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"We are now in the Anthropocene. The only way forward is to regenerate the resilience of Earth's life-support systems."

 Johan Rockström, Director of the Potsdam Institute for Climate Impact Research and co-author of the Planetary Boundaries framework, Nature Sustainability interview, 2022

"Regenerative design is not a luxury. It is the logic of life."

Kate Raworth, Economist and author of Doughnut Economics,
Design for Planet Festival, 2021





PURPOSE AND SCOPE

This discussion paper invites the IDGs ecosystem to consider sustainability and regeneration not as opposing paradigms but as complementary guides for leadership development in service of planetary wellbeing.

It explores how these concepts, long embedded in ecological, social, and Indigenous wisdom, can deepen the Inner Development Goals framework as it evolves to meet complex global challenges.

Drawing on scientific evidence from planetary boundaries research, public health, economics, and sociological perspectives on justice and decolonisation, the paper highlights how regeneration expands the purpose of sustainability. It moves the focus from minimising harm to restoring vitality in living systems.

It also surfaces emerging signals from United Nations frameworks, which increasingly integrate regenerative approaches into climate, health, biodiversity, education, and urban policy agendas. These developments offer legitimacy and alignment for embedding regeneration into IDG-aligned leadership programmes.

The paper offers:

- A conceptual framing of sustainability and regeneration as a twin compass for leadership
- A synthesis of global signals and scientific insights
- Five invitations for leaders and facilitators to cultivate regenerative capacities
- A call to name what guides us, individually and collectively, as we navigate toward a flourishing future





SUSTAINABILITY AND REGENERATION: A TWIN COMPASS

From a scientific and systems perspective, sustainability and regeneration are interdependent. One cannot exist meaningfully without the other. Together, they form a twin compass for navigating leadership in an era of ecological and social disruption.

Sustainability establishes the conditions for operating within safe ecological and social boundaries. It ensures that today's needs are met without compromising the ability of future generations to meet theirs (World Commission on Environment and Development, 1987). In essence, it is about not exceeding planetary boundaries—guarding the thresholds within which life can continue.

Regeneration moves beyond preservation. It actively restores vitality to ecosystems, communities, and institutions that have already been harmed (O'Neill et al., 2024; UNEP, 2021). It focuses on renewing life-support systems so that they may flourish again. Recent scholarship in Nature Sustainability frames regeneration as processes that rebuild ecological and social vitality, mainstreaming regenerative dynamics within sustainability science and practice.

Given that at least six of the nine planetary boundaries have already been breached (Stockholm Resilience Centre, 2024; Richardson et al., 2023), sustainability alone is no longer sufficient. Much of what once could be sustained now requires regeneration simply to be viable. Regeneration is not a luxury; it is a prerequisite for returning to stability and enabling long-term flourishing.

Together, sustainability and regeneration form a twin compass for leadership:

- Sustainability guards the boundaries.
- **Regeneration** restores vitality.

Without regeneration, sustainability risks becoming static or technocratic, focused on efficiency without healing ecosystems or addressing justice. Without sustainability, regeneration risks being idealistic, lacking grounding in scientific limits. Both must therefore serve as explicit guiding principles within the IDGs framework, just as they increasingly do within UN policy agendas.

VITALITY: THE PULSE OF PLANETARY WELLBEING

Vitality refers to the dynamic, life-affirming qualities of a system; its ability to sustain, renew, and evolve in response to internal and external change. In planetary terms, vitality is not just the absence of harm; it is the presence of coherence, diversity, resilience, and generative potential.





Ecological Vitality

The capacity of ecosystems to regenerate soil, purify water, cycle nutrients, and support biodiversity

- Indicators include species richness, soil health, pollination networks, and intact bioregional cycles
- Vital ecosystems are not merely "stable"—they are alive, adaptive, and relational

Social Vitality

- The ability of communities to foster wellbeing, justice, and cultural continuity
- Includes access to clean air, nutritious food, education, and meaningful participation
- Vital societies are inclusive, creative, and capable of healing historical harms

Institutional Vitality

- The responsiveness and integrity of governance, education, and economic systems
- Includes transparency, adaptability, and alignment with planetary boundaries
- Vital institutions evolve toward regenerative norms, not just sustainable metrics

Vitality is what regeneration seeks to restore. It is the pulse of planetary wellbeing, the difference between surviving and flourishing.

IN THIS SENSE, REGENERATION IS NOT A REACTIVE FIX BUT A PROACTIVE INVITATION TO REWEAVE THE CONDITIONS FOR LIFE.





