Tools for **regenerative practice**

30 frameworks, exercises and methods in service of human and planetary flourishing

FixOurFood

TRANSFORMING UK FOOD SYSTEMS
Strategic Priorities Fund

ecocentric futures
TRANSFORMATIVE RESEARCH & ACTION

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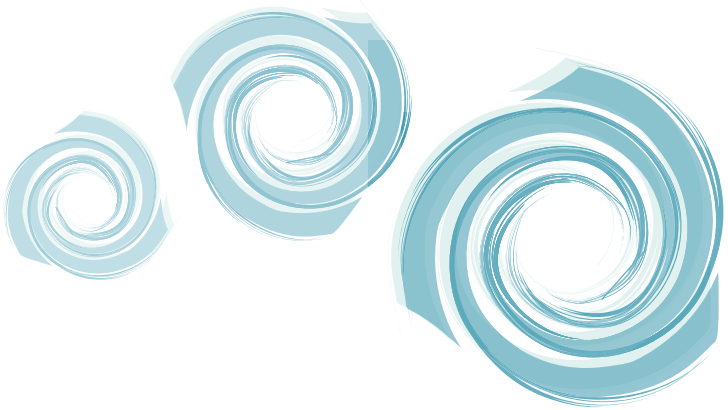
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Leverhulme Centre for ANTHROPOCENE BIODIVERSITY

JRF JOSEPH ROWNTREE FOUNDATION

BeeArc

Apiceutical Research Centre

IPRG International Propolis Research Group

LEADERS' QUEST

AMBITION LOOP

Foreword from the lead authors

***Regenerative* orientations, dynamics and practice are powerful ways to bring about sustainability and justice, and address deep-seated cultures of human-nature separation in westernised societies. Such cultures have been developed and imposed on others over centuries, bringing humans out of alignment with the innately regenerative processes of life.**

You may have heard words like 'regeneration', 'regenerative' and 'circular' gaining prominence in public discourse and are curious about what this might mean for your life and work. For example, you might be:

- working for a business that's trying to become carbon-negative;
- an architect or designer trying to design a new building or institution that works in cooperation with nature;
- a forest school teacher helping children connect to the natural world;
- a farmer interested in applying regenerative agricultural practices in a multi-dimensional way;
- part of a community-led initiative interested in ideas of ecological as well as social health and how they interact;
- or coordinating and catalysing a large-scale system change initiative that incorporates all of the above and is building new, sustainable relationships with its region.

This guide will support you on your journey of using and engaging with ideas of regeneration. You'll find tools for framing conversations in terms of regenerative systems or for sensitising people to what it feels like to be regenerative. You'll find tools that push the boundaries of your understanding, scope, ambition, and imagination. You'll also find tools that help you move into action. Give them a try, adapt them to your own context, experiment with them, get creative with them – and join a growing movement of people striving to revitalise patterns of life in which people and planet can flourish together.

The guide grew out of the FixOurFood research programme, which aims to understand how to support transformation towards a regenerative food system in Yorkshire, a large region of north-east England. Many of the tools have therefore been developed and tested in this context, and in the UK and Europe more widely. However, we share these tools with the hope that they will be of value in other situations.

Importantly, this toolkit has been developed by those from Western contexts, with a system-change orientation in mind. We recognise that patriarchal and colonial histories and cultures have granted us unearned privilege to create and share this guide, and contributed to the suppression and dismantling of other cultures that operate from ecocentric and regenerative foundations, and from which much can, and should, be learned.

Much of this learning, however, has been appropriated and reinterpreted by Western academics without due attribution. This guide could therefore easily be seen as reinforcing such concerns, and the racial and gendered issues that are deeply entwined with regenerative practice.

So we offer this guide, in all humility, as the best gift we can craft at this stage of our own lifelong journeys of learning how to decolonise our own practice, reconfigure the Enlightenment worldviews of separation that we have been steeped in, and cultivate more regenerative ways of living and being in the world.

Foreword from the lead authors

We hope it can at least be a stage in the process of elevating marginalised perspectives of regenerative cultures, following the lead of many others including: the United Nations Declaration on the Rights of Indigenous Peoples; the IPBES Values Assessment[2] and Transformative Change Assessment[3]; the work of EvalIndigenous, including the Wolastoq Declaration on Indigenous Evaluation; and the Protocols for Non-Indigenous People Working with Indigenous Knowledge developed by Indigenous Knowledge Systems Lab and colleagues.



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Section 1:

Introduction



There's growing interest across the world in ideas of how a business, organisation, community, food system, city, economy, region or even a whole country can be 'regenerative', and enable dynamics that build up human and ecological health together in a self-reinforcing way. This idea is a powerful, ambitious and hopeful framing for how we can address the many challenges facing people and the planet, and bring radically different futures into being.

Section 1: Introduction

'Regeneration' is not a new concept, however, nor a new trend. Regeneration is a core pattern of life itself. It already takes place all around us and within us, in cells, organs, individuals, communities, ecosystems, and at the planetary scale. We witness it in activities of care in our neighbourhoods, when we heal from illness or injury, when trees unfurl new leaves in spring, and in Earth's self-regulation of biogeophysical processes. For the vast majority of our evolutionary history, humans have been regionally regenerative keystone species who nurtured our habitat into higher states of biological productivity. To this day, many of the world's remaining biodiversity hotspots are under the stewardship of Indigenous peoples[4].

But particularly since around 10,000 years ago, at a time of major climate change that sparked the Agricultural Revolution, many of our societies have strayed far from this kind of mutualistic relationship[5]. Our collective journey from this point has been characterised as one of separation in multiple aspects of our self-identity: humans as separate from and superior to the rest of nature, trends towards reductionism that sees the world as isolated parts rather than connected wholes, patriarchy and the fetishisation of masculinity, racial hierarchy, left brain hemisphere dominance, and mind/inner treated as separate from matter/outer[6–10].

Western cultures have violently imposed such ideas on regenerative cultures whilst suppressing and dismantling their ways of being, particularly through instruments such as the Doctrine of Discovery that justified claims of sovereignty by European colonial powers over lands inhabited by non-Christians[11].

This journey of separation has been strongly implicated in the sustained degradation and destruction of the living world that now threatens our very survival – what Joanna Macy called the Great Unravelling[12,13]. So we urgently need a Great (Re)Turning[12]: an age of reintegration that realigns human patterns with life's regenerative impulse, and reminds us that we too are part of the web of life.

Some cultures, religions and wisdom traditions have sustained regenerative ways of living into the present day. These practices are sometimes so ingrained that they do not even have a special name: for instance, the agroforestry practices of the Lenca people of Honduras are simply called 'traditional technique'[14].

Many other communities are starting to rediscover how to live in a regenerative relationship once again with the wider community of life on whose health we all depend.

At the same time, there have been global efforts to rescind the colonial enforcement of Western worldviews, law and policy and restore bioregional stewardship guided by traditional ecological knowledge and inherently biocentric paradigms of Indigenous peoples. Notable examples include the United Nations Declaration on the Rights of Indigenous Peoples, IPBES Values Assessment[2] and Transformative Change Assessment[3], and the work of EvalIndigenous.



