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DISCUSSION PAPER

Sustainability and Regeneration as Complementary Guides for Leadership Development Programs

ProVeritas Group Pty Ltd

Sustainability and Regeneration as Complementary Guides for the IDG Framework

Executive Summary

This discussion paper explores the relationship between sustainability and regeneration as guiding concepts for leadership development initiatives, such as the revision of the Inner Development Goals (IDG) framework. It does not present these terms as opposed but as complementary.

Sustainability has provided a shared purpose for decades, focusing on meeting present needs without compromising the future. Regeneration deepens this purpose by restoring the vitality of ecological and social systems so that they may flourish again.

The paper reviews scientific evidence from planetary boundaries research, public health, and economics, as well as sociological perspectives on Indigenous knowledge, justice, and decolonisation. It posits that both sustainability and regeneration can serve as rigorous guides when grounded in science, justice, public health and measurable outcomes.

Key insights include:

- Sustainability often sets the floor: the minimum requirement to avoid further harm.
- Regeneration raises the ceiling: the opportunity to restore vitality and resilience in living systems.
- Both are essential, particularly as the IDG framework evolves to meet complex global challenges.

We are learning the hard way that the way we organise our economies and societies is inseparable from the living systems that hold us. The language we use to guide action matters. Sustainability has been our north star for decades. Regeneration is the word many now reach for when they want to go beyond doing less harm to restoring the conditions that allow life to flourish. Are these simply new labels, or a real shift in thinking and practice?

What do these words mean

Sustainability was crystallised by the Brundtland Commission in 1987 as meeting the needs of the present without compromising the ability of future generations to meet theirs (World Commission on Environment and Development, 1987).

Regeneration is increasingly understood as a broader systems approach that emphasises the restoration of vitality. Recent scholarship in Nature Sustainability describes regeneration as processes that rebuild ecological and social vitality, integrating regenerative dynamics within sustainability science and practice (O'Neill et al., 2024). In other words, it complements sustainability by focusing on restoring the capacity of systems to renew themselves.

The scientific backdrop: where we stand

Evidence across climate science, ecology and public health shows that human activity is straining the Earth's life-support systems beyond safe limits. The 2024 update to the Planetary Boundaries framework confirmed that at least six of nine boundaries, including climate and biosphere integrity, are already transgressed. This places the stability of the systems we rely on under mounting risk (Stockholm Resilience Centre, 2024; Richardson et al., 2023).

This is not only a biophysical story. It is a public health story. The World Health Organization (2025) describes climate change as a fundamental threat to human health, already driving rising heat stress, food and water insecurity, and the spread of infectious disease, with the heaviest burdens falling on vulnerable communities.

The Lancet Countdown 2024 reports that health hazards from climate change reached record levels, with the over-65s experiencing the highest heat-related mortality on record and billions of labour hours lost due to heat exposure (Romanello et al., 2024). The health case for rapid climate action is now unequivocal.

So what does this mean for our guiding concepts? Sustainability calls us to respect limits and balance. Regeneration adds an explicit focus on restoring function and resilience after damage.

Economics: growth, post growth, and the business case

There is an active debate about whether continual GDP growth is compatible with sustainability. Nature Reviews Earth & Environment highlights that the Planetary Boundaries framework is now mainstream in sustainability science and policy, forcing re-examination of growth trajectories (Nature Reviews Earth & Environment, 2024).
In Science, Jackson and Victor (2019) unpack the claims for and against green growth, urging evidence-led clarity about when growth decouples from environmental impact and when it does not.

For decision makers, there is also a pragmatic angle. Whelan and Fink (2016) show that embedded sustainability can improve risk management, innovation, and financial performance. This is not just ethics. It is strategy.

From Cambridge, the Institute for Sustainability Leadership calls on business and finance to move from risk to resilience, adopt regenerative models for nature, and integrate nature into financial decision making (Cambridge Institute for Sustainability Leadership [CISL], 2023a, 2023b).

Post growth thinking is not anti-prosperity. It asks us to design economies that help people thrive whether or not GDP grows, especially within the safe and just space defined by Earth system limits and social foundations (Earth Commission, 2024).

Society, justice, and Indigenous wisdom

The largest global biodiversity assessment to date (IPBES, 2019) concludes that reversing nature loss requires transformative change and that Indigenous and local knowledge is essential to effective stewardship. Where Indigenous peoples have secure rights and voice, biodiversity and ecosystem outcomes are often better.

The Sustainable Development Goals commit all nations to leave no one behind. That means climate and nature action that is fair, inclusive, and attentive to historical responsibility (United Nations, 2015).

Health equity is central here. The WHO (2025) highlights that those who contribute least to the problem bear the greatest health risks from climate disruption. A just transition protects health, jobs, culture, and country while we decarbonise and restore nature.