WHERE WE STAND: SCIENCE, HEALTH, AND GLOBAL SIGNALS

Across the United Nations system, regeneration is gaining traction—not as a rhetorical flourish, but as a guiding principle for policy and practice. It is being embedded in diverse domains, from ecosystem restoration to urban planning and education:

- The **United Nations Development Programme (UNDP)** launched *A Regeneration in the Sahel*, positioning regeneration as central to governance, resilience, and energy transitions across climate-vulnerable regions (UNDP, 2023).
- The United Nations Environment Programme (UNEP) and the Food and Agriculture
 Organization of the United Nations (FAO) co-lead the UN Decade on Ecosystem
 Restoration (2021–2030), a global initiative to prevent, halt, and reverse ecosystem
 degradation across terrestrial, freshwater, coastal, and marine systems (UNEP, 2021).
- The **United Nations Human Settlements Programme (UN-Habitat**) advances urban regeneration, linking environmental resilience with cultural heritage, inclusive governance, and equitable urban development (UN-Habitat, 2024).
- The United Nations Educational, Scientific and Cultural Organization (UNESCO)
 convenes dialogues on sustainable rural regeneration and integrates regenerative
 principles into education for sustainable development, fostering ecological literacy and
 cultural continuity (UNESCO, 2023).

These initiatives signal a shift: regeneration is being mainstreamed across UN agencies as a necessary response to systemic harm and a pathway to resilience.

⚠ THE SCIENTIFIC BACKDROP

Multiple lines of evidence show that humanity is operating beyond safe limits on key Earth systems.

The 2024 update to the Planetary Boundaries framework confirmed that at least six of nine boundaries - including climate stability and biosphere integrity - have already been transgressed (Stockholm Resilience Centre, 2024; Richardson et al., 2023).

This is not only a biophysical crisis. It is a public health emergency.





The World Health Organization (WHO) identifies climate change as a fundamental threat to human health, already driving increased heat stress, food and water insecurity, and the spread of infectious disease.

Vulnerable communities bear the heaviest burdens (WHO, 2025).

The Lancet Countdown 2024 reports that climate-related health hazards reached record levels.

The over-65 population experienced the highest heat-related mortality on record, and billions of labour hours were lost due to heat exposure (Romanello et al., 2024). The health case for urgent climate action is now unequivocal.

🕵 REGENERATION IN PRACTICE: CITY LEADERSHIP IN ACTION

While global frameworks increasingly embrace regeneration, city leaders are already translating these principles into practice. Across urban contexts, regeneration is guiding decisions that restore ecological function, cultural vitality, and community wellbeing.



Barangaroo Harbour Park design by AKIN Festival of Urbanism - Henry Halloran Urban and Regional Research Initiative

In Oceania, this momentum is visible in Australia's urban leadership (see above image). The *Festival of Regenerative Urbanism*, convened by the Halloran Trust and the University of Sydney, showcases how regeneration is being embedded in planning, housing, infrastructure, and governance. The 2025 programme featured themes such as:

• Caring for Country: Elevating Indigenous land stewardship and cultural continuity in urban design





- Regenerative Housing: Exploring models that restore social cohesion and ecological resilience
- Urban Repair: Addressing historical harm through inclusive planning and place-making
- Climate-Ready Cities: Linking regeneration with adaptation, health, and equity outcomes

These examples demonstrate that regeneration is not a distant aspiration—it is a living practice. City leaders are reframing urban challenges as opportunities to restore vitality, build trust, and serve planetary health from the ground up.

As Oceania's IDG Research Co-Lead, I see these efforts as vital contributions to the IDG ecosystem. They offer grounded case studies for researchers, facilitators, and policymakers seeking to embed regeneration into leadership development and systems change.

(6) IMPLICATIONS FOR OUR GUIDING CONCEPTS

Considering these signals, SUSTAINABILITY calls us to respect limits and maintain balance.

REGENERATION adds an explicit focus on restoring function and vitality after damage.

Together, they offer a twin compass for leadership: one that is both precautionary and transformative.





😙 REGENERATION AS A LEADERSHIP IMPERATIVE

Regeneration is not only a conceptual guide: it is a leadership imperative. It invites a shift in how leaders perceive disruption and how they respond to complexity, harm, and possibility. Framed practically, regeneration can be cultivated in two interrelated ways:

- Mindset: A regenerative mindset sees breakdowns and crises not as endpoints but as openings for renewal: personally, institutionally, and systemically. It shifts leadership orientation from fear and scarcity to possibility, creativity, and repair. This mindset fosters hope without denial, and agency without illusion.
- Skill Set: Regenerative leadership draws on concrete practices that restore vitality and coherence. These include emotional resilience, ecological literacy, restorative justice, and conflict transformation. Such skills enable leaders to translate regenerative intent into everyday action, shaping cultures of care, adaptability, and accountability.



