

# Environmental, Social, Governance: What does it mean to you as a professional?

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The United Nations (UN) 1987 Brundtland report described sustainable development as being development that “meets the needs of the present without compromising the ability of future generations to meet their own needs” (UN,1987). This definition recognises the right of future generations to achieve a sustainable level of development and the right to utilise natural resources.

In 2015 the UN Sustainable Development Goals (SDGs) were established as a blueprint to achieve a better and more sustainable future for all. The 17 Goals of the SDGs are interconnected and address global sustainability challenges including those related to poverty, inequality, climate change, environmental degradation, and peace and justice (UN, 2015).

The concept of Environmental Social and Governance (ESG) has evolved in parallel to the UN sustainability initiative. However ESG is a poorly defined, and possibly misunderstood concept that is broadly interpreted by different interest groups to meet specific objectives. In its core form ESG is the acronym for Environmental, Social and (corporate) Governance which are the three primary areas of interest, termed ‘socially responsible investors’. Socially responsible or ‘ESG investing’ can also be referred to as ‘sustainable investing’. However, the focus on ESG creates an awareness of the interlinkages of environmental, social and governance aspects that are key to sustainable business practice.

Subsequently the concept of ESG, in conjunction with the impacts of climate change, has evolved to incorporate the concept of sustainability and is broadly expressed as ‘Responsible Mining’ across the minerals and metals industry.

## Global minerals industry response

Increased societal focus on ESG has encouraged entities such as the Southern African Institute of Mining and Metallurgy (SAIMM), the Minerals Council South Africa (MC), International Council on Mining and Metals (ICMM), Minerals Council of Australia (MCA), Mining Association of Canada (MAC), the Engineering Council & Royal Academy of Engineering (UK), Australian Institute of Mining and Metallurgy (AUSIMM), and many others across multiple jurisdictions and disciplines, to establish principles and frameworks for responsible mining (SAIMM, 2021; MC, 2020, ICMM, 2020; MCA, 2021; MAC, 2019; Engineering Council, 2021; AUSIMM, 2021).

Central to these international responses has been clear differentiation between the role of the engineering professional and that of the business entity and its activities.

## **The role of the business entity in sustainability**

Progressive decarbonisation of the global economy and realisation of the UN SDGs will create sustained demand for metals and minerals well into the future. This has rightly led to greater scrutiny of where these materials have come from and whether they are being produced and used responsibly. The associated environmental, social and governance demands on industry are thus becoming increasingly complex but essential.

The role of establishing appropriate ESG requirements on the minerals and metals industry has largely been assumed by the ICMM who has established ten mining principles that define good practice environmental, social and governance requirements for the mining and metals industry (ICMM, 2020). These principles have been broadly adopted and integrated into several mining jurisdictions:

*Principle 1- ethical business:* Apply ethical business practices and sound systems of corporate governance and transparency to support sustainable development.

*Principle 2 – decision making:* Integrate sustainable development in corporate strategy and decision-making processes.

*Principle 3 – human rights:* Respect human rights and the interests, cultures, customs and values of employees and communities affected by our activities.

*Principle 4 – risk management:* Implement effective risk-management strategies and systems based on sound science, and which account for stakeholder perceptions of risk.

*Principle 5 – health and safety:* Pursue continual improvement in the health and safety performance with the ultimate goal of zero harm.

*Principle 6 – environmental performance:* Pursue continual improvement in environmental performance issues, such as water stewardship, energy use and climate change.

*Principle 7 – conservation of biodiversity:* Contribute to the conservation of biodiversity and integrated approaches to land-use planning.

*Principle 8 – responsible production:* Facilitate and support the knowledge-base and systems for responsible design, use, re-use, recycling, and disposal of products containing metals and minerals.

*Principle 9 – social performance:* Pursue continual improvement in social performance and contribute to the social, economic and institutional development of host countries and communities.

*Principle 10 – stakeholder engagement:* Proactively engage key stakeholders on sustainable development challenges and opportunities in an open and transparent manner, effectively report and independently verify progress and performance.

## **The role of the professional in sustainability**

Professionals have a significant role in helping society develop and achieve a sustainable way of living. They should work to enhance the welfare, health, and safety of all whilst paying due regard to environmental impact, biodiversity, and sustainability of resources. Due to their knowledge and skills, they are the potential providers of options and solutions to maximise social value and minimise environmental impact. Execution of professional activities invariably encompasses social, ethical, environmental, and economic challenges across multi-disciplinary teams in a variety of locations and social contexts. As such, professionals have critical leadership and influencing roles towards sustainability, ethical practice, and social responsibility.

Professionals therefore need to be informed, committed, creative, and play an active role in the responsible management of the planet's ecosystems, and in so safeguarding the security and prosperity of future generations.

Guidance to professionals broadly encompasses:

- Creating awareness through statements of professional principles, codes of ethics, statements of principles, standards, and guidance, and highlighting the consequences of business activity on communities and broader society.
- Creating understanding of how professionals can contribute to minimising harm and maximising value to affected communities and broader society by reference to ESG principles, standards, guidance and work execution.
- Creating competence in environmental and social performance areas, as demonstrated by professional qualifications, that cover jurisdictional requirements, workplace systems and procedures, relevant global principles, standards, guidance and performance in relevant codes of practice.