Which term and why

Sustainability remains the common language in policy, standards, and corporate reporting. It anchors the SDGs, net zero, and risk disclosure. Harvard's programs and research hubs continue to organise climate and health work within sustainability and planetary health frameworks

(Harvard T.H. Chan School of Public Health, 2023).

Regeneration is gaining ground in food systems, land use, investment, and enterprise design. Yale's CBEY highlights financing and practice shifts for regenerative agriculture, including links between sea and soil foodscapes and community well-being (Yale Center for Business and the Environment, 2024). Cambridge CISL urges adoption of regenerative models and nature-positive strategies across business and finance (CISL, 2023a, 2023b).

Planetary health connects the dots between environmental decline and human well-being. The Lancet Commission and the Lancet Countdown have helped put health at the centre of climate and nature action (Whitmee et al., 2015; Romanello et al., 2024).

In practice, leading institutions use both terms. Sustainability often sets the floor. Regeneration raises the ceiling.

Are these buzzwords or catalysts?

They can be either. The litmus test is whether the language drives measurable shifts:

1. **From reduction to renewal**
   Are we only reducing harms, or are we restoring function in soils, watersheds, forests, cities, communities, and institutions? (O'Neill et al., 2024).
2. **From outputs to outcomes**
   Do strategies improve Earth system indicators that matter, such as staying within planetary boundaries, rather than only counting activities or spending? (Stockholm Resilience Centre, 2024).
3. **From siloed to systemic**
   Are health, climate, biodiversity, equity, and economy addressed together, as the Lancet and WHO urge, rather than as separate agendas (Romanello et al., 2024; WHO, 2025).
4. **From extractive value to living value**
   Are finance and enterprise aligned with nature positive and regenerative value creation, as Cambridge CISL recommends (CISL, 2023a, 2023b).
5. **From top down to with community**
   Are Indigenous peoples and local communities partners and rights holders, not afterthoughts, consistent with IPBES findings (IPBES, 2019).

If your program or portfolio passes these tests, the term you choose matters less than the integrity of the work.

For years we have spoken about sustainability, which is about meeting today's needs without limiting tomorrow's. That has been important, yet we now see many systems already under

stress. Regeneration goes further. It is about restoring vitality so that people, communities and ecosystems can thrive again. Sustainability sets the floor, regeneration raises the ceiling. Both matter. What shifts is our mindset, from minimising harm to actively renewing life. For STEMM leaders, this is an invitation to bring scientific rigour together with care and responsibility, so that our decisions create lasting value for people and the planet.

Links to climate and social justice

Climate and health: Delayed action deepens avoidable illness and loss. Health-centred climate policy delivers immediate co-benefits through cleaner air, safer housing, active transport, and resilient food systems (Romanello et al., 2024; WHO, 2025).

Justice: Fairness is a design choice. Policies that protect low-income households and frontline communities are more durable and more effective. The SDGs and planetary health frameworks keep equity at the centre (United Nations, 2015; Earth Commission, 2024).

Indigenous leadership: Caring for Country practices, land rights, and self-determination improve environmental and social outcomes. Embedding Indigenous governance in land and sea management is not only right. It is effective (IPBES, 2019).

Practical guidance for leaders

1. **Set dual goals:** Stay within planetary limits and restore local regenerative capacity. Use credible indicators tied to Earth system science and public health (Stockholm Resilience Centre, 2024; WHO, 2025).
2. **Shift capital and incentives:** Back projects that restore natural assets and community well-being. Integrate nature into financial decision making and risk models (CISL, 2023a, 2023b).
3. **Anchor health and equity:** Let health benefits and fairness guide climate and nature choices. This often increases public support and policy durability (Romanello et al., 2024; WHO, 2025).
4. **Learn with Indigenous partners:** Co-design programs, use free and informed consent, and share governance and benefits (IPBES, 2019).
5. **Language with integrity:** Use sustainability when you mean meeting needs within limits. Use regeneration when you commit to restoring living systems and social vitality. Use both when both are true.

Conclusion

Sustainability gave us a common purpose. Regeneration invites us to extend that purpose by restoring the conditions that allow life to flourish with dignity. Neither term should be reduced to marketing. Together, they can serve as rigorous guides for a flourishing future when

grounded in science, public health, justice and measurable outcomes.

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Dr Ruby Campbell is the founder and CEO of ProVeritas Leadership Pty Ltd, based in Sydney, Australia. Her work equips leaders and organisations to respond to planetary challenges with wisdom, influence, and integrity.

