

Regenerative Museums:

*Reshaping the museums' role in addressing
social and environmental collapse*



Figure 1: Manchester Museum staff in consultation with Anindilyakwa women during the repatriation process. Photo: D. Walding, AIATSIS/ Museums Association Archive

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“Regeneration is a continual process of a whole system rebirth.”

Bill Reed

“Decolonization and Decarbonization are two sides of the same coin.”

Lesley Lokko

“Regenerative thinking is the guiding light, our last best hope.

This notion of bridging sustainability with regenerative thinking is really the answer.”

Robert Janes

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Obrigada to my Afro-Brazilian grandfather, Mário Anselmo, and my mother, Lourdinha Anselmo, the most inspiring gardener I have ever known. They are both part of this journey, together with my husband, daughter and all supportive family.

ENDORSEMENT

"Our civilization has done irreparable damage to the natural world, and the world's museums have an obligation and the opportunity to heal this rupture using their unique strengths, knowledge, public trust, and deep sense of time. Regenerative thinking is long overdue as a foundational museum practice, and Lucimara Letelier's work is an invaluable guide in applying this thinking to museum method and theory.

Of vital importance is acknowledging that not only must museums attend to their own sustainability and that of their communities, but they must also assume their role as stewards of the More-Than-Human-World. Too many museums have overlooked the meaning of interdependence in their work, and regenerative thinking is the bridge that enables a broad web of societal and ecological relationships to be recognised and nurtured.

The application of regenerative thinking in museum practice is destined to reshape the role of museums in addressing social and environmental collapse, and Letelier provides an essential blueprint to lead the way."

Robert R. Janes

Former museum director, author, founder of the Coalition of Museums for Climate Justice, and currently a Visiting Research Fellow at the School of Museum Studies at the University of Leicester (UK); Author of "Museums and societal collapse: the museum as lifeboat" (2024) and Museums without Borders (2015).

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EXECUTIVE SUMMARY

Why does Regenerative thinking matter to museums?

This research project aims to unfold how museums can effectively apply the concept and practice of regeneration to address social and environmental challenges. It also seeks to identify the characteristics of regenerative leadership (Hutchins & Storm, 2019) to be developed among museum professionals and highlights the unique contributions museums can make to broader regeneration efforts. Additionally, the research aims to envision what a regenerative museum would look like and why this shift is crucial for the future of museums and society.

To uncover these findings, the project used a mixed methodology, including interviews with thinkers and practitioners in regenerative cultures and museum professionals. Additionally, the methods involved desk-based research on regenerative thinking literature and examples of regenerative practices in museums.

The report provides key findings for integrating regenerative practices in museums. It highlights the positive impact of regenerative development, blending decarbonization and decolonization, examining how museums can play a distinct role in regenerating territories based on their history, collections' origins, and purpose. This approach prompts museums to address social-ecological crises systemically and serves as an instrument for museums to learn how to regenerate place by place and, ultimately, regenerate the planet (Bill Reed, 2010).

Interviewees' evidence demonstrates that embracing regenerative practices provides museums with a positive framework to holistically address environmental and social complexities. This involves recognizing the interconnectedness of social and environmental issues (Janes, 2024), collaborating with communities to reverse ecological damage, taking responsibility for the restoration of geographic and symbolic territories and supporting their thriving.

The widespread adoption of regenerative culture in museums requires a broad adaptation of frameworks, funding systems, and capacity building. A regenerative mindset can enhance museums' responses to climate and social issues through its unique qualities, fostering a culture of care and adaptive resilience (Wahl, 2016) for a genuine commitment to nature and humanity.

This report aims to be a valuable source of information for the museum sector, shedding light on the application of regenerative cultures in museums, an area with limited literature available. It guides museum professionals to regeneration resources while also addressing the challenges and ways in which museum professionals can adopt a regenerative mindset. This research underpins imaginative ways in which museums could learn to prioritize the voice of nature (Sanford, 2020) while designing projects in education, management, or exhibition curatorship.

INTRODUCTION

Why this project?

The reason-why

The research aims to explore how museums can become regenerative forces, addressing climate and social collapse. It seeks to expand its abilities to address society's deteriorating patterns and contribute to the Regeneration movement, guiding efforts to reverse collapse and support societal resilience.

The process

To tackle these issues, the research has identified six areas of focus based on the literature review's analysis, the museum's social-environmental context and the research objectives.

1. The potential of regenerative thinking for museums
2. Application of regenerative principles to the museum's functions and programs
3. Application of regenerative frameworks to museum practices
4. Characteristics of regenerative leadership in museums
5. Differences between regenerative and sustainable development
6. Singular contribution of museums to planetary regeneration

This study also seeks to investigate how regeneration is present in museums, either through their original focus on social and ecological issues or through emerging regenerative practices. Further guidance on terminology and prioritization could expand this work and help museums address complex social-environmental issues.

The researcher

As a sustainable development consultant and trainer in the museum sector, the researcher has gathered insights into regenerative practices from various sources. These include her past exposure to eco-museums, Indigenous cosmology, and ecovillages in Brazil, as well as personal experiences such as growing up on a farm.

METHODS

How was this study developed?

A. THE RESEARCH QUESTION

How can museums incorporate regenerative frameworks to transform their core functions and strategic thinking and become effective and ethical catalysts for society's mitigation and adaptation to social and environmental collapse?

B. OBJECTIVES

- Analyse **regenerative thinking** in museums to enhance sustainable practices;
- Identify **regenerative leadership** qualities in museums;
- Recognize the **unique contributions of museums to regeneration**.

Other secondary aims include:

- Investigate the application of **regenerative principles** in museums and their impact on museums' response to social-climate collapse;
- Identify characteristics of **regenerative museums**;
- Provide examples of **regenerative practices** to encourage its adoption.

C. METHODOLOGY

Qualitative research methods were applied: interviews¹ with regenerative development practitioners and museum leaders. Secondary data was collected through desk-based research on regenerative thinking and contemporary museums.

The researcher's perspective is shaped by her professional experience in museums and sustainable development. While her positionality is also influenced by her social

¹ Please refer to "Appendix 1: List of Interviewees" to review the professionals and institutions who participated in this Research Project Interviews.

reality, ontological and epistemological viewpoints (Mason, 2002), the project maintains rigorous data collection and analysis through research protocols ensuring legitimate evidence.

D. ETHICAL APPROACH

This research project has minimal risk and blanket ethics approval. Informed consent was obtained from all interview participants², who were provided with context through a Project Information Sheet, pre-approved by the supervisor. Sample forms are in the Appendices³.

² Please refer to “APPENDIX 1: List of Interviewees”

³ Please refer to “APPENDIX 2: Consent Form Template” and “APPENDIX 3: Participant Information Sheet”.

CONTEXT & BACKGROUND

The escalation of climate and social crises and their impact on museums

The birth of modern industrial capitalism in the mid-18th century brought a new geological era known as the Anthropocene⁴ (Crutzen & Stoemer, 2000). This era has led to a separation between humans and nature (Loureau, 2023), reinforcing an extractive paradigm (Sanford, 2019), and is at the heart of the ongoing sixth mass extinction⁵(Kolbert, 2014).

Global warming, biodiversity loss, desertification, climate injustice, refugee crises, deforestation, species extinction, and pollution (Merriman, 2024; BBC/NY Times, 2024) are major causes of social and environmental collapse (Janes, 2024), which has hugely impacted both human and non-human life (Janes, 2024).

Museums are under growing pressure to address this context, driven by demands from policymakers, activists, fellow professionals, and audiences seeking answers in a time of uncertainty (Museums Association, 2023). Also, internally, progressive museum professionals aim to transform museums into active change catalysts, reshaping their purpose in a world facing significant challenges.

⁴ The *Anthropocene* is the most recent period in Earth's history when human activity significantly impacted the planet's climate and ecosystems. In March 2023, The International Union of Geological Sciences (IUGS) rejected the proposal to recognize a new geological epoch based on humanity's influence. However, the IUGS understands that the term "Anthropocene" will continue to be used. (Sources: National Geographic, October 2023; BBC, March 2024)

⁵ Climate scientists globally describe the severe effects of current climate change as a critical indication of an ongoing *Sixth Extinction*. Author Elizabeth Kolbert, in her book, draws on researchers' work to explain this prediction of the "most devastating extinction event since the asteroid impact that wiped out the dinosaurs."

Museums have embraced sustainability to reduce damage by decarbonizing their operations (ICOM, 2019) and integrating their programs with the UN Sustainable Development 2030 Agenda to "do more good, and do less harm" (McGhie, 2019) through local and global solutions (Robertson, 1997). However, the acceleration of climate change and society's demands for more efficient responses challenge this approach (NEMO, 2022).

While the sustainability agenda has positive effects, some experts argue that the current level of exhaustion in the biosphere may make it difficult to sustain our ecosystems (Bill Reed, 2010). They suggest that economic growth may not be compatible with the time and scale constraints to reverse the damage. Instead, they propose restoration, reconciliation, and reconstruction (Regenegis, 2016; Wahl, 2016; Sanford, 2020), emphasizing the need to regenerate.

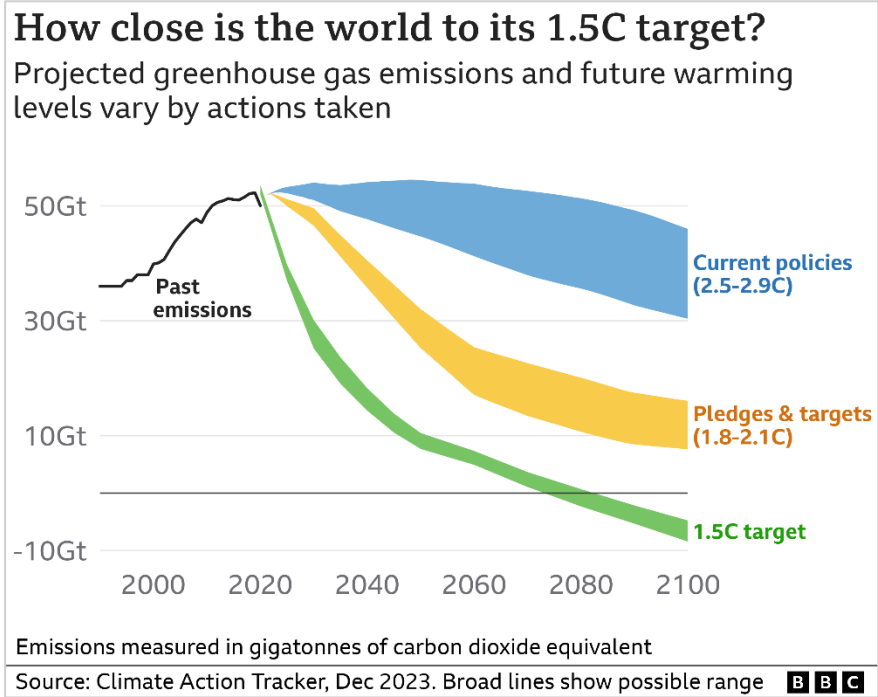


Figure 2: Graphics from BBC (February 2024) showing that the greenhouse gas levels are still rising quickly and the world is "likely" to warm beyond 1.5C, external, according to the IPCC⁶.

⁶ IPCC: Intergovernmental Panel on Climate Change: The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change.

What do we mean by Regeneration?

The session below reflects on the key concepts of regenerative thinking and highlights the relevant areas of the literature review for this research project.

A. REGENERATION IS NOT NEW. IT IS AN ANCESTRAL PRACTICE.

Regeneration is a natural capacity of all living systems (Capra, 1997) rooted in ancestral knowledge applied to agriculture thousands of years ago (Dhanani, 2023). Hawken emphasizes that “Regeneration is the default mode of life” (Hawken, 2021, p. 701), while Daniel Wahl (2016) sees it not as new knowledge but as a remembrance of inherited wisdom.