Section 1: Introduction

For many of us living in contemporary westernised societies, however, thinking, designing and acting regeneratively is a major shift, and it can be difficult to know where or how to start.

This guide therefore provides a set of tools that help to:

- give people an embodied sense of what it feels like to be regenerative;
- enhance understanding about regenerative dynamics;
- engage with our whole-body senses and intelligence;
- reconnect people to nature and gain inspiration from it;
- develop worldviews informed by principles of complexity and interdependence;
- identify where regeneration is already present in your community and what capacities enable or sustain it;
- push the ambition and imagination of envisioned futures;
- bring ideas about transformation and regeneration into evaluation practice;
- navigate the evolving landscape of organisations and initiatives applying regenerative practice;
- guide learning about your bioregion and how to live regeneratively within it;
- develop systemic strategies and frameworks for regenerative action;
- collectively navigate dilemmas and difficult questions;
- draw on the diversity of our collective wisdom in decision-making;
- connect you with further resources and communities of practice for continuing your regenerative journey;
- and ultimately design more sustainable cultures capable of regenerating the health of their people and place.

The guide includes 30 tools, summarised in Table 1. It first explains regenerative practice in more detail (Section 2), and what situations or purposes the tools could be used for (Section 3).

The guide then explains how the tools are organised and how to navigate the guide (Section 4), along with some general guidance for applying the tools (Section 5). Each tool is then presented in turn (Section 6), followed by some suggestions on how the tools might be combined (Section 7).

Finally, we offer pointers towards other useful tools beyond our guide (Section 8).



Section 1: Introduction

Table 1. Summary of the 30 tools in this guide. 'Group size' excludes the facilitator(s) and assumes application of the tool in groups, although many of the tools can also be used for individual reflection. 'Group stage' describes the minimum level of assumed familiarity in the group with regenerative practice and futures methods (particularly Three Horizons).

Tool set I: Tools for framing and sensitising

Tool no.	Tool name	Tool type	Tool purpose	Facilitation difficulty	Time required	Group size (no. of participants)	Group stage
1	Future Stewards' Regenerative Video	Framing, visual aid, audio aid	Priming participants to the concept of 'regenerative'	Beginner	4.5 mins	Any	Beginner
2	The Great (Re)Turning	Framing, visual aid	Explaining the need to realign ourselves with the regenerative trajectory of life	Beginner	5 mins	Any	Beginner
3	The Regenerative Spiral	Framing, visual aid, evaluation aid, exercise	Conceptualising regenerative dynamics on a spectrum	Beginner	30 mins	c. 15-30	Beginner
4	Regenerative Descriptions	Framing, exercise	Starting discussions about what it means to be regenerative	Beginner	20 mins minimum	Ideally c. 10-20	Beginner
5	Come To Your Senses	Framing, visual aid (optional), audio aid (optional), exercise (optional), contemplation	Bringing your whole self into regenerative practice	Beginner to Intermediate	c. 2-20 mins	Any	Beginner
6	Structures and Flows	Framing, visual aid, exercise, contemplation	Introducing people to dynamic systems thinking	Intermediate	45 mins to 1 hour	c. 5-30	Beginner
7	Mutual Qualities of Life	Framing, visual aid (optional), exercise, contemplation	Experiencing the feeling of participation in a regenerative system	Beginner	5-15 mins	Any	Beginner
8	The Window of Vitality	Framing, visual aid, evaluation aid, exercise	Conceptualising regeneration as the balance between efficiency and resilience	Beginner	30 mins	c. 15-30	Intermediate

Tool set 2: Tools for pushing the boundaries of our knowledge, ambition and imagination

Tool no.	Tool name	Tool type	Tool purpose	Facilitation difficulty	Time required	Group size (no. of participants)	Group stage
9	Principles of Life	Framing, evaluation aid, exercise, contemplation	Recognising regeneration in living systems, reconnecting people to nature, and inspiring regenerative design	Intermediate	1.5-2 hours	5-20	Beginner
10	Unique Gifts of Life	Exercise, contemplation (version 1)	Deepening the sense of what it means to be regenerative and part of the web of life	Intermediate	1.5-2 hours	5-20	Beginner
11	Recognising Practices of Care	Visual aid, exercise	Recognising how regeneration shows up in your community and culture	Intermediate	45 mins to 2 hours	c. 10-50, although could work with larger groups	Beginner
12	Nested Systems	Framing, visual aid, evaluation aid, exercise	Bringing awareness of cross-scale linkages into our actions	Intermediate	1 hour	c. 15-30	Beginner
13	Regen-Degen Quadrants	Framing, visual aid, evaluation aid, exercise	Demonstrating the cross-scale reciprocity needed for regenerative systems, and sparking discussion about their definition	Intermediate	30-40 mins	c. 15-30	Intermediate
14	The Regenerative Lens	Framing, visual aid, evaluation aid, exercise	Evaluating and pushing the ambition and imagination of envisioned futures	Intermediate	1-2 hours	c. 16-32	Intermediate
15	Twelve Principles for Transformation-focused Evaluation	Framing, visual aid, evaluation aid, exercise	Focusing evaluation practice on catalysing transformations towards regenerative futures	Beginner	Flexible; perhaps 15-20 mins minimum	Flexible	Intermediate

Tool no.	Tool name	Tool type	Tool purpose	Facilitation difficulty	Time required	Group size (no. of participants)	Group stage
16	The Regeneration Directory	Database, exercise	Navigating the landscape of regenerative practice	Beginner	Flexible	Any	Beginner
Tools for bioregioning							
17	Compass Directions for Bioregional Mapping	Exercise, contemplation	Helping you get started in bioregional mapping	Beginner	1-2.5 hours	c. 15-30	Beginner
18	The Bioregional Quiz	Exercise	Establishing the extent of your bioregional knowledge	Beginner	45 mins to 1 hour	c. 1-30	Beginner

Tool set 3: Tools for moving into action

Tool no.	Tool name	Tool type	Tool purpose	Facilitation difficulty	Time required	Group size (no. of participants)	Group stage
19	Three Horizons	Framing, visual aid, evaluation aid, method	Envisioning and planning transformations towards regenerative futures	Intermediate to Advanced	1 half-day minimum	Typically c. 10-30, although can be used with much larger groups	Beginner
20	Three Stages of Change	Framing, visual aid, exercise	Framing the key stages of transformations towards regenerative futures in terms of what actors do	Beginner	20 mins	c. 15-30 or more	Intermediate
21	H2+ Criteria	Framing, visual aid, evaluation aid, exercise	Identifying and prioritising transformative actors, initiatives and actions	Beginner	45 mins	c. 15-30 or more	Intermediate
22	Reinforcement Clustering	Framing, exercise	Reperceiving systems as the mutualistic reinforcing relationships between actors	Intermediate	30-45 mins	c. 15-25	Advanced