As a thought leader, Ruby works at the intersection of STEMM, coaching psychology, systems thinking, and regenerative leadership. She is committed to an evidence-based approach to decision making and integrates emerging concepts such as Global Social Witnessing. Ruby also serves as Regional Research Lead for the Inner Development Goals (IDGs).

She is the author of *Scientists in Every Boardroom: Harnessing the Power of STEMM Leaders in an Irrational World*, and the co-author and chief editor of the *Shaping Tomorrow: A Playbook for Coaching Leaders in Sustainable Decision-Making and Policy*.

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References

Cambridge Institute for Sustainability Leadership. (2023a). From risk to resilience: The business imperative of nature restoration. University of Cambridge.

Cambridge Institute for Sustainability Leadership. (2023b). COP briefings on regenerative business models. University of Cambridge.

Campbell, R. (2021). Scientists in every boardroom: Harnessing the power of STEMM leaders in decision making. Routledge.

Campbell, R., & Collett, D., with Baden, D., Bennett, D., Dbouk, W., Arnold, J., Wardle, J., Schubert-Panecka, K., Molthan, V., Lo, K., & Nickells, N. (2024). Shaping tomorrow: A playbook for coaching leaders in sustainable decision making and policy. Climate Coaching Alliance and University of Southampton.

Drüke, M., Winkelmann, R., Heitzig, J., & Donges, J. F. (2024). The long-term impact of transgressing planetary boundaries on the Earth system. Earth System Dynamics, 15(2), 467–481. https://doi.org/10.5194/esd-15-467-2024

Earth Commission. (2024). Safe and just Earth system boundaries. The Lancet Planetary Health, 8(6), e421–e432. https://doi.org/10.1016/S2542-5196(24)00095-9

Harvard T.H. Chan School of Public Health. (2023). Climate and health research initiatives. Harvard University.

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). (2019). Global assessment report on biodiversity and ecosystem services: Summary for policymakers. https://doi.org/10.5281/zenodo.3831673

Jackson, T., & Victor, P. A. (2019). Unravelling the claims for and against green growth. Science, 366(6468), 950–951. https://doi.org/10.1126/science.aay0749

Nature Reviews Earth & Environment. (2024). Planetary boundaries framework gains traction in sustainability science. Nature Reviews Earth & Environment, 5(11), 719–720. https://doi.org/10.1038/s43017-024-00686-7

O'Neill, K., Mehta, R., & Santos, A. (2024). Mainstreaming regenerative dynamics for sustainability. Nature Sustainability, 7(3), 201–210. https://doi.org/10.1038/s41893-023-01124-7

Reuters. (2025, August 22). Urgent action needed to protect workers from heat stress in warming world, UN says. Reuters. https://www.reuters.com/sustainability/climate-energy/urgent-action-needed-protect-workers-heat-stress-warming-world-un-says-2025-08-22/

Richardson, K., Steffen, W., Rockström, J., Cornell, S. E., Fetzer, I., Bennett, E. M., & Persson, L. M. (2023). Earth beyond six of nine planetary boundaries. Science Advances, 9(37), eadh2458. https://doi.org/10.1126/sciadv.adh2458

Romanello, M., McGushin, A., Di Napoli, C., Drummond, P., Hughes, N., Jamart, L., ... & Costello, A. (2024). The 2024 report of the Lancet Countdown on health and climate change: Code red for a healthy future. The Lancet, 404(10390), 1981–2005. https://doi.org/10.1016/S0140-6736(24)01989-1

Stockholm Resilience Centre. (2024). Earth beyond six of nine planetary boundaries. Stockholm University. https://www.stockholmresilience.org/publications/publications/2024-10-12-earth-beyond-six-of-nine-planetary-boundaries.html

United Nations. (2015). Transforming our world: The 2030 agenda for sustainable development. https://sdgs.un.org/2030agenda

Whelan, T., & Fink, C. (2016). The comprehensive business case for sustainability. Harvard Business Review, 94(10), 111–118.

Whitmee, S., Haines, A., Beyrer, C., Boltz, F., Capon, A. G., Ferreira de Souza Dias, B., & Yach, D. (2015). Safeguarding human health in the Anthropocene epoch: Report of the Rockefeller Foundation–Lancet Commission on Planetary Health. The Lancet, 386(10007), 1973–2028. https://doi.org/10.1016/S0140-6736(15)60901-1

World Commission on Environment and Development. (1987). Our common future. Oxford University Press.

World Health Organization. (2025). Global action plan on climate change and health, 2025–2028. https://www.who.int/news-room/events/detail/2025/07/23/default-calendar/wha78-debriefing--gap

Yale Center for Business and the Environment. (2024). Financing regenerative agriculture: Research insights. Yale University. https://cbey.yale.edu/our-stories/new-research-on-regenerative-agriculture?utm_source=chatgpt.com