“Regeneration, a concept applied in various modern society areas, emphasizes putting life at the centre of every action and decision. It applies to all aspects of human life, including communities, cities, schools, cultures, commerce, and governments” (Hawken 2021).

The concept of Regeneration has roots in "design as nature" (McHarg, 1969) and permaculture (Mollison, 1978). It evolved in the 21st century to be applied to fields such as science, architecture, urban planning, tourism, education and business. Regenerative principles have been incorporated as a systemic approach to contemporary project management, implemented and documented by Carol Sanford (2016, 2020), Daniel Wahl (2016), and Bill Reed/Pamela Mang (2016), with further evolvments in the last five decades (IDR, 2024).

When first introduced to the concept of regeneration, some would believe that it is restricted to environmental aspects. It is, rather, a theory that unites environmental and social aspects. A regenerative mindset is rooted in social justice, human rights, equity, diversity, community engagement, and decolonization, emphasising the integral connection between humans and nature (Regenegis, 2016).

B. REGENERATION INCLUDES AND SURPASSES SUSTAINABILITY

Regenerative development goes beyond sustainable development by actively working to reverse the damage inflicted since the Industrial Revolution. “It aims to rebalance depleted systems and restore them to a sustainable level. Sustainable development sees “humans doing things to nature”, while regenerative development focuses on “humans as nature” (Reed, 2016).

Regenerative development aims to reintegrate humans and nature, managing projects with systems thinking and addressing social inequality in environmental issues.

Prioritizing nature's voice involves moving beyond just reducing damage, aiming to restore years of exploitative behaviour and create harmony between nature, people, and land. This approach may conflict with economic growth standards set by the Sustainable Development Goals framework (Wahl, 2020), particularly in SDG 8, and may require degrowth.

Regenerative practitioners advocate for a co-evolutionary approach to sustainability, emphasizing the importance of humans working in partnership with nature to enhance life and community prosperity (Regenesis, 2016, p. xxvii).

C. REGENERATIVE PARADIGM, PRINCIPLES, FRAMEWORKS

Paradigm

Carol Sanford (2019) has organized four modern paradigms in a framework in which the regenerative paradigm is the most advanced and, as suggested by Richard Piacentini (2024), views “humankind's role as actively adding vitality, value, and capacity—adding life—to all living systems. This perspective has a long history on this planet, and embracing it is a form of reawakening”.

Sanford (2019) summarizes each of the four paradigms by highlighting the forms of knowing prioritized by each of them:

- **Extract Value:** Know by accepting the authority of those with power over us
- **Less Bad:** Know by scientific method with sensorial inputs
- **Do Good:** Know by moral teachings and metaphors
- **Regenerate Life:** Know by examining the dynamics of living systems

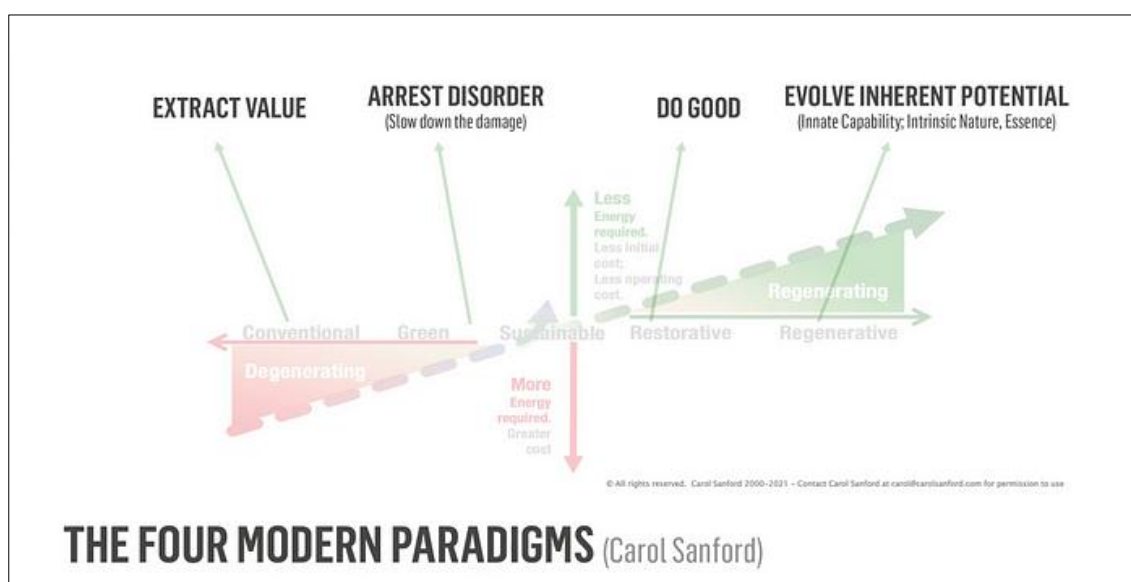


Figure 3. The Four modern Paradigms Framework (Sanford, 2019).

Principles

In the Anthropocene era, “we’ve forgotten the importance of non-human living forms in ensuring sustainable systems; we need to be reminded of our quality of thinking regeneratively” (Wahl, 2016). To restore our collective well-being, we need to reactivate regenerative principles in our families, institutions, and cities. Sanford warns that simply using the term “regenerative” without making major process changes undermines the potential of understanding living systems (Sanford, 2019).

To redesign a complex system and restore life through regeneration, specific guidelines and principles must be followed mindfully to recreate regenerative patterns identified within the territories we aim to change (Sanford, 2024).

“The seven principles of regeneration are rooted in emerging discoveries in ecology, psychology, semantics, and other modern disciplines. They also have deep roots in ancient and indigenous ways of thinking” (Sanford, 2020, p.23).

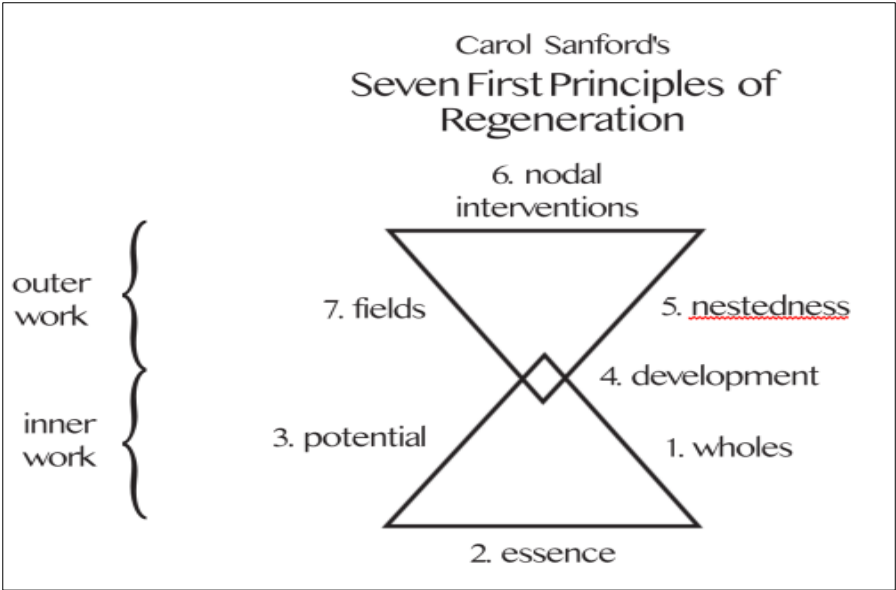


Figure 4. The 7 Regenerative Principles. (Sanford, 2019, page 23).

Carol Sanford (2020; pp-23 to 32), and Regenes Group (2016), define seven

Regenerative principles:

1. **WHOLE:** includes everything, every dimension of consciousness and existence. It minds the notion of ecology, which sees all aspects as part of a working dynamic whole: nature and humans as one unique living system. (Reed, 2011). It counteracts our tendency to fragment. (Sanford, 2019)
2. **POTENTIAL:** the relationship between the inherent qualities of a whole (which is enduring) and how they could be expressed within a context (which is continuously changing). This dynamics between the enduring and the changing means that there is always a new potential to be discovered and developed. (Sanford, 2019)
3. **ESSENCE:** The irreducible core of something; what makes it singularly itself. A unique, energetic or spiritual core. (Sanford, 2019)
4. **DEVELOPMENTAL:** the means by which essence becomes increasingly able to reveal and express itself as potential. Includes the transformation of living beings participating in the process and evolving their capabilities to create systemic benefit within a field of caring, co-creativity, and co-responsibility. (Regenesis, 2016)
5. **NESTEDNESS:** All things are connected, with connections ordered into different levels requiring a different kind of thinking. Smaller systems can impact the larger systems that contain them, and vice versa. (Sanford, 2019)

6. NODES: Keys to a system. They concentrate on a single intervention with the potential to transform the whole system. (Sanford, 2019)

7. FIELDS: patterns of energy influencing the quality of activity within a system. Fields are one of the underlying conditions capable of transforming a whole system through a single nodal intervention. (Sanford, 2019)

By embracing these principles, organisational leaders can view their institutions as living systems aligned with a larger ecosystem, aiming to thrive while embodying a newfound respect for all life forms.

Frameworks

Regenerative practitioners developed regenerative frameworks to guide professionals and institutions toward regenerative projects and apply regenerative principles to the pragmatic processes of strategic planning and decision-making. These frameworks enable institutions to oversee initiatives as living entities, becoming “regenerative institutions” responsible for collaborating on the health of the system they inhabit.

Regenerative frameworks have the potential to be applied across all sectors, private or public, institutional or individual, cultural or social. It can help society adopt a collective pathway towards building resilience for a future challenged by social and environmental crises (Hawken, 2021).

One of these most relevant frameworks is the “Regenerative Design Framework”⁷ developed by Bill Reed (2006) and adapted by Daniel Wahl (2019), demonstrating the evolutionary path from degenerative to regenerative development:

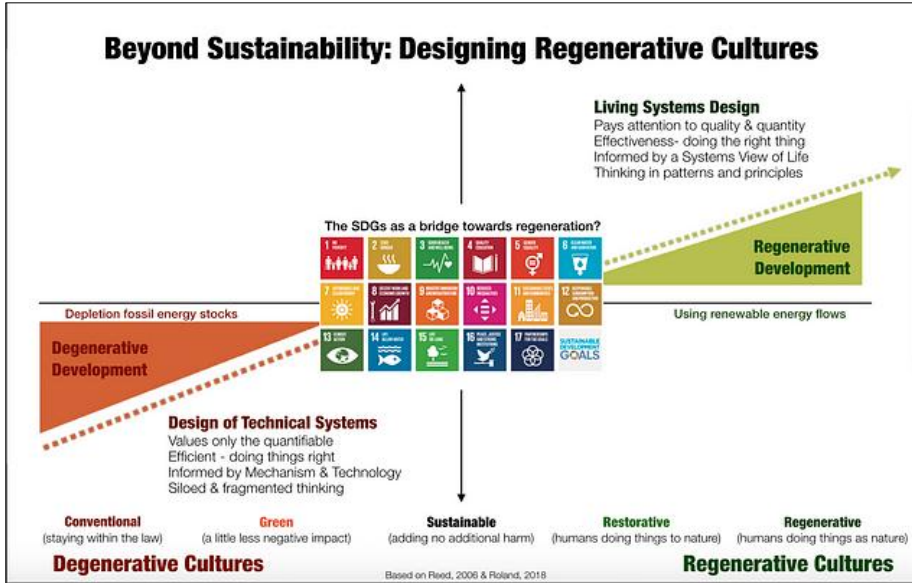


Figure 5. Regenerative Design Framework (Bill Reed, 2006/ Wahl, 2019)).

