy brief, please download the source report (SUMEX Project Deliverable 1.1) from <https://bit.ly/3l8d0Yh>.

Follow our activities:

www.sumexproject.eu

@SUMEXproject