LINKS TO CLIMATE AND SOCIAL JUSTICE

Regeneration is not abstract. It connects directly to urgent justice and health imperatives:

Climate and Health

Delayed action deepens avoidable illness and loss. Health-centred climate policy delivers immediate co-benefits: 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 Sustainable Development Goals (SDGs) and planetary health frameworks place 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 just - it is effective (IPBES, 2019).

Regeneration as a principle honours these imperatives and connects them in practice. It offers leaders a way to respond to harm with healing, and to complexity with coherence.





IMPLICATIONS FOR IDG RESEARCHERS

Now

Researchers can begin integrating regenerative language, case studies, and practices into the five existing IDG dimensions. This includes drawing on examples from UN agencies, Indigenous knowledge systems, and Global Majority leadership models.

Regeneration can also be tested as an enriching lens for capacity-building tools, facilitation methods, and educational programmes.

Future

The research community could deepen evaluation of how regeneration, alongside sustainability, strengthens the IDG framework as guiding principles. This includes ensuring both are grounded in diverse worldviews, scientific evidence, and lived experience, particularly from communities most impacted by ecological and social harm.

By embedding REGENERATION AS BOTH A GUIDING PRINCIPLE AND A LIVED CAPACITY, the IDG framework can evolve in step with global policy signals and ancestral wisdom traditions, while offering leaders practical ways to serve planetary health.





FROM INSIGHT TO ACTION: FIVE INVITATIONS FOR LEADERS

As regeneration gains traction across science, policy, and practice, leaders are called to translate insight into action. The following invitations offer practical guidance for embedding regenerative principles into decision-making, programme design, and institutional culture.

1. SET DUAL GOALS

Commit to staying within planetary boundaries while actively restoring regenerative capacity at local and regional scales. Use credible indicators grounded in Earth system science and public health to guide decisions and track progress (Stockholm Resilience Centre, 2024; WHO, 2025).

2. SHIFT CAPITAL AND INCENTIVES

Support initiatives that regenerate natural assets and strengthen community wellbeing. Integrate nature into financial decision-making, investment criteria, and risk models to align capital flows with ecological resilience (Cambridge Institute for Sustainability Leadership, 2023a, 2023b).

3. ANCHOR HEALTH AND EQUITY

Let health outcomes and fairness guide climate and nature choices. Policies that deliver cobenefits - such as cleaner air, safer housing, and resilient food systems - often gain stronger public support and prove more durable over time (Romanello et al., 2024; WHO, 2025).

4. LEARN WITH INDIGENOUS PARTNERS

Engage Indigenous leadership through respectful, reciprocal partnerships. Co-design programmes, uphold free, prior, and informed consent, and share governance and benefits. Such approaches improve environmental and social outcomes while honouring rights and responsibilities (IPBES, 2019).

5. USE LANGUAGE WITH INTEGRITY

Be precise and intentional in how guiding concepts are named. Use sustainability when referring to meeting needs within limits. Use regeneration when committing to restoring vitality in living systems and communities. Use both when both are true.





T CONCLUSION: A FLOURISHING FUTURE

This paper has explored how sustainability and regeneration can serve as complementary guides for leadership in service of planetary wellbeing. Grounded in scientific evidence, public health imperatives and global policy signals, regeneration is emerging as a necessary response to systemic harm and a practical pathway to renewal.

By framing regeneration as both a mindset and a skill set, leaders are invited to move beyond preservation and actively restore vitality in ecological, social and institutional systems. This approach aligns with the Inner Development Goals framework, offering a deeper orientation for cultivating the capacities needed to navigate complexity, foster justice and support life.

As regeneration becomes embedded across UN agencies, city leadership and Indigenous governance, the IDG research community has an opportunity to integrate these principles into evaluation, education and practice. Doing so strengthens the framework's relevance and responsiveness to diverse worldviews and lived realities.

NAMING REGENERATION AS A GUIDING PRINCIPLE AFFIRMS A COMMITMENT TO HEALING, COHERENCE AND TRANSFORMATION. IT INVITES LEADERS TO RESPOND TO DISRUPTION NOT WITH DESPAIR, BUT WITH CREATIVITY AND CARE. IN THIS WAY, REGENERATION BECOMES NOT ONLY A CONCEPT, BUT A COMPASS FOR LEADERSHIP IN UNCERTAIN TIMES.





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