⁷ For further information on how this framework can be applied in museums, check the “APPENDIX 6: Chart: The Regenerative Design Framework Applied to Museums”

Other regenerative design frameworks involve incorporating nature as a stakeholder and integrating reconciliation into projects. The Phipps Conservatory and Botanical Gardens, for example, have been applying these three frameworks in their practices (Piacentini, 2024).

The Three Lines of Work (Stanford 2019) enhances the nestedness within projects and institutions supporting leaders in drawing nested scenarios to generate transformation at all levels involving initiatives related to the territories.

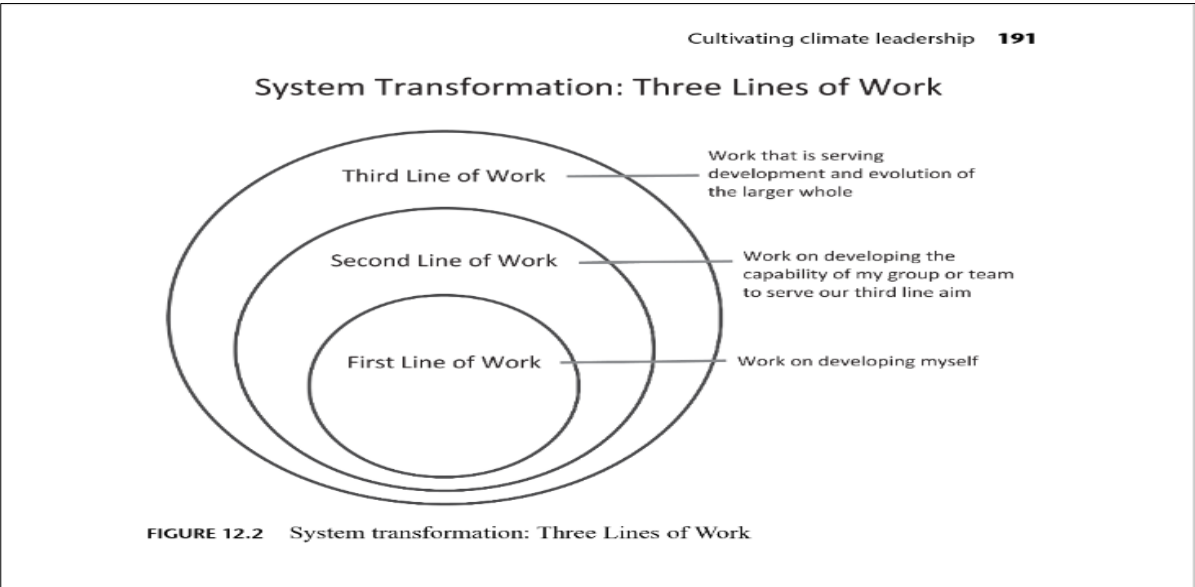


Figure 6: Three Lines of Work Framework (Sanford, 2019). (Museums and the Climate Crisis, 2024)

The Living Systems Stakeholders (Stanford 2019) deliberately incorporate the planet dimension into the projects' planning by including "Earth," representing the voice of nature, among the stakeholders.

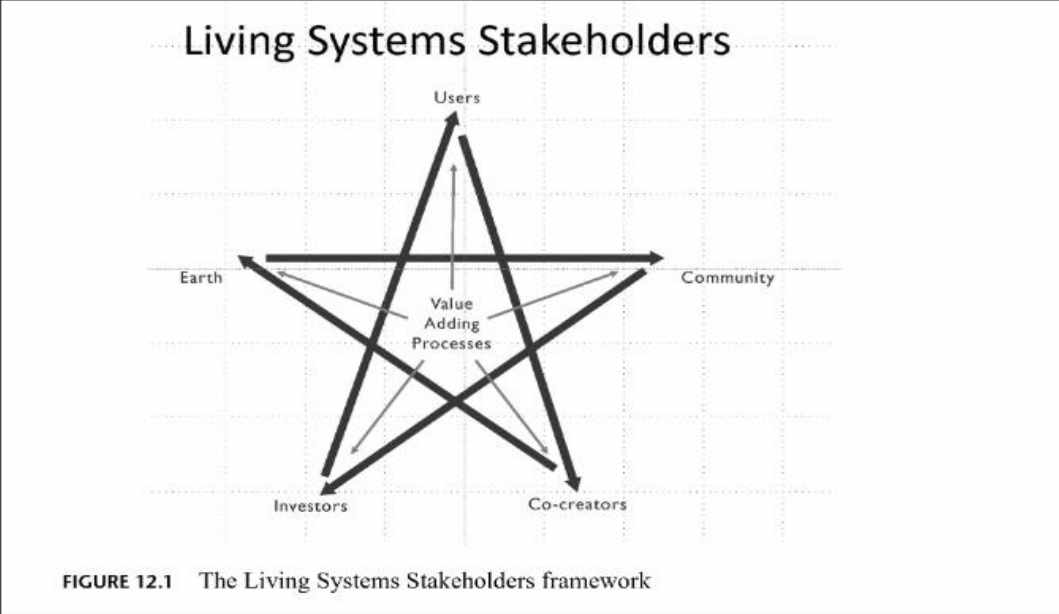


Figure 7. The Living Systems Stakeholders Framework (Sanford 2019). (Museums and the Climate Crisis, 2024)

The Law of Three (Stanford 2019) serves as a framework for organizations to identify areas where compromise may be necessary in order to strike a balance between activating and restraining forces within project dynamics. This involves anticipating conflicts and potential opportunities for reconciliation.

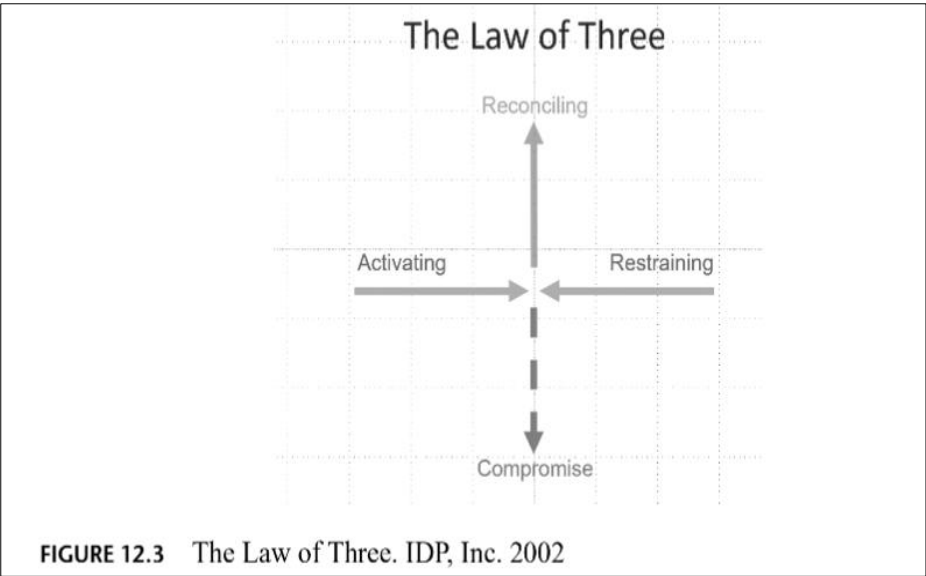


Figure 8. The Law of Three Framework (Sanford 2019). (Museums and the Climate Crisis, 2024)

D. REGENERATIVE LEADERSHIP

Regeneration authors define regenerative leaders as committed to personal and professional growth, emphasizing the need for inner groundedness, habit awareness, and an understanding of interconnected living systems. They value authenticity, systemic thinking, designing for complexity, working with tensions, creating life-affirming futures, and understanding the logic of life (Hitchins & Storm, 2019).

“Those drawn to regenerative development feel a deep connection to natural systems and believe that transforming physical and social infrastructures is essential for a sustainable future. They aim to work developmentally and co-creatively with those they serve. Agents of transformation must undergo their own transformation, redesigning their own ways of thinking and being” (Regenesis, 2016, p. Xvii).



Figure 9: Integrative Design Process; Regenesis Group Archive

E. REGENERATIVE THINKING IN MUSEUMS

This research investigates to what extent regenerative thinking has been incorporated into museum practices, including its principles and frameworks. Although there is limited literature available on this topic, recent articles, podcasts, and webinars have provided valuable insights. Some organizations such as Climate Museum UK (2020) and Culture Declares (2023) in the UK, RegeneraMuseu (2018) in Brazil, and Phipps Conservatory (2024) in the US advocate for regeneration as a practice to improve museum responses to climate and social collapse.

Bridget McKenzie, Climate Museum UK director, believes that “regenerative museums aim to develop people's eco-capacities, weaving possible paths to the future. Future literacy and eco-capacity can guide people to see that we are all part of nature” (McKenzie, 2023). Lucimara Letelier, director of RegeneraMuseu, emphasizes how museums' actions can be either aligned with degenerative or regenerative forces. “This post-pandemic era presents a unique opportunity for museums to focus on regenerating the present for a better future” (Letelier, 2022).

Another organization, Culture Declares, defines itself as “a network sharing knowledge and support to seek justice, work towards regenerative change, and provide care through culture, heritage, and the arts” (Culture Declares, 2024). Additionally, Piacentini, the director of The Phipps Conservatory and Botanical Gardens, mentions that the organization “embraces regenerative thinking, recognizing the interconnectedness of everything” (Piacentini, 2024).

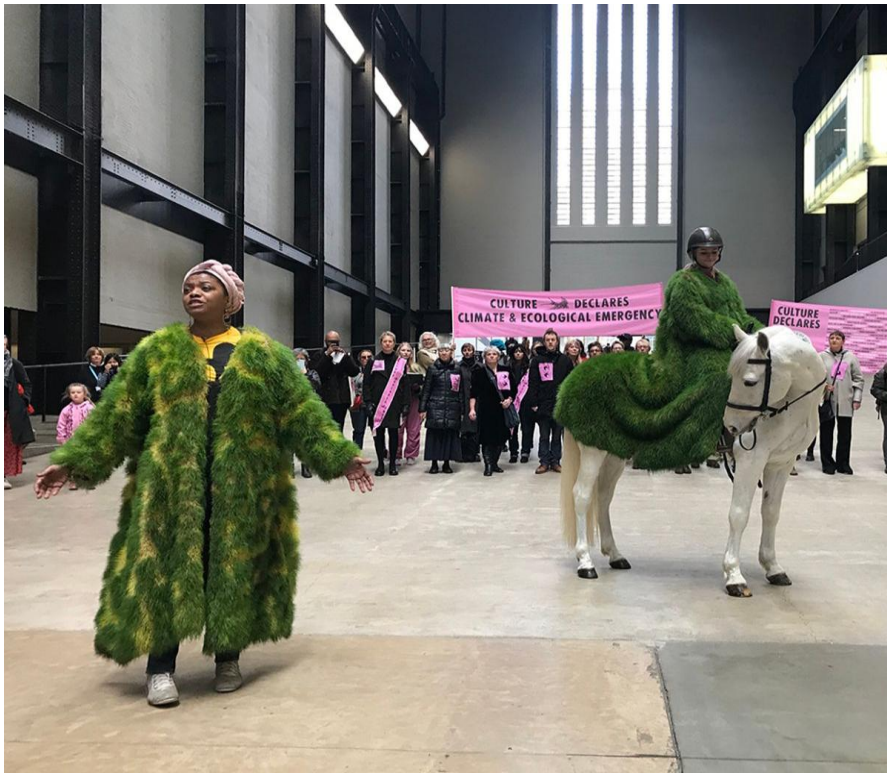


Figure 10: Culture Declares Emergency at the Tate Modern's Turbine Hall; Photo: Courtesy of Louisa Buck to the Arts NewsPaper.