Tool no.	Tool name	Tool type	Tool purpose	Facilitation difficulty	Time required	Group size (no. of participants)	Group stage
23	Regenerative Actor Mapping	Method	Exploratory identification of regenerative relationships between actors	Intermediate	45 mins	c. 6-28	Advanced
24	Requests and Offers	Framing, exercise	Identifying mutualistic cross-system relationships between domains of action	Advanced	2 hours	c. 15-30	Advanced
25	Ambition Loops	Framing, visual aid, evaluation aid, exercise	Designing Minimum Viable Patterns of regeneration	Intermediate	1 hour	c. 15-30	Intermediate
26	Regenerative Dynamics with the 4 Returns Framework	Framing, visual aid, evaluation aid, exercise	Designing and evaluating cross-system regenerative dynamics	Intermediate	1 hour	c. 15-30	Intermediate
27	Adaptive Waves	Framing, visual aid, evaluation aid, method	Sensing dynamics in systems, timing interventions towards regeneration, and enhancing resilience	Intermediate	25 mins to 2 hours or more	c. 15-30 but flexible	Intermediate
28	The World Mandala	Framing, visual aid, evaluation aid, method	Identifying synergies for whole-system regeneration	Intermediate to Advanced	1 hour to 1 day	Flexible; can work well with small groups	Beginner
29	Dilemma Navigation	Framing, visual aid, evaluation aid, method	Using tensions and conflicts as creative opportunities for transformation and regeneration	Advanced	1 hour minimum	Best with c.10-15	Beginner
30	The Wheel of Wisdom	Framing, visual aid, method	Deep listening and collective wisdom in decision-making	Intermediate to Advanced	1 hour minimum	c. 4-30	Intermediate

Section 2:

What is regenerative practice?

We refer to our tools as being for 'regenerative practice'. A question this raises is: *what is meant by 'regenerative'?* Janine Benyus summarised a regenerative dynamic succinctly as 'life creates conditions conducive to life'[15]. This is what a healthy forest does, for instance: its life acts to continually create more life and the niches in which it lives.

Section 2: What is regenerative practice?

Not only does a forest support its own integrity through its trees growing and dying, creating space and resources for other plants, animals, fungi, and so on – a forest also contributes to continuation of life beyond itself, regenerating the air, climate, water, and nutrients that wider ecosystems also need. In this way, being 'regenerative' is a core pattern of life itself. It underpins the ability of living systems to self-organise into interacting, interdependent networks that build, maintain, repair and reproduce themselves whilst also continuously adapting, innovating, and evolving. So being regenerative is about realigning our societies with the naturally regenerative processes of life.

Another way to think about regenerative systems at broader scales where human societies and wider ecosystems interact, is that regenerative systems maintain positive reinforcing cycles of health both within and beyond themselves, including between humans and the rest of nature[16].

This goes beyond relatively superficial approaches to achieving sustainability that have traditionally focused on reducing harm to more acceptable levels through incrementally improving existing processes – or, in international development, treating sustainability as continuation of the same outcomes rather than dynamic adaptability to changing conditions. A regenerative business, for example, would not only be taking care of its employees and finances, but would also actively be contributing to the health of wider society and ecosystems on which the business ultimately depends for its long-term survival and flourishing, finding ways to be carbon-negative rather than merely achieving net zero carbon emissions, and creating conditions for continuous adaptation and evolution. Regeneration is therefore about finding ways to emulate natural systems where human and environmental benefits can dynamically build on each other.

A second question raised by regenerative practice is: **what is meant by 'practice'**? The notion of 'practice' communicates the idea of a continuous, iterative journey of design, experimentation, adaptation and learning. While it might include periods of reflection, practice goes beyond conceptually understanding something to actually doing it. For example, we could not learn how to ride a bicycle simply by reading a manual – we also need to experience it in practice, and develop a more embodied, intuitive 'felt sense' and muscle memory of what it means to ride and balance on a bicycle.



Section 2: What is regenerative practice?

Regenerative practice is then a continuous, iterative journey of design, experimentation, adaptation and learning that is led by the intention of enabling regenerative systems to emerge and flourish at multiple scales.

It involves not only striving for regenerative societies and cultures more widely, but also trying to embody regenerative qualities and dynamics (including mutualism, reciprocity, circularity, diversity, reflexivity, adaptivity, and a complexity-informed worldview) in the work that we do[16] (see Box 1). Regenerative practice incorporates 'inner' as well as 'outer' work to harness life's regenerative capacity[17]. It involves exploring the ecological and cultural uniqueness of the particular place you call home, actively engaging people in processes that change the quality of relationships towards care and kinship, and supporting the capacity of the whole system to perceive itself and its own present and future potential for regeneration. In short, regenerative practice is the ways in which we align with life's regenerative impulse through how we participate together, whether in our work or lives more generally.

Box 1: Regenerative or circular - what's the difference?



Circular economies and regenerative practice both move beyond linear models of take-make-use-waste. Circular economies typically focus on closing loops of materials and energy to reduce environmental harm and increase efficiency. While regenerative practices and approaches often incorporate circular strategies, they also tend to go further by actively restoring and enhancing the capacity of ecological and social systems to flourish and regenerate. So rather than merely closing resource loops to enhance sustainability, regenerative practices involve finding ways to align human activity with the self-renewing cycles of life itself.

Section 3:

Users and purposes of the tools



This guide provides a diverse set of tools to help you explore and tailor regenerative approaches to your own context. It is aimed primarily at those in a position to facilitate groups of people, typically in settings of workshops, education, training, strategic planning, and community participatory processes.

Section 3: Users and purposes of the tools

Some of the tools could also be used for personal reflection or one-to-one conversations, however. The tools have mostly been used in groups of between 15 and 30 people, but you might also use them effectively in other sizes of group.

There are many different contexts in which these tools could be used. You might have a 10-minute slot where you want to open up a dialogue about regenerative concepts, a full-day workshop to engage in regenerative design, a week-long retreat for deeper exploration, or something in between. You might be in a context of business, economics, finance, food systems, energy systems, healthcare, bioregioning, education, development, tourism, research, or evaluation – to name but a few possibilities, each with their own entry points for regeneration.

For example, you might be:

- facilitating a group of industry leaders to help them understand how they could bring regenerative practice into their organisations to help them become carbon-negative, and understand the supportive role they play in a wider ecosystem of actors.
- trying to introduce awareness of regeneration into a social change initiative.
- a forest school teacher applying some framing and sensitising tools (see tool set 1) with children outdoors to help them connect more strongly with their senses and their natural environment.
- incorporating some of the tools into a series of Three Horizons workshops to push the regenerative alignment of envisioned desired futures and action in the present.
- an action-oriented researcher running a workshop with a group of food system stakeholders to explore how their food system could become regenerative.
- a transformation-focused evaluator trying to push the ambition and imagination of a project or programme.
- a regenerative farmer interested to apply regenerative agriculture in a multi-dimensional way, considering social as well as ecological health and how they interact.
- leading a weekend or week-long retreat to help people reconnect to nature or develop spiritual wellbeing, and looking for exercises to help provide some structure.
- a counsellor interested in helping clients through personal transformation and regeneration.
- an architect or designer leading a group of people in a project to design a new building or institution that works in cooperation with nature.
- representing the voice of nature on the board of an organisation, and in need of some practices to help you connect with the processes and needs of the natural world.
- hosting a series of bioregional gatherings to explore a territorial-scale approach to all of the above, and how to integrate diverse projects into a regionally cohesive initiative.
- someone interested in ideas about regeneration more generally, and how you might apply them in your everyday life.

