



## When one tugs on a single thing in nature, one finds it attached to the rest of the world



Change resistance is the tendency for something to resist change, even when a surprisingly large amount of force is applied. Systemic change resistance is the tendency for a system to reject an attempted change, even though the change is supported over a long period by a substantial fraction of the population. Systems ecologists have increasingly concluded that the conservation of species in isolation from human beings does not address the real systemic issues we are facing. For over 40 years, conservationists have been promoting the need for humans to heed the impact of our activities on the sustainability of natural ecosystem. Despite dire messages from scientists, the system has resisted substantive change.

The theory of change resistance reminds us that, frequently, a culture shift or systemic change process failed because the root cause was not being addressed. The concept of sustainable processing and social responsibility is one such systemic change that is required. Systems ecologists have increasingly warned that the Earth's ability to sustain the natural ecosystem is at a tipping point, with about 15% of all land globally degraded or severely damaged through human impact. About three out of five people in the world are impacted by damage to the ecosystem. The cost is largely hidden as it is not directly measured or counted, but it is estimated to be equivalent to about 10% of all global wealth.

ESG (environmental, social, and corporate governance) is a top priority for shareholders and investors in mining and metal extraction. Conservation and sustainability messages are not new, however, but it's become increasingly clear that we cannot protect an elephant without protecting the grass it walks on – both are key components of the ecosystem and cannot be protected in isolation. Conservationists have tried, and dismally failed. If we attempt to conserve the ecosystem without considering and incorporating human activities into the sustainability plan, the efforts to protect individual species will continue to fall short of the desired goals. Herein lie valuable insights for sustainable and responsible mining and processing. Consider the words of American naturalist John Muir: *'When we try to pick out anything by itself, we find it hitched to everything else in the Universe'*.

Individual professionals will require new skills and perspectives to support corporate ESG targets, and most importantly to truly deliver the systemic changes required to ensure ESG is not just another checkbox exercise in an annual report, so that the principles of sustainability and social responsibility become embedded in how we work. Mining and metallurgical industries can remain viable and deliver sustainable growth only through responsible, ethical, and sustainable mining and processing activities. The SAIMM can play a key role here by creating platforms to advance this crucial agenda beyond the buzzword level. Ultimately, responsible and sustainable processing will be brought about through the professionally influenced behaviour of professionals, such as the members of the SAIMM.

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