Figure 11: Phipps Conservatory and Botanical Garden. “Cultivating a Long-Term View: A Regenerative Thinking and Sustainability Workshop for Garden CEOs”. Photo: Phipps Conservatory Archive.

The upcoming session presents the main findings from the research interviews to uncover the challenges and opportunities of these forward-thinking regenerative practices for implementation in museums.

ANALYSIS

How does regeneration gain life in museums?

Key Research Findings

The following chapter analyses interviews with influential regenerative thinkers and museum professionals to highlight the emergence of key regenerative principles and practices. These findings are compared to existing literature on regenerative thinking and indicate specific museum initiatives that embody the regenerative approach.

A. NEW PARADIGM: REGENERATION AS A NEW APPROACH FOR MUSEUMS TO RESPOND POSITIVELY AND PROACTIVELY TO SOCIAL AND ENVIRONMENTAL CRISES.

Several interviewees referenced the capacity that regenerative thinking holds to support a much-needed paradigm shift in museum practice. As argued by Nick Merriman (2024), “a new museum paradigm is needed in the face of climate and biodiversity crises, one that does not rely on continuous growth. On the other hand, degrowth may be challenging for many as perceived as doing less, having less money, and fewer visitors. However, if we replace this with the paradigm of regenerative thinking, it provides a positive framework of action, not centred on growth, and positively impacting museum governance structures in effecting change”.

Museums, as guardians of social, historical, and biological memory, are entrusted with a high level of public trust (AAM, 2021). This trust, along with their social capital and impact on large audiences, places a responsibility on museums to address society's needs in a deeper manner, especially during unprecedented crises (Janes, 2024).

Museum leaders are urged to address more obvious issues, such as reducing carbon footprint and creating socially inclusive programs aligned with the Sustainable Development Goals (ICOM, 2019). However, these responses are still rooted in existing identity, reflecting the origins of museums anchored in growth. According to Merriman (2024), “Museum practice is inherently unsustainable as its metrics for success tend to be based on the growth of income, audiences, collections, buildings and infrastructure.”

This approach leads to fragmented responses. Efforts led by museum professionals committed to social and environmental causes to collections’ disposal and deaccession, archives and narratives decolonization, and degrowth meet resistance as they confront beliefs about museums’ role.

Can regenerative thinking shape the new paradigm needed in the museum sector?

Robert Janes, author of “Museums and Societal Collapse” believes that “regenerative thinking is the last best hope, and it needs to be embedded in museums.” Carol Sanford (2019) argues that “the regenerative paradigm is committed to knowing through the direct interaction with the living systems dynamics”, differently from the extractive paradigm, which relies on “knowing by accepting the authority of those with power over us”. The regenerative paradigm in museums encourages collaborative learning to explore critical questions of an unpredictable future.

Collaboration to “establish equitable relationships with the museum’s communities” (Ward, 2024) has been pivotal to the social-ecological approach at the Manchester Museum’s redevelopment, embodying regenerative thinking. “Framing it around a conversation about the care for those collections becomes genuinely a collaboration.

For some, repatriation is framed as a loss. I love to think of repatriation as a future for our museums” (Ward, 2024).

Embracing the regenerative paradigm in museums could reshape their role in creating a regenerative present while envisioning sustainable futures—a future rooted in different premises rather than a growth and extractive mindset.

B. MUSEUMS AS LIVING SYSTEMS: REGENERATIVE PRINCIPLES TRANSFORM MUSEUMS' NARRATIVE OF HUMAN-NATURE SEPARATION AND RESHAPE ITS ROLE.

This research concludes that some museums have intentionally or unintentionally applied some regenerative principles and frameworks, while others have adopted a regenerative mindset throughout all their programs. Territory Museums, Ecomuseums, and Indigenous Museums have demonstrated regenerative principles since their origins ("Regenerative Born Museums"). However, well-established urban and public-private museums have recently incorporated regenerative principles, named "Regenerative Adopters Museums"⁸ in this project.

Wahl (2024) argues that "Museums often reflect the Anthropocene and Industrial Revolution perspectives, rather than the original people's voices. Ecomuseums as community-based expressions can be more regenerative as a baseline".

Whether the museum has embraced regenerative practices since the beginning or recently adopted them, it has not been mindful of regenerative development as a comprehensive theory of change and its benefits to the whole museum system. Systematized frameworks, principles, literature and training in regenerative design are needed to guide museum planning, management, and practices.

Nonetheless, the evidence demonstrates that regenerative principles⁹ have been applied in museums, and the interviewees uncover their potential to unlock innovative approaches to address contemporary challenges in museums.

⁸ Please refer to the "APPENDIX 4: Chart: Regenerative Museums Types"

⁹ Please refer to APPENDIX 5: Chart: Regenerative Principles Applied to Museums"

Here's a summary of the research findings, organized according to the regenerative principles (Sanford, 2020; Regenes Group, 2016):

Wholeness: How can museums holistically integrate social, cultural, economic, and environmental work?

- Bridge ***Social and Environmental Sustainability***
- Mind ***Nature & humans' interconnectedness*** in narratives and programs.
- Define a regenerative role to guide environmental and social decisions, ***bridging decolonization and decarbonization.***

Potential & Essence: What is the authentic expression of a museum to unlock the potential of its ecosystems by empowering collective innovation?

- ***Expand the concept of "place"*** to geographic locations and symbolic territories (typology/ narratives);
- Recognize the ***singular restorative capacity*** of the museum to its related places, collections and stories;
- Define ***degenerated places*** where this museum can catalyse regeneration
- Identify the ***biocultural and bioregional patterns*** of a place with communities;
- Embrace the ***healing, care and regeneration*** intertwined with repatriation, restitution and decolonization.

Development & Reciprocity: How can museums engage in an evolutionary process, building all stakeholder's capacities while bringing mutual benefit?

- Create spaces for community sharing and ***reciprocal learning***;
- Establish an ***equal level of authority*** by adopting other ways of knowing;
- Develop staff', communities', and audiences' ***socio-ecological capacity***;

- Install a culture of **experimentation, vulnerability and inner development**.

Nestedness¹⁰ & Nodal: How can museums engage with strategic nodes in the system, creating systemic change, by recognizing their nested structures?

- Choose ***nodal interactions*** to drive impactful system transformation;
- Understand how to positively engage ***visitors and professionals with the territories*** (cities, neighbourhoods, countries), transforming them all;
- Create ***Glocal initiatives***: local actions supporting planetary challenges;
- Cultivate ***a generation of regenerators***: activate billions of people nested into the museums' ecosystems towards regenerative actions.

¹⁰ Please refer to Figure 5: Three Lines of Work (Sanford 2019) on page 22 to understand how the concept of wholeness can be implemented within this regenerative framework in project planning.

C. AN ECOLOGICAL LENS TO DECOLONIZATION: Regenerative thinking expands museums' role in repairing ecocide¹¹, epistemicide¹², and historicide¹³ by adding an ecological perspective to repatriation and decolonization.

A further theme emerged from the interview data concerning how regenerative thinking amplifies the restorative potential of repatriation and decolonization in museums while integrating ecological patterns with social concerns.

Decolonization in museums, including repatriation, focuses on restoring communities' relationships as the owners of original artefacts and involves exchanging museum and community knowledge regarding the historical significance of objects taken during land exploitation. Collaborative (or regenerative) repatriation enhances understanding of ecological patterns, unlocks wisdom in restoring ecosystems, and empowers new generations to embrace their regenerative capabilities in the land. It also restores the balance between the historical narrative and the local community's epistemology in the museum's curatorship practices. This entire process can be regenerative when living systems principles are applied.

The Manchester Museum repatriation to the Anindilyakwa

In the Manchester Museum's repatriation of 174 cultural heritage items to the Anindilyakwa, Australia, "it had to be led by those communities. We have to be careful that we don't end up with some godawful colonial 2.0 museums. The deep relationship held with the Anindilyakwa communities unlocked a rich cultural history and new

¹¹ "Ecocide" means unlawful or wanton acts committed with knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts. (Stop Ecocide Foundation, November 2020)

¹² "Epistemicide" refers to the killing of knowledge systems (Hall, B.L. and Tandon, R. (2017))

¹³ "Historide" refers to the erasure of history.

practices, which created cultural revitalisation. Their care for these belongings is integral to their sense of place” (Ward, 2024).

In this case, there is an intention to address the historicide (Haas, 2017) caused by the ‘Extract value paradigm’¹⁴ (Sanford, 2019), in place when the objects were collected. The museum is moving beyond simply aiming to “do less harm” or “do good” (Sanford, 2019). Instead, it is experimenting with the concept of “Regenerate Life”, honouring the reciprocal learning between the museum and the Anindilyakwa people. It has influenced the museums’ staff worldview to continue taking responsibility as caretakers in Manchester and beyond. “Sitting with Elders and hearing them discuss this collection on their land in their terms has enabled me to care in ways not possible in a store room in Manchester”, mentions Georgina Young, Head of Exhibitions and Collections. As Bill Reed (2024) reminds us, “the Regenerative paradigm goes beyond “doing good” (Sanford, 2019), which in many ways is a new form of colonialism, imposing our ideals on the world”. Regenerative repatriation opens a profound unlearning process, as described by Wahl (2024), “Repatriation involves unlearning and truly understanding our global north arrogance. It is about embracing deeper wisdom regarding relational interbeing, fitting into place, and being custodians of the living planet.” “The repatriation journey should be a regenerative process rather than business as usual” (Reed, 2024).

Esme Ward (2024), Manchester Museum Director, beautifully described this idea of unlearning in museums: “When we returned material to Australia and Groote Eylandt, they gave us a gift: new ethically collected shell dolls. But they also gave us new

¹⁴ Refer to the explanation about the Extractive Value Paradigm as part of “The Four modern Paradigms Framework”: Figure 2. The Four modern Paradigms (Sanford, 2019) on page 16.

conditions for care, including our understanding of these shell dolls as living cultures, not solely collections. We have an obligation for all the time we care for these objects that we will have to take these shell dolls out once a year and play with them. Now, museums don't usually do that. But that may be part of the shift we need to make”.



Figure 12: Manchester Museum staff were invited to visit Groote Eylandt during the consultation process. Photo: NITV Archive.

The Australian Museum Repatriation of Tonga Ancestors

Museums' collaborative repatriation processes help restore a sense of belonging and connection to communities' ancestral history. They endorse local regeneration by evoking people's bioregional and biocultural wisdom related to lands that suffered colonial ecocides (Ferdinand, 2021). Restitution of objects and human remains can be seen as nodal interventions supporting territories' regeneration by restoring local patterns.

The Australian Museum has recently repatriated ancestors to the Pacific. Jenny Newell (2024), the museum's Curator for Climate Change, describes this as "a regenerative experience for Tonga, involving a meaningful funeral ceremony. It is hugely important to receive an ancestor return as a starting healing process".



Figure 13: The remains were laid to rest in a royal funeral service attended by hundreds. News. (Photo: Joshua Matakimango Savieti)

The Horniman Museum returning Benin bronzes to Nigeria

In the Benin bronzes return by the Horniman Museum, “one of the most important things was that the people from Nigeria were consulted and listened to. I do recognize now that we were thinking in regenerative terms, although we named it “restorative justice”. A framework¹⁵ under the lines of regenerative thinking would have been tremendously useful not just about restitution but also about future museum development as a whole” (Merriman, 2024).

Objects' repatriation entails a paradigm shift as it challenges power dynamics between colonizers and the colonized, between the Global North and South. This shift encourages museum leaders, communities, and society to embrace regenerative values through a mutual learning process, moving away from a paradigm of “power over” to one of “power with”.

Diniz, IDR Director (2024), suggests that “When the repatriation of objects prioritizes singular identities focused on the biocultural singularity rather than purely as commodities, it inspires people to incorporate a decolonial perspective that confronts modern globalization limitations”.