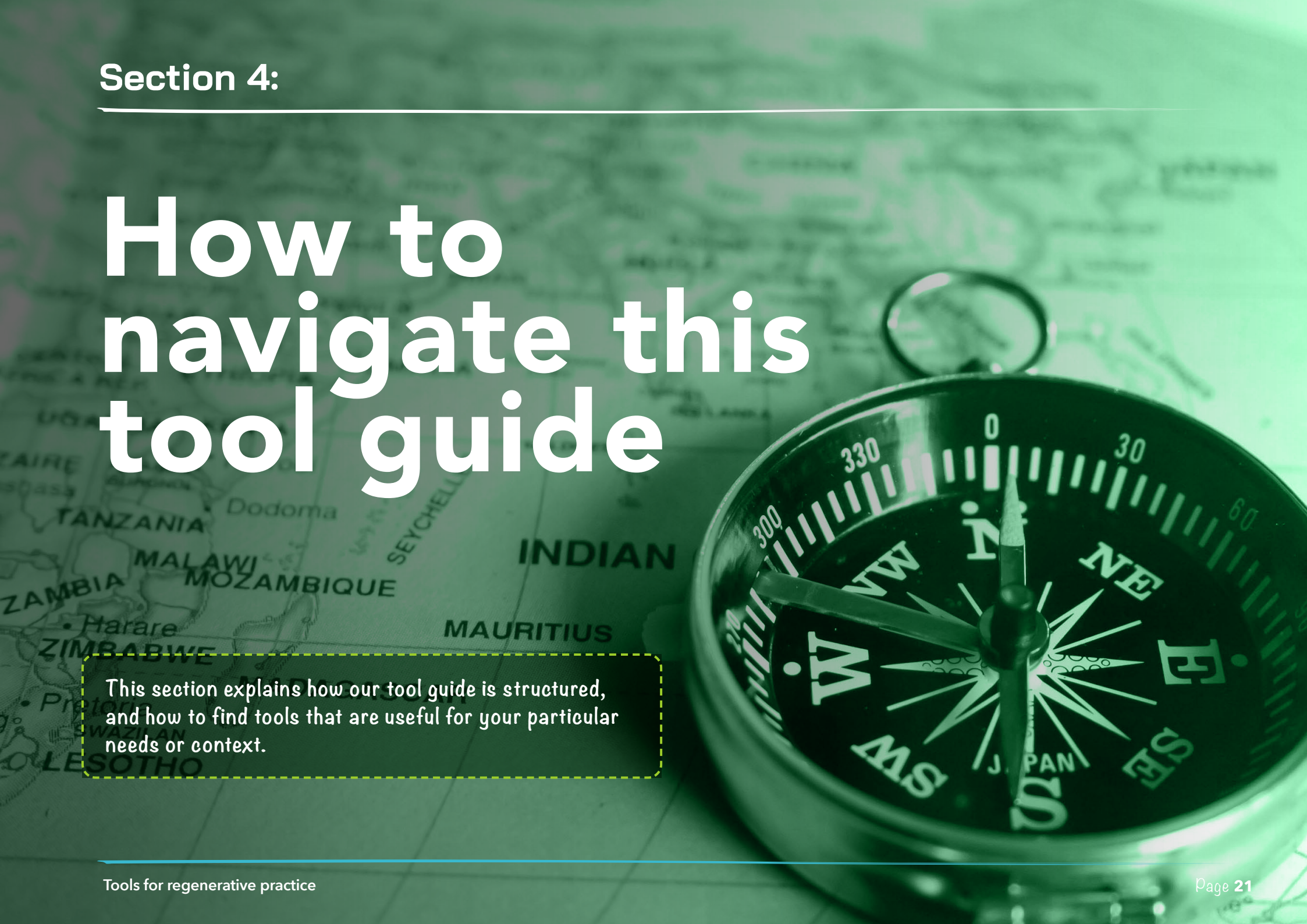
The tools in this guide offer simple entry points for getting people thinking about being regenerative and starting to plan and organise for regenerative action. For some tools, such as Three Horizons, there is abundant information for facilitators already available elsewhere, which we signpost rather than replicating in this guide.

Some of the tools assume prior facilitation experience, but many of the tools do not. Sources of general guidance for good facilitation include the H3Uni Resource Library, and books such as John Heron's The Complete Facilitator's Handbook[18] and Steve Dilworth's The Heart of Facilitation[19].

Facilitation guidance can also be found in other toolkits such as Susplace's Arts-Based Methods for Transformative Engagement[1] (also hosted online by Re-imaginary).

Section 4:

How to navigate this tool guide



This section explains how our tool guide is structured, and how to find tools that are useful for your particular needs or context.

Section 4: How to navigate this tool guide

How the tools are organised

Our tools are divided into three 'sets':

- Set 1: tools for framing conversations and sensitising participants to ideas about regeneration.
- Set 2: tools to help revitalise collective and place-sourced wisdom, deepen participants' understanding of regeneration, widen scope and raise ambition, and open up imagination about what is possible.
- Set 3: tools for moving into action and to support planning and organising actors and actions for growing new regenerative systems.

We would broadly expect tools from set 1 to be applied before tools from set 2, before applying tools from set 3, although this won't always be the case. While set 3 is explicitly action-focused, tools from sets 1 and 2 also provide practical agency, as regenerative practice often begins with personal development and expands into building collective capacities and capabilities.

Tool set 1: Tools for framing and sensitising

Tool 1: Future Stewards' Regenerative Video
Tool 2: The Great (Re)Turning
Tool 3: The Regenerative Spiral
Tool 4: Regenerative Descriptions
Tool 5: Come To Your Senses
Tool 6: Structures and Flows
Tool 7: Mutual Qualities of Life
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Tool set 2: Tools for pushing the boundaries of our knowledge, ambition and imagination

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Tools for bioregioning

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Tool 27: Adaptive Waves
Tool 28: The World Mandala
Tool 29: Dilemma Navigation
Tool 30: The Wheel of Wisdom

Section 4: How to navigate this tool guide

The casefile of each tool

Each tool has its own casefile with the following headings:

Tool type: an indication of what type of tool it is. The tools are either a



framing (a concept or idea that can be used to frame conversations)



visual aid (a diagram or other image or video that can help to frame conversations. See the separate high-quality downloadable versions of these visuals alongside the guide)



audio aid (similar to visual aid, but audio rather than visual)



evaluation aid (a framing that is useful for applying as an evaluative lens, e.g. to evaluate a system intervention, an initiative, or an envisioned future, and strengthen its alignment to features of regenerative systems. We consider evaluation practice to be the process of determining the value of something[20,21])



database (a searchable online database of information relevant to regenerative practice)



exercise (a facilitated, structured, relatively short activity for individuals and groups to develop capacities for regenerative practice and working with more in-depth methods)



contemplation (a relatively contemplative or reflective exercise, like a meditation or thought exercise, or an exercise involving significant periods of solo time)



method (a more in-depth sequence of steps, potentially incorporating and building on multiple exercises, that works from an overarching enabling structure for regenerative practice and aims to produce a practical, action-oriented outcome – e.g. Three Horizons for developing a framework for action)

or a combination of these.

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What is it? A brief description of what the tool consists of.

Facilitation difficulty: how easy or difficult the tool is to facilitate.