### **The role of the Southern African Institute of Mining and Metallurgy**

Within this context the SAIMM is focussing on developing the awareness of professionals' social responsibility and influencing member behaviour, through the concept of ESG-S (Environmental, Social, Governance – Sustainability) where sustainability of mining encompasses the full value chain from exploration to product recovery, sales and post mining closure.

Core to this approach of professional institute-influenced behaviour is the premise that sustainability, and the contribution of the mining and minerals industry to society is dependent on the professional and ethical conduct of minerals industry professionals.

The expertise and attitude of professionals is thus key to effective environmental, social and governance engagement with industry, finance providers, government, organised labour, NGOs, other stakeholder groups and the broader community to deliver sustainable social and economic benefit, currently and for future generations.

Activities that are being pursued encompass:

- Establishing an ESG committee to build member capability, influence professional behaviour and create industry dialogue on sustainability and responsible mining through environmental, social and governance related matters.
- Providing thought leadership that creates meaning to the concept of responsible mining and the linkages to ESG.
- Building member capability through creating awareness and understanding, providing single point access to relevant source and support material, and facilitating skills development.
- Enabling industry and stakeholder dialogue to build a shared understanding of opportunities and challenges, and to find common ground.

Proactive guidance of conference and journal content to ensure that ESG-S related aspects are given sufficient prominence.

- Maintain and expand influence in the governance area, specifically minerals industry reporting codes, to ensure effective integration of ESG-S aspects.

- Revision of the SAIMM Code of Conduct and associated governance material to embrace the concept of responsible mining e.g. a framework, guidelines, responsibility statement, and membership requirements/obligations.
- Through these activities create a logical professional home for sustainability practitioners in Southern Africa.

Ultimately there should be increased social acceptance and positive regard for the mining and metals industry, of the benefits that it brings to local communities and broader society, coupled with acceptance as a valued contributor to sustainable development and the economy.

### **So, what does this mean to you as a professional?**

As industry professionals there is the opportunity to positively impact sustainability, ethical practice, and social responsibility through what we say and do in our work. To do this we need to broaden the perspective across our areas of responsibility and influence the way we think about sustainability challenges

Typically, ESG related matters are addressed on an issue by issue basis with activities focussed on risk identification and mitigation by discipline. For example:

**Environment:** Water consumption, carbon neutrality, mine waste(s) management, hazardous substances control, stability of tailings storage facilities, air quality noise exposure, biodiversity, climate change, mine closure/ rehabilitation.

**Social:** Labour practices, individual rights, gender and human rights, land use, resettlement and livelihood impact, worker and community health and safety, artisanal mining conflict, mine closure impact.

**Governance:** Legal and regulatory compliance, business ethics, fair trade, bribery and corruption.

This approach is inherently reductionist and limits the effectiveness of possible solutions through limited acknowledgement of systemic interdependencies.

Alternatively, adopting a 'systems thinking' framework (and in doing so changing the way we think about the challenges) will change the nature of the outcomes. Core to this approach is to adopt a holistic perspective on ESG rather than simply that of compliance and risk mitigation.

As an example, by adopting an industrial ecology perspective identifies systemic interdependencies and associated opportunities that will enable more sustainable outcomes.

Industrial ecology is a branch of systems science and systems thinking – it is the study of systemic relationships between society, the economy, and the natural environment. It focuses on the use of technology to reduce environmental impacts and reconcile human development with environmental stewardship while recognising the importance of socioeconomic factors in achieving these goals. Essentially finding interdependent, ecosystem based, sustainable solutions.

Methods and approaches that can be applied in this science of sustainability are:

- Material flow analysis: the quantification of mass and energy flows in systems ranging from industrial plants to the global economy, including in temporally dynamic states;
- Life cycle assessment: the systemic analysis of environmental flows and related impacts that arise throughout the life cycles of products and services, from raw material extraction to end-of-life disposal;

- Industrial symbiosis: the study of the exchange of waste as a resource among nearby industrial facilities, akin to synergistic physical relationships among biological species;
- Environmentally extended input-output analysis: a method to quantify environmental footprints based on the exchanges between economic sectors, and with the environment, and;
- Socio economic metabolism that considers the interaction of human controlled material and energy flow within social systems.

An example of the application of an industrial ecology framework is the evolution and awareness of the circular economy and associated developments. As such the application of industrial ecology, as an ESG system tool is:

- Proactive, not reactive and driven by sustainability imperatives.
- Core to the design process and not an 'add-on' approach.
- Inherently flexible to accommodate technology development and evolving societal responses.
- Encompassing, not insular and requires consideration across sectoral, regional and cultural boundaries.

I'm not advocating industrial ecology as the panacea for all our ills but rather that we should look to different tools, learn new skills, see challenges differently to build sustainable solutions. However we consciously need to 'think about the issue differently, in order to build different outcomes' for sustainable outcomes. We need to be critical thinkers, to be curious, to seek out and understand the interconnectivity of 'parts', to acknowledge multiple perspectives to any challenge and to crucially expand both the time and spatial dimensions of solutions to create sustainability.

So, in closing, ESG for the professional is not only about stock exchange compliance, offsets, corporate social investment - yes, these are important and have a place, but it is rather about adopting and promoting holistic, systems-based thinking in the development and execution of mining operations to minimise environmental impact, ensure social stability, allow informed investing and to drive long term sustainability.

Ultimately, sustainable and responsible mining needs to achieve the same status as safety and the widely accepted concept of 'zero harm', across the industry, and become a fundamental part of our mining DNA and the way we think and behave as professionals.

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