Figure 14: Prof. Abba Tijani, head of Nigeria's National Commission for Museums and Monuments, addresses the signing ceremony at the Horniman Museum during the return of Benin Bronzes. Photo: BBC Archive.

¹⁵ Please refer to “The Law of Three framework” (Stanford 2019) related to how organizations can balance activating and restraining forces within project dynamics by anticipating areas for reconciliation and compromise (page 23).

**D. MUSEUMS AS CARETAKERS OF PLACES: REGENERATIVE DEVELOPMENT CATALYSES
MUSEUMS AS TERRITORIES' REGENERATORS BY NURTURING COMMUNITIES' CARE AND
ADAPTIVE RESILIENCE.**

The interviewees review how museums can expand their capacity to regenerate places by nurturing a culture of care and the notion of healing places through the restoration of land and people. Museums can start by asking, with their audiences and communities, how they can “heal places” by reinterpreting collections, narratives and programs. “When someone or a city is disconnected from their essence, it diminishes vitality. Development often commoditizes a place, robbing its truth and vitality. Museology can play a role in rescuing a place’s essence and reconnecting people with its unique patterns to sustain life” (Diniz & Tavares, 2024).

The Manchester Museum Anindilyakwa repatriation values the interconnectedness between people and place. “From the Anindilyakwa perspective, this was not a transaction, but a collaboration fuelled by empathy, trust and love. Ultimately, it's about shifting what may be possible on their island” (Ward, 2024).

Regenesis Institute (2016) argues that “belonging to a place is a doorway to caring”. The Manchester Museum has fostered a sense of belonging and wholeness, creating a supportive environment for regeneration in Manchester and beyond. Their exhibition, “Wild”, invites visitors to reimagine places by learning about “rewilding” projects with care, compassion and ancestral knowledge. Ward highlights the Noongar project in Western Australia, focusing on cultural revitalization and revegetation by Aboriginal communities. “The project aims to heal both the land and the people, recognizing the interconnectedness between them. After reclaiming their land, the community

participated in replanting and established youth justice programs, bringing together white and Indigenous Australians. The exhibition recreates Maya structures to foster conversation and connection among visitors, symbolized by a central fire. It challenges our understanding of our relationship with the land and each other” (Ward, 2024).

Museums regenerating the potential of territories as part of their essence

There are multiple connections between regenerative museums and "eco-museums", concepts. As defined by Hugues de Varine (1972), “an eco-museum is an institution managing a community's entire heritage, including the natural environment and cultural milieu. Integral museums are institutions focused on both past heritage and development” (Davis, P., 2011).

“Ecomuseums were created as a reaction against museums as closed institutions, focused only on collections and managed by experts outside the communities (Davis, 2011), a turning point in museology” (UNESCO/ICOM Roundtable, Santiago, Chile, 1972; Do Nascimento Junior, 2012) (Garlandin, 2022)¹⁶.

“Usually voluntarily run social enterprises, ecomuseums are not known in the Global North. The broader museum sector could learn from Ecomuseums on how to embrace regenerative principles if they received recognition and support” (Mckenzie, 2024).

¹⁶ Other case studies and considerations about ecomuseums can be found in the publication "Ecomuseums and Climate Action" (ICOM, 2021).



Figure 15: Ecomuseum Amazonia working with schools' projects in the Amazon. Scene from video (TV Norte Independente).

Several ecomuseums and regenerative practices are intertwined. They are community-run and focused on the interconnectedness between human life and local development, rooted in the territory's cultural heritage. They prioritize the care of a place and its people. While standard urban museums need to learn how to adopt a social-ecological lens to become regenerative, ecomuseums have been naturally embodied in this approach since their origins¹⁷.

"The Ecomuseum Amazon focuses on environmental education, sustainable tourism, reforestation, and indigenous phytotherapy combined with the intangible heritage. It preserves ancestral knowledge through arts festivals, generating community income. We are nature, culture, and people caring for its territory's preservation and vitality" (Martins, 2024).

¹⁷ Refer to the concept of "Regenerative Born Museums" at the "APPENDIX 4: Chart: Regenerative Museums Types"

“The Museu Vivo Sao Bento partners with universities to train professors and students in a tour of areas environmentally damaged by polluting industries (‘Toxitour’). The aim is to raise public awareness about degradation and engage them in regeneration” (Souza, 2024).



Figure 16: Museu Vivo São Bento exercising the “Developmental” principle of regenerative thinking by working with the communities through the “Ancestral memories from Indigenous and African people in the territory”. Photo: Museu Vivo São Bento Archive.

While Ecomuseums typically prioritise socio-ecology as the “modus operandi” delimiting a specific museum type, the regenerative museum's concept encourages all museums to adopt regenerative practices, regardless of its typology, collection, or location.

E. SUSTAINABLE DEVELOPMENT AS AN EVOLUTIONARY PATH TO REGENERATION: GOING BEYOND MECHANISTIC APPROACHES AND PROPOSING A SOCIAL AND ENVIRONMENTAL INTEGRATION IN MUSEUMS AIMED AT SUSTAINING LIFE.

Another aspect of this research is the unanimous acknowledgement by interviewees of the sustainable development framework limitations and the potential for integrating a regenerative approach into its implementation.

Through the UN 2030 Sustainable Development Agenda, museums have integrated the social and environmental complexities with local responsiveness that is globally relevant. Some have moved beyond a mechanistic approach to sustainability, although have incorporated waste management, energy reduction, water reuse, and circular economy (NEMO, 2022). Even with the sustainability (UN Brundtland Commission, 1987) and sustainable development¹⁸ (UN, 2015) advancements, there are critical challenges. These frameworks are based on an economic growth model that is no longer compatible with sustaining life on the planet. As argued by Wahl (2024), “SDG number eight is about continued economic growth, as the “Trojan horse¹⁹” in the system. It is the old system co-opting the SDG’s good intent by pretending it is possible to continue to grow economically without growing our impact on the planet exponentially and therefore killing ourselves”.

Regenerative thinkers argue that "sustain" is not a consistent choice, considering the need to revitalize territories where natural resources have been depleted to levels that

¹⁸ Please refer to the characteristics of “Sustainable Museums” as described on “APPENDIX 6: Chart: The Regenerative Design Framework Applied to Museums” on page 91

¹⁹ The Trojan Horse story, first mentioned in the Odyssey, describes how Greek soldiers took the city of Troy after hiding in a giant horse left as an offering to the goddess Athena.

require restoration before they can be sustained again (Regenegis, 2016). This resonates with museum professionals in relation to the development concept. As mentioned by Newel (2024), “I’ve always been a little uncomfortable with the sustainable development narrative. It seems counterintuitive to consider development when the West need to reflect on degrowth and support regeneration due to the extractivist impact”.

Fritjof Capra reminds us that “development is a fundamental property of life.” He emphasizes that “growth and the biological sense of development are non-linear properties of living systems intertwined with evolution as natural processes”. The problem is not with the “development” concept. It is that “mainstream economists and politicians” restrict development to quantitative and exponential growth (Capra, 1997). There is a critical need to bring an ecological perspective to development, and museums can be great supporters of this shift.

A regenerative lens on sustainable development could reframe museums' approach to sustainability by bridging often separate social and environmental areas. “We need a bridge looking at the relevance of sustainable development goals in places and interconnecting them” (Wahl, 2024).



Figure 17: The South Asian gallery, curated collaboratively with the community, expresses their beliefs addressing social and environmental colonialism's impact in the narratives.

Photo: Financial Times Archive.

Museums as reimagers of a qualitative Growth Narrative

Capra (2009) argues that “the distinction between quantitative and qualitative economic growth also sheds light on the problematic concept of “sustainable development.” If “development” is used in the narrow economic sense associated with unlimited quantitative growth, it can never be sustainable, and the term “sustainable development” would be an oxymoron. If, however, it includes social, ecological, and spiritual dimensions, and is associated with qualitative economic growth, then such a multidimensional systemic process can be sustainable.”

In that sense, Wahl argues that a shift is needed “from economic growth measured quantitatively by an insufficient measure like GDP towards a more qualitatively focused growth in social cohesion, topsoil, healthy waterways, forest cover, and biodiversity” (Wahl, 2024).

Wahl (2024) suggests a potential role for museums to catalyse that shift within an intergenerational dialogue: “Imagine wonderful museum halls hosting an intergenerational and ancient technology of council with one question at the centre: ‘What does growth actually mean?’. Participants in their 40s, 70s, 80s and teens speak in a circle, and others are just in the outer circle listening. Then, you swap the circles around. A sacred, powerful, work!”

This notion of museums as reimagers of a possible future with other patterns for qualitative growth is endorsed by McKenzie (2024) when she argues, “I take issue with the sustainable development goals, as they include economic growth. Often, the SDGS is a fragmented approach rather than nested and interrelated, which could offer a structure to museums' collapse responses by helping communities plan for

emergencies. This would change the system to a regenerative one and help museums move from the first horizon of business as usual to the third horizon of ‘moving towards a future²⁰’ (Hodgson & Sharpe, 2007; Curry & Hodgson, 2008; Sharpe, 2013; Mckenzie, 2024).



Figure 18: “Ardwick Climate Action Top Floor takeover” Project at the Manchester Museum encouraging a continuous dialogue with environmentalist groups in the city. Photo: Manchester Museum Archive.

²⁰ The three horizons framework, developed by Bill Sharp, provides a tool for thinking about the future. The first horizon is the dominant system ("business as usual"). The third horizon emerges as the long-term successor to business as usual. The second horizon represents transition activities and innovations in response to the changing landscape. (Connor, 2002)

F. REGENERATIVE MUSEUMS²¹: THE UNIQUE MUSEUMS' ROLE IN EARTH REGENERATION BY "REDESIGNING THE HUMAN PRESENCE ON EARTH" (ORR, 2002) AND "RECREATING THE CONDITIONS CONDUCIVE TO LIFE" (BENYUS,1997; WAHL, 2016)).

The interview data showed that museums can support regeneration by restoring conditions conducive to life. There are four pathways through which they can do this: a) Shifting narratives, b) Upholding communities and creating adaptive resilience, c) Encouraging audiences to take regenerative actions, and d) Regenerating places.

These pathways will be further explained in this chapter.

a) Shifting Narratives: expose degenerative truth, tell regenerative stories to reverse modern society's dogmas

Museums can tell stories of abundance, interdependence, and impermanence.

However, they also need to mind truth-telling about the collapse, the reason why we are facing a destructive era and what can be done to reverse it. Stories telling the truth about degeneration create spaces for society to question and learn how we can collectively build new possible futures.

Janes (2024) argues that we need antidotes to the MTI²² (modern techno-industrial society) "based on values about individualism, marketplace, and growth as essential to happiness, embedded in contemporary museums." He argues that "Regenerative thinking is our guiding light and our last best hope, but it is not occurring on a large

²¹ Please refer to the characteristics of Regenerative Museums at the "APPENDIX 6: Chart: The Regenerative Design Framework Applied to Museums" on Page 93

²² MTI means "modern techno-industrial society"

scale as the MTI values dominate. As highly trusted, museums have a responsibility to truthfully inform society by creating new narratives.”

Merriman (2024) argues that “museums are highly expert and have a very wide reach. If you're a museum worker, there's a moral and ethical imperative to speak the truth about what is happening to the planet. Museums can serve as examples of adaptation to the severe impacts of climate and biodiversity breakdown”.

Reversing the Story of Separation between Nature and Humans

Regenerative thinking in museums provides opportunities to reinterpret collections, exhibitions, and management systems, challenging the notion that humans and nature are separate. To work with planetary regeneration, museums must explicitly address the historical perspective of this separation and its reflection on current exploitative habits in society.