The categories are:

Beginner - can easily be facilitated by most people without much preparation, applying the facilitation steps almost like a recipe.

Intermediate - the facilitator will ideally have had some prior facilitation experience; the facilitation steps are more complex; the tool application may require considerably more preparation, and/or more adaptation and contextualisation for different settings.

Advanced - intended for experienced facilitators; the facilitation steps are complex and/or require strong facilitator presence; the tool application is likely to require significant preparation time and/or adaptation and contextualisation for different settings).

Time required: the time typically required to apply the tool.

Group size: the recommended number of participants when applying the tool (excluding the facilitator or facilitators).

Group stage: the minimum level of prior experience of, and familiarity with, regenerative practice and/or futures methods (e.g. Three Horizons) required in the group of participants before applying the tool.

The categories are:

Beginner - no prior experience required.

Intermediate - some familiarity with regenerative concepts/practice and/or futures methods is ideal.

Advanced - the group is already experienced in regenerative practice and/or futures methods).

Useful prior knowledge: useful tools or knowledge for participants to have had exposure to before applying the tool in question.

Section 4: How to navigate this tool guide

Materials required: physical materials typically required to apply the tool and facilitate a session around it; the default assumption is an in-person setting (see 'Adapting to online' for requirements for online settings).

Origins and designers: the conceptual origins of the tool, including the framework(s) it is based on, and the main person or people who designed the tool (including the approach of putting an underlying framework into practice).

Purpose and usefulness: this explains the purpose of the tool, the challenge or need it helps to address, and why it is useful for regenerative practice.

When to use: describes the circumstances where the tool might be most usefully applied.

Facilitation steps: key steps for applying and facilitating the tool, and/or links to facilitation guides for the tool hosted elsewhere (e.g. in the H3Uni Resource Library).

Facilitation tips: additional advice for applying the tool effectively.

Adapting to online: advice for adapting the tool for online settings.

Other adaptations: further suggestions for adapting the tool to different audiences and contexts.

Take it further: suggestions of other tools in our guide, or other tools, that you could now apply to extend and deepen your regenerative practice.

Navigating tools by type and application features

Table 2 offers additional ways of navigating the tools, beyond the three sets explained above. These groupings highlight cross-cutting similarities – such as framing, visual aids, or contemplative tools – to help you choose appropriate tools for a given situation. Once you've identified relevant tools, you can find their full casefile and facilitation guide in Section 6.

Section 4: How to navigate this tool guide

Table 2. The tools in this guide grouped by their type and features of application.

Combination type	Explanation	Relevant tools
Framing tools 	Tools that include a strong concept or idea that can be used to frame conversations.	**Tools from set 1**: Future Stewards' Regenerative Video, the Great (Re)Turning, the Regenerative Spiral, Regenerative Descriptions, Come To Your Senses (depending on the poem chosen), Structures and Flows, Mutual Qualities of Life, the Window of Vitality
		Tools from set 2: Principles of Life, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, Twelve Principles for Transformation-focused Evaluation
		Tools from set 3: Three Horizons, Three Stages of Change, H2+ Criteria, Reinforcement Clustering, Requests and Offers, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, the World Mandala, Dilemma Navigation, the Wheel of Wisdom
Visual aids 	Tools with a clear diagram or other image that can help to frame conversations. Useful for more visually minded participants.	**Tools from set 1**: Future Stewards' Regenerative Video, the Great (Re)Turning, the Regenerative Spiral, Regenerative Descriptions, Structures and Flows, Mutual Qualities of Life, the Window of Vitality
		Tools from set 2: Recognising Practices of Care, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, Twelve Principles for Transformation-focused Evaluation
		Tools from set 3: Three Horizons, Three Stages of Change, H2+ Criteria, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, the World Mandala, Dilemma Navigation, the Wheel of Wisdom
Evaluation aids 	Framing tools that are useful for applying as an evaluative lens, e.g. to evaluate a system intervention, an initiative, or an envisioned future, and strengthen its alignment to features of regenerative systems.	**Tools from set 1**: the Regenerative Spiral, the Window of Vitality
		Tools from set 2: Principles of Life, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, Twelve Principles for Transformation-focused Evaluation
		Tools from set 3: Three Horizons, H2+ Criteria, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, the World Mandala, Dilemma Navigation

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Combination type	Explanation	Relevant tools
Exercises 	Tools that include a facilitated, structured, relatively short activity for individuals and groups to develop capacities for regenerative practice.	**Tools from set 1**: Regenerative Descriptions, Come To Your Senses, Structures and Flows, Mutual Qualities of Life, the Window of Vitality
		Tools from set 2: : Principles of Life, Unique Gifts of Life, Recognising Practices of Care, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, Twelve Principles for Transformation-focused Evaluation, the Regeneration Directory, Compass Directions for Bioregional Mapping, the Bioregional Quiz
		Tools from set 3: Three Stages of Change, H2+ Criteria, Reinforcement Clustering, Requests and Offers, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework
Contemplative tools 	Tools with a more contemplative, reflective or meditative feel. They may include a meditation or thought exercise, or an exercise involving significant periods of solo time.	**Tools from set 1**: Come To Your Senses, Structures and Flows, Mutual Qualities of Life
		Tools from set 2: Principles of Life, Unique Gifts of Life (version 1), Twelve Principles for Transformation-focused Evaluation, Compass Directions for Bioregional Mapping
		Tools from set 3 (assuming they are applied as solo reflective tools): Three Horizons, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, the World Mandala, the Wheel of Wisdom
Methods 	Tools based on a more in-depth sequence of steps, potentially incorporating and building on multiple exercises, that works from an overarching enabling structure for regenerative practice and aims to produce a practical, action-oriented outcome, such as a strategy for action.	**Tools from set 3**: Three Horizons, Regenerative Actor Mapping, Adaptive Waves, the World Mandala, Dilemma Navigation, the Wheel of Wisdom
Tools about regenerative dynamics	These tools help people to understand the dynamics of regenerative systems.	**Tools from set 1**: Future Stewards' Regenerative Video, the Great (Re)Turning, the Regenerative Spiral, Regenerative Descriptions, Structures and Flows, Mutual Qualities of Life, the Window of Vitality
		Tools from set 2: Principles of Life, Unique Gifts of Life, Recognising Practices of Care, Regen-Degen Quadrants, the Regenerative Lens, the Regeneration Directory
		Tools from set 3: Regenerative Actor Mapping, Requests and Offers, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, the World Mandala, Dilemma Navigation, the Wheel of Wisdom

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Combination type	Explanation	Relevant tools
Tools that work well with children and other young people	These tools incorporate more elements of fun, play, and imagination, which may particularly suit younger participants. Grown-ups are allowed to use them too though!	**Tools from set 1**: Future Stewards' Regenerative Video, Come To Your Senses, Structures and Flows, Mutual Qualities of Life
		Tools from set 2: Principles of Life, Unique Gifts of Life, Regen-Degen Quadrants, the Regeneration Directory, Compass Directions for Bioregional Mapping, the Bioregional Quiz
		Tools from set 3: Three Horizons, the World Mandala, the Wheel of Wisdom
Tools that work well outdoors	Many of these tools draw inspiration from the natural world and are helpful for reconnecting people to nature; and/or the tools would likely be enhanced by applying them in wildlife-rich outdoor settings. Some of them have an essential outdoor component to the exercise.	**Tools from set 1**: the Great (Re)Turning, Regenerative Descriptions, Come To Your Senses, Structures and Flows, Mutual Qualities of Life
		Tools from set 2: Principles of Life, Unique Gifts of Life, Recognising Practices of Care, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, Compass Directions for Bioregional Mapping, the Bioregional Quiz
		Tools from set 3: Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, the World Mandala, the Wheel of Wisdom
Tools that draw inspiration from nature	These tools draw inspiration from the natural world and are helpful for reconnecting people to nature. Many of them can be held outdoors.	**Tools from set 1**: Future Stewards' Regenerative Video, the Great (Re)Turning, Come To Your Senses, Structures and Flows, Mutual Qualities of Life, the Window of Vitality
		Tools from set 2: Principles of Life, Unique Gifts of Life, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, Compass Directions for Bioregional Mapping, the Bioregional Quiz
		Tools from set 3: Regenerative Actor Mapping, Requests and Offers, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, the World Mandala, Dilemma Navigation, the Wheel of Wisdom
Multisensory tools	Tools that engage our wider suite of senses and intelligences beyond our rational brain.	**Tools from set 1**: Future Stewards' Regenerative Video, the Great (Re)Turning, Regenerative Descriptions, Come To Your Senses, Structures and Flows, Mutual Qualities of Life
		Tools from set 2: Principles of Life, Unique Gifts of Life, Recognising Practices of Care, Regen-Degen Quadrants, Compass Directions for Bioregional Mapping
		Tools from set 3: Three Horizons, Requests and Offers, Dilemma Navigation, the Wheel of Wisdom

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Combination type	Explanation	Relevant tools
Tools that aid complexity thinking	These tools help people to develop a more complexity-informed perspective on the world. For instance, some of them emphasise the idea of nested systems, emergent outcomes, self-organisation, cycles, feedbacks, reinforcing loops, dilemmas, trade-offs, side-effects, synergies, interconnectedness, interdependence, mutualism, and reciprocity.	**Tools from set 1**: Come To Your Senses, Structures and Flows, Mutual Qualities of Life, the Window of Vitality
		Tools from set 2: Principles of Life, Unique Gifts of Life, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, Twelve Principles for Transformation-focused Evaluation, Compass Directions for Bioregional Mapping, the Bioregional Quiz
		Tools from set 3: Three Horizons, Three Stages of Change, Reinforcement Clustering, Regenerative Actor Mapping, Requests and Offers, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, the World Mandala, Dilemma Navigation, the Wheel of Wisdom
More intellectual tools	These tools will likely appeal to more intellectual audiences who want to grapple with concepts and definitions related to transformation and regenerative practice.	**Tools from set 1**: Future Stewards' Regenerative Video, the Great (Re)Turning, the Regenerative Spiral, Regenerative Descriptions, the Window of Vitality
		Tools from set 2: Principles of Life, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, Twelve Principles for Transformation-focused Evaluation
		Tools from set 3: Three Horizons, Three Stages of Change, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, the World Mandala, Dilemma Navigation
Tools for getting to know your bioregion	These tools are particularly helpful for those trying to learn more about their local bioregion and the actors within it (see Tools for bioregioning), although they can also be used in other contexts of regenerative practice.	**Tools from set 2**: Recognising Practices of Care, the Regeneration Directory, Compass Directions for Bioregional Mapping, the Bioregional Quiz
		Tools from set 3: Regenerative Actor Mapping, Regenerative Dynamics with the 4 Returns Framework, the World Mandala

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Combination type	Explanation	Relevant tools
Tools based on Three Horizons	These tools are all based on, related to, or extensions of the Three Horizons framework.	**Tools from set 3**: Three Horizons, Three Stages of Change, H2+ Criteria, Reinforcement Clustering, Regenerative Actor Mapping, Requests and Offers, Ambition Loops, the World Mandala ('REIMAGINING our Biosphere' version), Dilemma Navigation
Tools for pioneers	These tools have had the least amount of testing with groups. You can be the pioneers and try them out – let us know what you learn!	**Tools from set 1**: the Window of Vitality
		Tools from set 2: Principles of Life, Recognising Practices of Care, Nested Systems, the Regenerative Lens, Twelve Principles for Transformation-focused Evaluation, the Regeneration Directory, Compass Directions for Bioregional Mapping, the Bioregional Quiz (version in Appendix 5)
		Tools from set 3: Regenerative Dynamics with the 4 Returns Framework

Section 5:

Principles for applying the tools

This section outlines five key principles to keep in mind when using the tools in this guide.

Section 5: Principles for applying the tools

1. Remain sensitive to place and culture.

Regenerative systems – a food system, business, economy, region, and so on – are highly context-specific. While they will share some commonalities, the qualities, dynamics, histories, traditions, and needs of a regenerative system will be unique for every locale, requiring groups to discover and build on the unique qualities of their own context. People also tend to care more deeply about their home place and have a more personal, experiential understanding of what goes on there, making it easier for them to relate to ideas of regenerative systems. Keeping your practice of these tools sensitive to place and culture is therefore both a powerful way of engaging people in regenerative practice, and a way of respecting and honouring the diversity of regenerative systems.

For example, you could use Recognising Practices of Care, the Regeneration Directory, Compass Directions for Bioregional Mapping, Regenerative Actor Mapping or the World Mandala to explore what regenerative relationships would look like for a group's home bioregion. At the same time, you can help people to understand some archetypal features of regenerative systems to push their ambition and imagination, using tools like the Regenerative Spiral or the Regenerative Lens.

Working with Indigenous cultures, knowledge and territory, especially in post-colonial contexts, requires additional care and the following of appropriate protocols. Minimum good practice would include beginning the facilitation of each tool with an acknowledgment of whose traditional territory your initiative is taking place within, and the historic and current systems that established how the area is stewarded today.

Keeping your regenerative practice attuned to place also means convening diverse groups of participants representative of the given locality. This can be challenging given that participants are often determined by which organisations can afford to send delegates to an event. We are also far outweighed by non-human actors in our regions – such as rivers, soils, and wildlife – so consider how these non-human voices are also being represented. This may involve human participants acting as proxies or representatives of non-human actors (see Box 2).

2. Help people rediscover their true nature *as nature*.

Many people have become alienated from the natural world in urbanised societies – a phenomenon that some have called 'nature-deficit disorder'[22] – and a sense of humans as more important than the rest of nature is also prevalent. Common language use predisposes us to think of nature as if there were such a thing as 'not nature', with human cultures and technology often seen as examples of that other-than-nature. But as Goethe warned nearly 200 years ago, 'who does not see nature everywhere, sees her nowhere in the right light'[23].

Our perceived separation from nature is a fallacy. We are expressions of and participants in nature as the context of the Earth, solar system, and universe within which we emerge. We are nature – as maintained by Indigenous cultures around the world since time immemorial. Being regenerative is then about 'weaving humanity back into the web of life'[24,25]: realigning our activities and worldviews with life's innately regenerative processes (see Box 2).