As argued by Merrinam (2024), “Museums are endorsers of the separation between nature and humans. This narrative has been central to the Anthropocene, and it is inherent in the museums’ physical structures, where human history contains very little reference to nature exploitation. Ideally, we would completely redisplay all of our museums to place human activity and impact on nature as being the central story”.

By integrating nature and humans, museums can create a new worldview that contributes to building a regenerative culture within modern society. Janes (2024) emphasizes that “The regenerative principles align with the concept of socio-ecology, highlighting the close connection between cultural and natural worlds and the importance of this notion to be added to museums’ decision-making”.

Ward (2024) explains that the 2019-2023 Manchester Museum redevelopment challenged this separation: “Our displays and galleries now integrate nature and culture, including non-human and indigenous perspectives, and encourage an ecological understanding of the museum and our place within the city.”

Newell (2024) argues that “Australian and Pacific museums can contribute to regeneration by sharing First Nations approaches, from diverse backgrounds, including farmers, those rebuilding after natural disasters to strengthen communities and regenerate nature. Powerful elder storytellers can help us rethink history”.

Janes (2024) mentions the concept of impermanence as central to a new narrative. “Museums document changes over time but often fail to reflect on this deeply. Embracing impermanence helps us to see ourselves as part of nature, navigate uncertainty and understand the era we are living in.”

He also argues that museums should consider interdependence to overcome the obstacles to multidisciplinary thinking. “Social ecology, interdependence, and regenerative thinking bridge the gap between nature and culture” (Janes, 2024).



Figure 19: Australian Museum Climate Change Exhibitions/ Climate Centre Solutions.
Photo: Australian Museum Archive.

Regenerative Stories: Engaging audiences in new possible futures

Wahl (2024) suggests that museums should not lose themselves in abstract ideas about the future. They should act now, creating a concrete change and understanding “the future potential of the present moment” (Anthony Hodgson, 2020). Museums can invite visitors to understand how they participate in this nested system the museum holds space for. How are they contributing to either “futuring or de-futuring”? How are they contributing to healing, sharing, caring, nurturing, protecting and reconnecting? Or are they continuing to contribute to separating, competing, exploiting, extracting and distancing?” (Wahl, 2024).

Evy Weezendonk (2024), director of the Anzania Museum, argues that “stories bring education to life and integrate sustainable education into the museum's programs, allowing Kenyan children to take agency over their future through learning.”



Figure 20: The Anzania Museum. Kenya. (Photo: Anzania Museum Archive).

b) Upholding communities in safe imaginative spaces creating adaptative resilience

Regenerative museums can be civic spaces for democracy and the collective construction of other imagined futures. Museums as community hubs anticipating climate-social emergencies, creating adaptation and mitigation together. Wahl (2024) argues that "We are likely to face disruptive decades ahead. Museums can build resilience by fostering community cohesion, triggering important conversations, and serving as civic spaces for people to gather during difficult times. They can renew our understanding of democracy as a daily practice and put people back into relationships, preparing for challenges ahead."

Mckenzie (2024) states that "Museums should prioritize understanding over knowledge, as it comes from experience. They can act as telescopes for our perspectives, helping us see the whole and creating a richer present and a stronger sense of community."



Figure 21: Climate Coffee Conversation /The Climate Solutions Center at the Australian Museum. Photo: Australian Museum Archive.

Preserve the present to have future stories to tell.

Merriman (2024) ponders, “What will heritage look like in 100 years when we are faced with extreme weather events? Museums have to preserve items for the future and engage people in the present. However, if the future is uncertain and preservation cannot be guaranteed, we need to adapt. Regenerative thinking can provide us tools and vocabulary to deal with this challenge.”



Figure 22: Manchester Museum repatriation of objects to places of origin. It is described by the museum as “the unconditional repatriation of secret sacred objects to communities of origin helps create healing, justice and reconciliation.” Photo: Manchester Museum Archive.

c) Driving audiences to regenerative actions by nurturing a generation of regenerators

“The regenerative paradigm offers museums a way to have a larger impact on the social-climate crisis by fostering hope and regenerative action among billions of visitors. While reducing museums’ carbon footprint is important, it represents only a small percentage of carbon emissions in the overall system when compared to other industries” (Merriman, 2024). Regenerative museums are taking on a much larger task that goes beyond the “net zero” narrative and commits them to play a thoughtful role in shifting society's paradigm from extractive to regenerative.

As argued by McKenzie (2024), “Museums can help us see the degenerative and potential for the regenerative. A regenerative culture is about expanding the imagination to see ways of living that enable local ecosystems to heal themselves. Museums are about that balance between the regenerative and degenerative tension as a dynamic relationship”.

Positive stories guiding concrete actions

“Museums should focus on sharing positive stories to engage with the public effectively. Research suggests that negative narratives can deter people and discourage them from acting. Instead, fostering hope and encouraging positive actions can empower millions to become advocates for change” (Merriman, 2024).

Ward (2024) argues that museums can build community and aspirations when she states that “we are more than just storytellers; we have a material culture, data, expertise and the ability to convene so many people together”.

Exhibitions as regenerative experiences

Ward (2024) exemplifies how to transition an exhibition to an experiential mode rather than just showcasing. “We initially planned a show called “Wild” about rewilding and nature restoration but realized the wild concept is colonized. This transformed the exhibition into a dynamic space driving systemic change. Visitors are engaged in a transformative experience rather than just providing information. We partner with organizations, such as Fast Familiar²³, that created an interactive game with visitors reflecting on their relationship with nature and making a difference in their connection to the non-human world.”

“Museum narratives have been shaped by the cognitive senses. We need to open space for experience and experimentation. Museums being the conveyors for the encounter between the Anthropocene-shaped and the First Nations people” (Wahl, 2024).



Figure 23: Wild Talks integrates the series of programmes related to the exhibition “Wild” at the Manchester Museum.

Image: Manchester Museum Archive.

²³ Fast Familiar is a group of recovering theatre makers and artists from different creative and academic backgrounds designing ‘audience-centric’ experiences exploring complex questions.

d) Regenerating places through regenerative repatriation and local restoration²⁴

Museums can help to reverse the alienation of places that de-indigenized African and First Nations people from their ancestor knowledge when displaced by colonialism. By repatriating sacred objects, ancestors and land stories, museums are supporting that restorative process. As Wahl (2024) reflects, "Museum repatriation can powerfully connect people to cultural contexts opening a dialogue about how we are connected to people in other places, especially those from whom our ancestors have taken these objects. It raises questions about the healing of this bioregion."

Conversely, Wahl (2024) reminds us to avoid a separate story of regenerative museums, while "the true museums potential lies in bringing multiple regenerative narratives together, involving schools, participatory democracy, urban development. A regenerative museum requires collaboration to cultivate a genuine appreciation for our place and people, encouraging participation in the nested systems sustaining us".

The concept of regenerating a place from a museum's perspective can be applied to the local where the museum is situated, the regions from which the collections originated, or a symbolic place that museums hold in audiences' hearts and minds. This idea encompasses social and ecological values that any museum should embrace to foster restorative and reconciliatory²⁵ actions for sustainable futures.

²⁴ Further information on this topic can be found in the chapters "Museums as Caretakers" and "An Ecological lens to Decolonization" of this report.

²⁵ Refer to "The Law of Three framework" (Stanford 2019) to review how reconciliation is integrated to this regenerative framework supporting organizations on planning restitution and repatriation projects regeneratively. (page 23).

Regeneration is not only a task for environmental parks, botanical gardens, climate or natural history museums; it is for all museums.

The concept of regenerating a place is demonstrated by the Anzania Museum restoring a quarry area, the Amazon Ecomuseum preserving biodiversity, and the Sao Bento Museu Vivo advocating for reforestation legislation. It is also seen in the Manchester Museum Anindilyakwa repatriation case and in Manchester city, where the museum's Climate Hub fosters climate mitigation.

Regardless of how a museum regenerates a place, the central regenerative principle is to foster a culture of care and support community development by committing to the future of a place for which the museum is co-responsible.



Figure 24: The area of the former quarry where the Anzania Museum is located, and it is committed to restoring the land. Photo: Anzania Museum archive.

G. A NEW FORM OF MUSEUM LEADERSHIP: REGENERATIVE MUSEUM LEADERS WEAVE NEW FUTURES, NURTURING INNER AND OUTER CONSCIOUSNESS AND SOCIO-ECOLOGICAL SENSITIVITY.

This research's interviewees have emphasized elements they believe are necessary for leading regenerative projects in museums. In doing so, they revealed key characteristics of regenerative leadership outlined by regeneration authors. Some have demonstrated an intuitive utilization of the regenerative frameworks.

Furthermore, they have highlighted how these characteristics intersect with, and sometimes are challenged by, the specific nature of the museum field.

The regenerative Leadership concept invites museum professionals to embark on a journey interlinking inner and outer work. It requires the adoption of social-environmental perspectives combined with professional and personal integrity in pursuing initiatives aimed at regenerating audiences' worldviews, territories and organizational culture. "The process of becoming a regenerator is about surrendering to not knowing, not having the answers and being courageous and curious about the living system's principles. We need to hold emergency in a different way, which we are not trained to do" (Storm, 2024).

Learning to lead by embracing the questions instead of providing the answers

Wahl believes that a "true regenerative leader guides others through living with questions, serving the community and the planet. "Weavers" build relationships and stay invisible while still being effective" (Wahl, 2024). As Martins (2024), the EcoMuseum Amazon Director, argues, "Leadership is about listening and practising humility."

Some museum leaders demonstrate inherent regenerative qualities. However, integrating regenerative practices into rigid museum management cultures is challenging. “The idea of bringing your whole self to a task, as suggested by regenerative thinking, becomes challenging when it comes to ethics, politics, and identity. We are currently working to understand how to navigate these challenges and determine what is and isn't possible within the structures we have” (Ward, 2024).

As argued by Ward (2024), “Being comfortable with vulnerability is challenging for many museum workers. There is a feeling that we should have all the answers, but instead, we should focus on creating conditions for questions rather than thinking that we and our collections hold the answers. It may seem simple, but it is quite significant.”

Tavares (2024), the Institute of Regenerative Development director, argues that “to transform museum's leaders and the museum itself, they need to become vulnerable, a challenge for an area holding conservative beliefs. Transformation is not a choice, it's a given. A recognition that stagnation is death.”

Regenerative leadership requires full awareness of the social-environmental collapse and a deep desire to contribute to helping society navigate that challenging time. “I remember clearly the moment it dawned on me what was happening to our world, environmentally, and it was really grim (Ward, 2024)”.

The Director of Azania Natural Future Museum in Kenya mentions that the museum embraces eco-lens in everything. She mentions her biggest assets as resilience, creativity, and a great sense of purpose. “I'm looking at this museum as someone

deeply concerned about the planet. We integrate governance with our purpose and structures, including considering giving nature a Board seat” (Van Weezendonk, 2024). Intuitively, Weezendonk is incorporating the “Living Systems Stakeholder Framework²⁶” and regenerative principles when designing as nature.

Applying non-cognitive learning through social-ecological experiences

Embodying regenerative capacities involves deep ecology and immersive decolonized experiences. Non-traditional capacity-building focused on non-cognitive knowledge in ecological practices and personal development, such as permaculture, agroforestry, bio-construction, and mindfulness, can enhance museum professionals' social-ecological approaches.

As Merriman (2024) argues, “climate or regenerative museum leadership training is absolutely necessary. This could involve a curriculum-based residency of one to two weeks to train a new generation of regenerative museum leaders. It should be integrated into programs involving carbon literacy leaders. We lack a broader framework for positive thinking about the future of museums as social-environmental organizations.”



Figure 26: Regenerative leadership seminar with immersive experiences in nature as part of the Regenerators Academy programme.

Photo: Regenerators Academy archive.

²⁶ Refer to “The Living Systems Stakeholder Framework” that suggests organizations to consider “Earth” or “Nature” as one stakeholder in the initiatives (Figure 6. The Living Systems Stakeholders) on page 22.

Being Experimental, evolving ourselves

Janes (2024) reflects that “active experimentation is key, although a challenge for museum professionals, who seek perfection. Instead, we should act, fail, redo, and embrace vulnerability. Integrity involves having a clear sense of one's obligations while contributing to our collective purpose and allowing for imperfect but open transparency”.

Museum professionals would need to release control to become regenerative. As questioned by Bill Reed (2024), “Who's ever in control? As “life is the process of becoming”, it is continually asking us to adapt. We aren't going to take care of life unless evolving ourselves.”

Overcoming Challenges and barriers

McKenzie (2024) indicates that “the deeply pragmatic culture in the global North is a barrier to museum professionals' adopting a holistic approach as it tends to be conformist, leaving little room to embrace diversity and incorporate individuals' sacredness expression into professional programs.”

She adds that “museum professionals' abilities should go beyond intellectual capacity and include spiritual, physical, and emotional. A comprehensive program should enhance eco-capacities and eco-literacy involving regenerative pathways to respond to the social climate emergency” (Mckenzie, 2024).



Figure 27: Climate Museum UK in a workshop about the Earth crisis with museums' professionals facilitated by Bridget McKenzie

Merriman (2024) argues that “although it is challenging to manage the practicalities of the sector, including financial pressures, long-term perspectives are essential. Regenerative thinking could be helpful in addressing immediate and long-term challenges.”

FUTURE RECOMMENDATIONS

What is needed for museums to become regenerative catalysts of a regenerative society?

The research findings indicate that regenerative development has the potential to help museums address social and environmental issues more effectively. However, interviews revealed challenges and opportunities. The following section outlines recommendations for addressing these issues and ensuring the effective implementation of regenerative thinking in museums.

MUSEUMS NEED TO CONNECT TO THE BROADER REGENERATION MOVEMENT

Museums can expand their potential to revitalize deteriorated geographic, thematic, or symbolic places by engaging with regeneration frameworks, training programs, literature and networks. This allows museums to move beyond “silo thinking” and make a distinct contribution to regeneration.

REGENERATION FRAMEWORKS²⁷ NEED TO BE FURTHER USED AND ADAPTED BY MUSEUMS

The Regenerative development frameworks can be helpful in translating the regenerative culture into core museum functions. This will guide museums in taking a regenerative approach to curatorship, education, and management, creating regenerative programs.

REGENERATIVE LEADERSHIP IN MUSEUMS REQUIRES IMMERSIVE CAPACITY-BUILDING

It is important to offer training and shared practices to incorporate regenerative thinking into tangible projects. Capacity-building programs, supported by national or

²⁷ Please refer to pages 20 to 22 of this report

global funding bodies and museum associations, should include regenerative thinking. This entails developing inner skills and immersive regenerative practices to enable museum professionals to transition from being sustainability leaders to becoming regenerative weavers addressing social-climate collapse.

FUNDING AND PUBLIC POLICIES COULD EXPAND REGENERATIVE THINKING IN MUSEUMS

This research evidence validates regenerative thinking as a valuable framework for addressing social and environmental challenges, surpassing other existing ones. To increase its impact and scale, public policies and funding bodies should integrate regenerative development into initiatives and funding calls for the museum sector.

INTEGRATE INDIGENOUS COSMOLOGY TO REINTERPRET COLLECTIONS REGENERATIVELY

Museum collections, documentation and research centred on Indigenous cosmology and ancestral knowledge, including the community's wisdom, can deeply inform museums on how to become regenerative.



Figure 28: Ecomuseum Amazonia working with vegetable and phytotherapy garden based on Indigenous and ancestral knowledge about biodiversity preservation. Image: Scene from a TV Norte Independente video.

CONCLUSION

The research asserts that regenerative thinking has enormous potential to redesign museums to a critical role in building resilience to climate and social collapse while fostering thriving futures. As demonstrated through the evidence brought by regenerative practitioners and museum professionals, regenerative development encourages a new culture in museums, positively impacting both professionals and visitors to learn how to regenerate places and the planet.

Museums adhering to regenerative practices have found creative and consistent ways to present a socio-ecological response to internal and external audiences, presenting a distinctive way of what progress means for them and the communities. They also demonstrate how combining decarbonization and decolonization efforts creates a more resilient and ethical response to the impending climate collapse. This is a window for museums to align their social and environmental policies and reimagine their role in addressing socio-ecological crises, leveraging their unique qualities and legacies.

The Manchester Museum, Horniman Museum, and Australian Museum repatriation examples, understood as “regenerative adopters museums²⁸,” illustrate how a socio-ecological perspective can add value to both museums and communities and expand the notion of museums as caretakers of places connected to narratives, collections, and locations. Conversely, the “regenerative born museums” have critical learnings to share with the whole museum sector on how to incorporate regenerative practices.

²⁸ Please refer to “APPENDIX 4: Chart: Regenerative Museums Types”

While the UN 2030 Sustainable Development Agenda continues to be an important reference in the museum world, adopting a regenerative approach can assist museums in furthering their sustainability practices and acting for sustainable development from a broader perspective. It allows the necessary adjustments in the museums' policies and priorities to ensure that economic growth does not take precedence over the need to support life in all its forms within the biosphere. It's important to see these frameworks as steps towards a co-evolutionary process of building more sustainable futures rather than as an end goal in themselves.

This report's examples of regenerative practices in museums aim to support other museums in adopting regenerative thinking. It highlights the unique contribution museums can make to the wider earth regeneration movement. They demonstrate how museums can embrace a multidisciplinary approach, blur the boundaries between humanities and ecological galleries, integrate social and environmental sustainability, and bridge the gaps between decarbonizing their operations and decolonizing their contents. By applying regenerative thinking to strategic planning, museums can create pathways for a new era. Museums are currently navigating this transition, and regenerative thinking is essential to arrive well-prepared on the other side, where a multifaceted future is taking shape.

This research also reflects on the need for museums to reframe what preservation means in a world in collapse and how regenerative frameworks can help shape that shift. Regenerative development can offer tools for a new paradigm in museums in relation to its key role of preserving the future.

In conclusion, the adoption of regenerative practices in museums, or the regenerative museums concept, can be interpreted as a strategic embrace of a culture characterized by care, humanity, institutional and individual integrity, and 'radical' love (Kumar, Satish, 2024; Hooks, Bell, 2024; Maturana, Humberto, 2009), integrated to an ecological sense of the world. This strategic shift in decision-making aims to foster a more consistent and profound museum response to the intricate social and environmental challenges of our era.

Adoption of regenerative culture on a large scale in the museums sector requires capacity building, funding and framework adaptation. However, at their core, regenerative museums require people who are genuinely committed to nature and humanity. Museums' leaders engaged in the best possible actions to reverse damage whenever possible and work to create a generation of regenerators within their museum's workforce and among their audience capable of acting regeneratively in the present to create sustainable societies for the future, collectively.

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APPENDICES

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Museums

APPENDIX 1

List of Interviewees

Regenerative Thinkers and practitioners:

- **Bill Reed**, Principal at Regenegis Group (US)
- **Daniel Wahl**, author of Design Regenerative Cultures (Germany/Spain)
- **Juliana Diniz and Felipe Tavares**, Directors of IDR - Regenerative Development Institute (Brazil)
- **Laura Storm**, co-author of Regenerative Leadership (Denmark/ Portugal)

Museums professionals:

- **Bridget Mckenzie**, Director of Climate Museum UK (UK)
- **Esme Ward**, Director of Manchester University Museum (UK)
- **Evy Weezendonk**, Director of Anzania Natural Future Museum (Kenya, Africa)
- **Jenny Newell**, Curator for Climate Change at the Australian Museums' Climate Solutions Centre (Australia)
- **Marlucia Santos**, Director of Museu Vivo São Bento (Brazil)
- **Nick Merriman**, Author of "Museums and the Climate Crisis", Director of National English Heritage (UK)
- **Robert Janes**, Author of "Museums and Societal Collapse" (Canadá)
- **Terezinha Martins**, Former Director of EcoMuseum Amazon and Director of the Association of Brazilian Ecomuseums and Community Museums (ABREMC) (Brazil)

APPENDIX 2

Informed Consent Form (ICF)

Museums Studies Program, University of Leicester

Project (*Working title): *Regenerative Museums: how museums can be transformed into Ethical Catalysts for society's adaptation and mitigation to Social and climate collapse by incorporating regenerative frameworks*

Researcher: Lucimara Letelier (lasl2@student.le.ac.uk), Student of Museum Studies 2023-2024

Supervisor: Richard Sandell (rps6@le.ac.uk), Professor of Museum Studies; Director of Research Centre for Museums and Galleries (RCMG)

Please **initial** box

- 1. I confirm that I have read and understand the **participant information sheet (Version 3.0, 17 April 2024)** for the above study and have had the opportunity to ask questions.

- 2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving reason.

- 3. I understand that at all times this research project will comply with the *General Data Protection Regulations (GDPR, 2018)* approved by the EU parliament on 14 April 2016 and passing into UK law effective from 25 May 2018 and that if I have any concerns how I contact the University of Leicester to raise these. (I confirm I have read the Privacy Notice.)

- 4. I agree to take part in the above research project.

Please initial
box

- | | | | |
|-----|--|---------------------------------|--------------------------------|
| 5. | I agree to the interview being audio recorded. | Yes
<input type="checkbox"/> | No
<input type="checkbox"/> |
| 6. | I agree to the interview /being video recorded. | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. | I agree to the use of my quotes in publications. (I understand that proper citation and referencing practices will be used for future publications that refer back to the findings of this research.) | Yes
<input type="checkbox"/> | No
<input type="checkbox"/> |
| 8. | I agree to being named in subsequent publications and understand this will be for academic purposes and not commercial gain. | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. | I agree that this research project can result in specific outcomes, including a publication of the project report, an e-book, and a podcast featuring a selection of quotes and information gathered from the interview. | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. | I agree that data collected for this research project may be used in future research. | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. | I wish to receive a copy of the results of this research project, and I agree for my contact details to be retained and used for this purpose. | <input type="checkbox"/> | <input type="checkbox"/> |

Participant: Name of Participant	Date	Signature
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Researcher:
Lucimara Anselmo Santos Letelier

Date

Signature

APPENDIX 3

Participant Information Sheet (PIS)

Project: Regenerative Museums
Student: Lucimara Letelier

Research Project title (*working title)

Regenerative Museums: how museums can be transformed into Ethical Catalysts for society's adaptation and mitigation to Social and climate collapse by incorporating regenerative frameworks

Invitation paragraph

You are being invited to take part in this research project. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

The data collected as part of this study may be used, in part or in whole, for the writing of educational projects such as a Master's Degree or a PhD; at no time would any personally identifiable data be published without consent.

What is the purpose of the research project?

This research project is a crucial component of the Master in Museum Studies Program's Research Module at the University of Leicester. It will begin on March 25th, 2024, and conclude on July 12th, 2024. Professor Richard Sandell, author of "Museums, Equality and Social Justice" (2012) and coauthor of "Museum Activism" (2019), supervises the project. The project's primary objective is to examine the implementation of regenerative design principles in museums' strategic planning to create more sustainable futures.

The research will examine how regenerative frameworks can assist museums in moving beyond sustainability and advance sustainable development practices towards achieving an effective and ethical role in mitigating and adapting to social and environmental collapse by incorporating living systems paradigms into their operations and mindset.