So when you apply these tools, consider how to help people reconnect to their own nature *as nature* and rekindle collective love for life in all its forms. At its simplest, that might mean holding sessions or parts of them outside in nature, using metaphors from the natural world to help explain regenerative concepts, starting an event with a traditional prayer, appreciation, song or poem that evokes the web of life that sustains us, and framing the purpose of regenerative practice in terms of realignment to life (see the Great (Re) Turning). Many of the tools in this guide draw inspiration from the more-than-human world, such as Come To Your Senses, Structures and Flows, Principles of Life, Unique Gifts of Life, the Regenerative Lens, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Adaptive Waves, the World Mandala, and the Wheel of Wisdom.

Box 2: Representing nature in our psyche and governance



Shifting worldviews of human-nature separation and hierarchy is one of the most important aspects of regenerative practice.

Some people and organisations are approaching this through the 'onboarding nature' movement to give nature a stronger voice in organisational decision-making, including by making nature an advisor, board member, shareholder, CEO or Director of businesses. Others are elevating the status of non-human beings through the 'rights of nature' movement, where the rights and personhood of non-human entities are upheld in legal systems. A growing number of these entities have now been granted legal personhood, such as the Amazon region and Atrato River in Colombia, the Whanganui River, Te Urewera forest, and Taranaki Maunga (Mount Taranaki) in New Zealand, and the River Ouse in East Sussex, UK. This requires a shift from seeing something like a river as an inanimate object, to seeing it as inherently alive and intelligent.

Representation of non-human nature in our psyche, governance structures and legal systems is likely to require 'transpersonal' practices to do this in a meaningful way. In transpersonal practice, wisdom is drawn from entities beyond the self. An example is shamanic practice, which often involves drawing on the wisdom of spirit animals, ancestors, and other guides. This is a step towards people being able to fairly represent or act as vessels for the voice of nature in order to make wiser decisions. Transpersonal practices are beyond the scope of this guide, although the Wheel of Wisdom gently builds capacity for such practices. For transpersonal tools elsewhere, see the facilitation guides for the Council of All Beings by Joanna Macy and John Seed, Inviting Non-Human Stakeholders by Kelli Rose Pearson and colleagues, and Future and Nature Stakeholder Integration in Climate Deliberation by Fátima Alves and Diogo Guedes Vidal.

Section 5: Principles for applying the tools

3. Show up with your 'whole self'.

As we explained in Section 2, regenerative practice is more than just a conceptual exercise. It requires that we bring our 'whole selves' into our practice – not just our head, and logical reasoning, but also our heart, hands and wider senses, our full capacity for action, our creativity and imagination, our moral compass, what we stand for and commit to, and ultimately our embodiment of regenerative life. If we aren't even able to bring our own fullest expression of life into play, then we will likely struggle to connect to the wider web of life around us, and understand what nature needs and tells us.

As well as bringing this kind of awareness yourself, you can help your participants to develop it too. Many of the tools in our guide can support you in doing this, such as Come To Your Senses, Mutual Qualities of Life, Unique Gifts of Life, Recognising Practices of Care, and the Wheel of Wisdom. Three Horizons is also helpful in encouraging people to think about what they want to see in the future (rather than just what is likely to happen), and to explicitly identify the values underpinning current and desired future patterns.

4. Choose your facilitation setting with care.

In-person application of the tools may enable deeper engagement, especially for place-based work that can more directly honour the unique features and stories of a particular place. However, online or hybrid settings may be more accessible and avoid negative environmental consequences of people travelling to participate (especially if travel involves flying). Hybrid settings, which combine in-person and online engagement and materials, may balance these issues although are more challenging logistically for facilitators. Facilitation settings should be decided after weighing up these different factors. Note that all of the tools in this guide can be applied online as well as in person.

In online settings, consider using a platform with a breakout rooms feature (such as Zoom or Microsoft Teams). Many of the tools would also require an online whiteboard such as Trello for simple tasks and Mural or Miro for more complex exercises, although remain mindful that such platforms can overwhelm participants unfamiliar with them.

5. Experiment, adapt and learn.

Treat each tool as a practice to be tried, adapted, and iterated with humility, curiosity and openness; the tools will never produce the same outcome twice. Often, the relational processes that occur through the tool's application – the quality of conversations, shifts in relationships with people and place, the learning journey, and emergent novelty – matter as much as predefined outputs. Like a musician inhabiting the sound world mediated by their instrument[6,26], we invite you to inhabit the relational world mediated by these tools.

While some of the tools have had more testing and use than others, they should all be considered 'prototypes': we invite you to experiment and have fun with them, adapt them to suit different contexts, learn, and improve them. We welcome feedback, stories of successful or unsuccessful applications, suggested improvements, or other tools that you've found useful for regenerative practice. Let us know by emailing the corresponding author, who can also provide editable versions of the tools on request (Sam Buckton, sam.buckton@york.ac.uk), and by tagging @Ecocentric Futures in LinkedIn posts.

In summary, we encourage you to apply these tools in a way that is attuned to place, setting, and human-nature connection, brings your 'whole self' into play, and takes an experimental and adaptive learning approach. In the next section, you can start putting all this into practice.

Section 6:

30 tools for regenerative practice

This section outlines a set of 30 tools for regenerative practice that we have found useful in framing and sensitising people to regenerative concepts, encouraging people to push the boundaries of their ambition and imagination, and starting to plan and organise for new regenerative relationships and patterns in society.

Tool set 1: Tools for framing and sensitising

The eight tools in this first set are useful to apply early on in a workshop or other gathering to help frame conversations in terms of regenerative systems, awaken and familiarise participants to ideas about regeneration and what it feels like to be regenerative, and provide motivation for regenerative practice (particularly the Great (Re)Turning).

Some of the tools can be used like meditations, grounding exercises or thought exercises that help people to develop a more holistic awareness and get a stronger 'felt sense' of what it means to be regenerative, such as Come To Your Senses, Structures and Flows, and Mutual Qualities of Life. Some provide a basic introduction to regenerative dynamics, including the Regenerative Spiral, Regenerative Descriptions, and Mutual Qualities of Life. These framing and sensitising tools provide a foundation that makes it easier to then apply Tools for pushing the boundaries of people's knowledge, ambition and imagination, and Tools for moving into action.



Tool 1: Future Stewards' Regenerative Video

A tool for priming participants to the concept of 'regenerative'

This is a quick, simple, appealingly animated, narrated video that can be used to give participants a flavour of what 'regenerative' means prior to a gathering.

framing visual aid audio aid

What is it? A 4.5-minute animated, narrated video on the topic 'what is regenerative?'

Facilitation difficulty: Beginner

Time required: 4.5 minutes.

Group size: any.

Group stage: Beginner

Useful prior knowledge: none.

Materials required: a way of viewing or listening to the video.



Purpose and usefulness: helps participants enter regenerative practice having at least a rough idea of what 'regenerative' means; the video uses language, concepts and imagery that are likely to feel intuitive to many people. The video draws on similar concepts to Regen-Degen Quadrants and the Regenerative Lens, and is most strongly based on the Regenerative Spiral. It also mentions Janine Benyus' phrase 'life creates conditions conducive to life'[15], and how many Indigenous cultures have preserved regenerative ways of living for thousands of years. Examples (e.g. from agriculture) are used to illustrate concepts throughout the video.'