Other Research aims are:

- Create a comprehensive framework outlining the essential components and actions of a regenerative museum;
- Create guidelines to inspire regenerative leaders in museums capable of driving positive changes in values, behaviours, narratives, and systems;
- Provide examples of regenerative initiatives in museums to encourage the adoption of a regenerative approach in the sector.

- To identify the unique contributions that museums can make to the broader field of regeneration to support the ultimate goal of regenerating human presence on the planet and building more sustainable futures.

Attached are further project details for your interview and consent form sign-off.

Why have I been invited to participate?

This research aims to interview around ten to fifteen professionals from two different knowledge sources. Firstly, we will interview professionals from the regeneration field of study with prior experience in regenerative culture, regenerative design, or regenerative development. Secondly, we will interview professionals from the museum's field who have been progressively working towards sustainable development, sustainability and reflecting on the museum's role in the face of the social and climate crisis. They may also provide insights on regenerative practices applied to existing museum initiatives.

Your previous work and notable thinking align with the key issues surrounding regenerative museums, offering valuable contributions to this research project's central questions.

Do I have to take part?

Participating in the research project is entirely voluntary. It is up to you to decide whether or not to take part in this research project. If you do decide to take part, you will be given this information sheet along with a privacy notice that will explain how your data will be collected and used, and you will be asked to provide your consent to participate.

If you decide to take part, you are still free to withdraw at any time and without giving a reason by contacting the researcher. This decision will not further affect the project's university marks and assessments.

What will happen to me if I take part?

The interview is planned to happen online and will be recorded (both audio and video) through Zoom, Microsoft Teams, or an equivalent online platform. We will agree on a date and time convenient to you, and I will send the consent forms to be signed off prior to the interview date.

Each interview will last approximately one hour but may vary from 1.5 hours to less than an hour based on participant needs.

What will happen to any data I provide?

As part of this research project, an online interview will be conducted to collect data, which will be recorded and transcribed. The information collected will be used to inform the research project. It may also be quoted, cited, or referenced in the research report.

The project adheres to the data storage regulations of the University of Leicester and the data retention policies applicable to research projects. The collected data will be securely stored for a maximum of six years following the project's conclusion.

What are the possible benefits of taking part?

Taking part in this research study could benefit others by providing more robust research on how regeneration principles apply to museums and how they can support museums' purpose in creating more sustainable futures.

Other possible benefits include the possibility of this research project filling a gap in the literature regarding the regenerative culture applied to museums. This research may serve as a reference to further research on regeneration, regenerative development and regenerative design applied to the culture & heritage sector.

Will what I say in this research project be kept confidential?

All personal information collected about the individual will be kept strictly confidential, and confidentiality and privacy, based on the GDPR Regulations, will be ensured in the collection, storage, and publication of all research material.

How will you look after the data you collect about me?

We must ensure you understand what will happen to the data we collect about you and your legal rights. This document is accompanied by a separate Privacy Notice providing further details attached to this email.

Your normal rights under the Data Protection Act and the General Data Protection Regulation apply. However, we need to manage your records in specific ways for the research project to be reliable. This means that we won't [always] be able to let you see or change the data we hold about you. You can stop being part of the research project at any time without giving a reason. Still, we will keep the information about you that we already have and continue to use it for the purposes of the research project as outlined here.

Data generated by the research project should be stored in the university's systems in accordance with the university's information security policy and retained in accordance with the University's Research Code of Practice.

At all times, this research study will comply with the General Data Protection Regulations (GDPR, 2018) approved by the EU parliament on 14 April 2016 and passed into UK law with effect from 25 May 2018.

What will happen to the results of the research project?

The information gathered during the interviews will be presented as evidence in the final research project report, which can be shared with all the participants. The report may also be published in academic journals and other public digital channels.

Each interview's content, in the form of written transcripts or audiovisual recordings, can be used to create an e-book or podcast. The final product may include edited versions of the primary interview and can be shared with participants before publication for specific permission.

To summarize, the project aims to generate outcomes, including selected quotes and information obtained from the interviews, a final project report, an e-book, and a podcast. Proper citation and referencing practices will be followed to ensure that future publications

that refer to the findings of this research are appropriately acknowledged. Additional participants' permission will be sought at the time of creating these other resources.

What should I do if I want to take part?

You will be asked to complete an Informed Consent Form and to opt-in to a variety of research options by ticking the Yes or No box. This will confirm you understand how your data will be processed, protected and reviewed for research purposes.

Who is organising the research project?

I am conducting the research project as a student in the Master's in [Museums Studies](#) department at the University of Leicester, UK, and a [Chevening Scholar](#).

What if something goes wrong?

There are no special compensation arrangements in the very unlikely event that you are harmed by taking part in this research project. If you are harmed due to someone's negligence, you may have grounds for legal action, but you may have to pay for it.

Who has reviewed the research project?

The University of Leicester Research Ethics Committee has approved this research project.

Contact for Further Information:

Supervisor: Professor Richard Sandell (rps6@le.ac.uk)

Student/Researcher: Lucimara Letelier (lasl2@student.le.ac.uk)

In case you have any concerns or queries about the way in which the research project has been conducted, please contact the Chair of the University Research Ethics Committee at ethics@le.ac.uk.

If you require more GDPR data protection information, then you can access this via the University's Information Assurance Services:

Information Assurance Services
University of Leicester
University Road
Leicester
LE1 7RH
T: +44 (0)116 229 7945
E: ias@le.ac.uk
W: <https://www2.le.ac.uk/offices/ias>

Thank you for taking the time to participate in this research and reading this research project information sheet.

APPENDIX 4: Chart: Regenerative Museums Types

CHART: Regenerative Museums Types	
Regenerative Born Museums (Type 1)	Regenerative Adopter Museums (Type 2)
<i>Museums that have regenerative thinking as an inherent part of their culture and decision-making process have routed their core actions into social and environmental.</i>	<i>Museums that have designed regenerative initiatives that resonate with the regenerative paradigm and its principles as part of their social-environmental actions.</i>
Territories museums Ecomuseums Community Museums Social Museology “Route Museums” Indigenous Museums	Urban Museums National Museums Public/private museums More established museums (larger budget & audiences, broader visibility, Huge collection and touring exhibitions)
<p>Considerations</p> <ul style="list-style-type: none"> • Actions are intuitively or empirical regenerative, many are based on ancestor Knowledge inherent to their way of thinking • Not necessarily have eco-capacity or eco-literacy • Activism is part of the culture, but not necessarily actions interconnected with climate response or with the full understanding of climate science • Have not been trained in Sustainable development or do not necessarily have access to policies and funds that include SDGS 	<p>Considerations</p> <ul style="list-style-type: none"> • Actions represent critical pathways to address social and environmental issues more deeply by integrating these initiatives into their core mission. • To engage these "established museums" in regenerative culture requires like-minded leaders to lead the decision-making process in order to drive change. • Most of these museums have changed their mission, vision, and policies, and have adapted existing ones to transition to a more regenerative role. • They accept social climate collapse and understand museums have a central role to play • They have created actions to raise awareness and engage society in mitigation, adaption and resilience in the face of social and climate crisis

CHART: Regenerative Museums Types	
Regenerative Born Museums (Type 1)	Regenerative Adopter Museums (Type 2)
	<ul style="list-style-type: none"> • Some of them have reframed their narratives from a generic one to a more local response contribution to environmental solutions • Leaders in these museums are more risk-takers, activists, and change-makers, not afraid to learn and are open to reimagining their museums in a world of a complete transformation
<p>Examples</p> <ul style="list-style-type: none"> ✓ <i>Amazonia EcoMuseum</i> ✓ <i>Indigenous Cultures Museum</i> ✓ <i>Sao Bento Live Museum</i> ✓ <i>Blue House Museum</i> ✓ <i>Anzania EcoPark Future Museum</i> 	<p>Examples</p> <ul style="list-style-type: none"> ✓ <i>Manchester University Museum</i> ✓ <i>Australian Museum</i> ✓ <i>Phipps Conservatory</i> ✓ <i>Horniman Museum</i>

APPENDIX 5:

Chart: Regenerative Principles Applied to Museums (1)



Chart: Regenerative Principles Applied to Museums (2)

HOW



The Regenerative Design Framework Applied to Museums

(by Lucimara Letelier)



Extractive Museums	Sustainable Museums	Regenerative Museums
<ul style="list-style-type: none"> ▪ Deny the need for decolonization in every aspect of the museums ▪ Reinforce the colonial narrative/documentation /archive/Nomenclature ▪ Resist to repatriation, restitution and reconciliation ▪ Deny Climate emergency ▪ Perpetuate violence by blindingly ensuring harsh hierarchies that silence voices and avoid creating anti-racism practices endorsed by Embodied whiteness ▪ Do not see links between social and environmental issues ▪ Focused on economic Growth based on market values ▪ Respond to environmental and social issues exclusively based on mandatory regulations 	<ul style="list-style-type: none"> ▪ Respond to local, national, and international legislation, peer pressure, and policies related to sustainable development. ▪ Commit to Create Green Buildings and facilities ▪ Aimed at Carbon Neutral operation (net zero) : Calculate their carbon footprint and define targets of reduction; develop actions to reuse water, have renewable sources of energy, waste management and circular economy ▪ Follow the 17 SDGs framework usually applied in a fragmented perspective instead of a systemic approach ▪ Start to mind the integration between social and environmental issues in specific SDGs actions, although internally still operates with a separation between social and environmental sustainability concerns in the museum's structure 	<ul style="list-style-type: none"> ▪ Mind the regenerative role of museums in their territories (Geographic, Symbolic, Typological) ▪ Integrate social and environmental action all together, working systemically ▪ Engage with social-environmental communities joining existing networks and creating others by opening space for dialogue, co-creation for territorial change and mutual learning ▪ Recognize the social climate collapse and declare a climate emergency ▪ Become community hubs for mitigation, adaptation and resilience to social-climate multiple crises and uncertain futures ▪ Apply regenerative principles (living systems principles) and frameworks in their projects and initiatives, whether intuitively or intentionally.

Extractive Museums	Sustainable Museums	Regenerative Museums
<ul style="list-style-type: none"> ▪ See sustainability only as a bureaucracy that needs to be done to comply with funders, public policies and public perception ▪ Climate crisis response is translated into creating new wings, and new buildings for new Climate galleries/exhibitions as opposed to creating critical actions to support society's change towards regenerative presents and sustainable futures ▪ Focus on the Extractive paradigm 	<ul style="list-style-type: none"> ▪ Initiate Repatriation and restitution as part of its new policies and initiatives, although not yet reaching its full potential and integration with environmental and local issues ▪ Start paying attention to actions that are developed locally but have global connections.(Glocal) ▪ Establish Sustainability teams or consultancy or committees/networks ▪ Start actions related to sustainable exhibitions by reducing the carbon of displays, conservation, transportation, etc. ▪ Focus on doing less harm and doing more good 	<ul style="list-style-type: none"> ▪ Create actions following the SGS framework and comply with sustainability standards in museums in order to achieve carbon neutrality (reducing damage and promoting positive impact). Additionally, integrate a regenerative approach to the Sustainable Development Goals (SDGs) to reverse damage whenever possible and regenerate territories. ▪ Commit to local development by understanding the museum's role in the bioregional and biocultural characteristics of the territories the museum is co-responsible for; A strong commitment to Places ▪ Developing its workforce with inner development skills, ecological literacy, and the capacity to adapt to climate and social challenges. ▪ Change programs and narratives to mind the needs of nature and the biosphere health related to this specific museum's work and adjust its priorities, mission and vision ▪ Shift narratives in their exhibitions and collections to integrate nature and humans, culture & environment to support alternative models to extractivism ▪ Incorporate Degrowth values as needed, including the concept of "dynamic collections," while avoiding economic growth as the sole progress ideal. ▪ Mind the ecological aspects related to repatriation, restitution and decolonization ▪ Focus on Regenerate