When to use: before a workshop or other session in which a regenerative framing is being used.

Facilitation steps: send a link to the video to participants prior to the session with an instruction to watch it in advance.

Tool 1: Future Stewards' Regenerative Video

Origins and designers: the video is based primarily on the Regenerative Spiral framework of Bill Reed, Carol Sanford, and other members of Regenesis Group. The video narrative was written by Bill Sharpe and Yasu Mali, narrated by Yasu, and animated by The Media Workshop Ltd. The main tool image above is a still from the video.

Facilitation tips: we recommend sending out the video prior to a session rather than playing the video during a session because informational videos can bring an unhelpfully didactic and passive energy to groups. A facilitator explaining concepts 'live' (e.g. by talking about them or drawing them) is often more engaging in a workshop.

Adapting to online: the video is online (hosted on YouTube) by default, unless it is downloaded to be playable offline.

Other adaptations: see the 'regenerative worldview' card in Future Stewards' *10 tools for systems change to a zero carbon world*[27] for an alternative format of the ideas in the video.

Take it further:

- It is assumed that the subsequent gathering(s) of the group will apply some of the other tools for regenerative practice, whether in or beyond this guide. It would make sense to at least apply the Regenerative Spiral during the session to consolidate the information in the video.
- You could ask your group to search the Regeneration Directory to find organisations and initiatives that they feel are most strongly embodying the ideas about regeneration presented in Future Stewards' video.

Tool 2: The Great (Re)Turning

A tool for explaining the need to realign ourselves with the regenerative trajectory of life

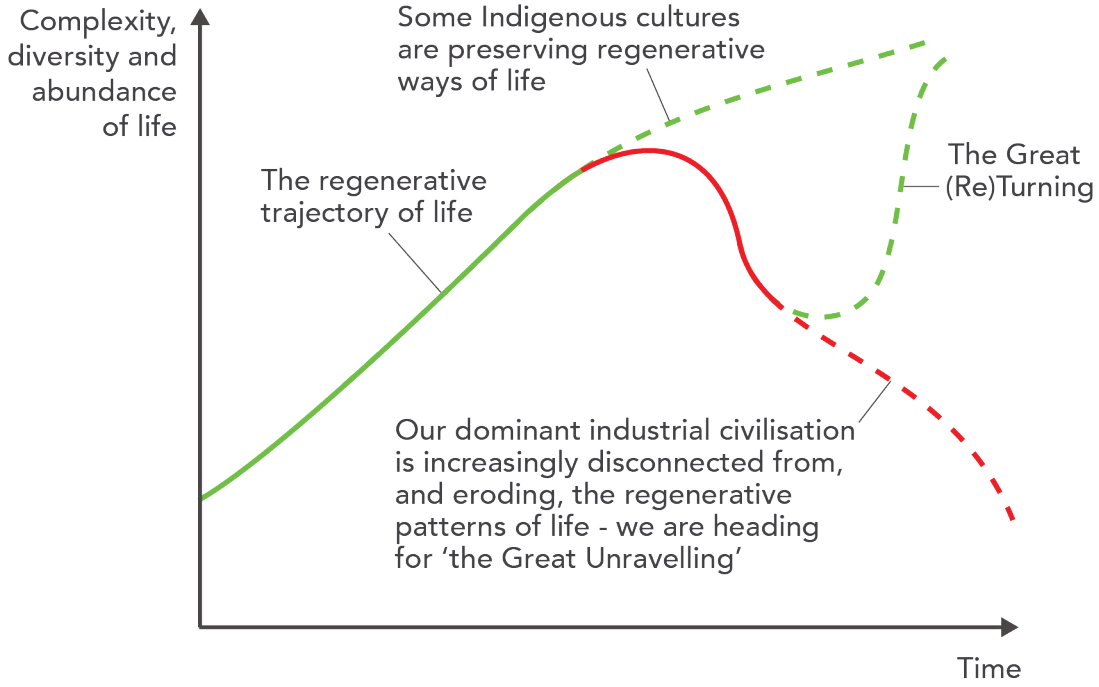
This is a simple visual way of explaining the motivation and need for regenerative systems, and how we need to realign our societies with the regenerative processes of life, as exemplified by the worldviews and practices of Indigenous cultures. It provides a powerful framing that you'd introduce early on in a session.

framing visual aid

What is it? A simple diagrammatic story of life on Earth and how it could unfold in the future.

Facilitation difficulty: Beginner

Time required: 5 minutes to draw from scratch or share a slide with a built-up narrative.



Purpose and usefulness: as we explained in Section 2, being regenerative requires realigning our societies with the innately regenerative processes of life, or 'weaving humanity back into the web of life'[24,25]. This tool provides a simple illustration of why this realignment is needed. It helps people to zoom out and see humanity in its planetary and evolutionary context. This provides a foundational motivation for regenerative practice.

When to use: use for framing near the beginning of a session when the group needs to find their way into understanding regenerative concepts and outlook. It is a useful prelude to Regenerative Descriptions.

Tool 2: The Great (Re)Turning

Group size: any.

Group stage: Beginner

Useful prior knowledge: Future Stewards' Regenerative Video

Materials required: projector and presented slide (if showing pre-created diagram), or whiteboard/flipchart and pen(s) (if drawing from scratch).

Origins and designers: based on the work of American environmental activist, author and teacher Joanna Macy[12,13], with additional ideas from Bill Sharpe.

Facilitation steps: this diagram can either be presented as a pre-created image or drawn from scratch in real time on a whiteboard or flipchart (or other kinds of canvas). In either case:

1. Explain to the group how life has built up increasing complexity, diversity and abundance over time through its regenerative processes (left-most diagonal line).
2. Point out how our current dominant civilisations are based on extractive dynamics that are depleting and degrading this bounty of life: what Joanna Macy calls the 'Great Unravelling' (undashed red line curving down).
3. Explain that our task is clear: we can either continue on our current path towards degeneration and collapse (dashed red line curving down), or we can strive to realign ourselves with the regenerative processes of life: this is the 'Great (Re)Turning' (dashed green line curving up).
4. Finish by pointing out that many Indigenous cultures around the world have preserved these regenerative ways of living (upward diagonal dashed green line).

Facilitation tips: keep it simple – you just want people to get a sense of the high-level story of life. Avoid using technical terms beyond what the group will be comfortable with; make it a story you are comfortable telling.

Adapting to online: the same facilitation steps can be applied in online settings, using an online whiteboard if drawing from scratch.

Other adaptations: if appropriate, you could connect with the sort of language and images people will have seen in David Attenborough documentaries or similar.

Take it further:

- Deepen understanding of the kinds of dynamics we need to achieve a Great (Re)Turning with the Regenerative Spiral, Regenerative Descriptions, or the Window of Vitality.
- Deepen understanding of what it means to weave ourselves back into the web of life with the Principles of Life or Unique Gifts of Life.
- Use this framing to move into place-based regenerative practice (see Tools for bioregioning) with Recognising Practices of Care, the Regeneration Directory, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala.

Tool 3: The Regenerative Spiral

A tool for conceptualising regenerative dynamics on a spectrum

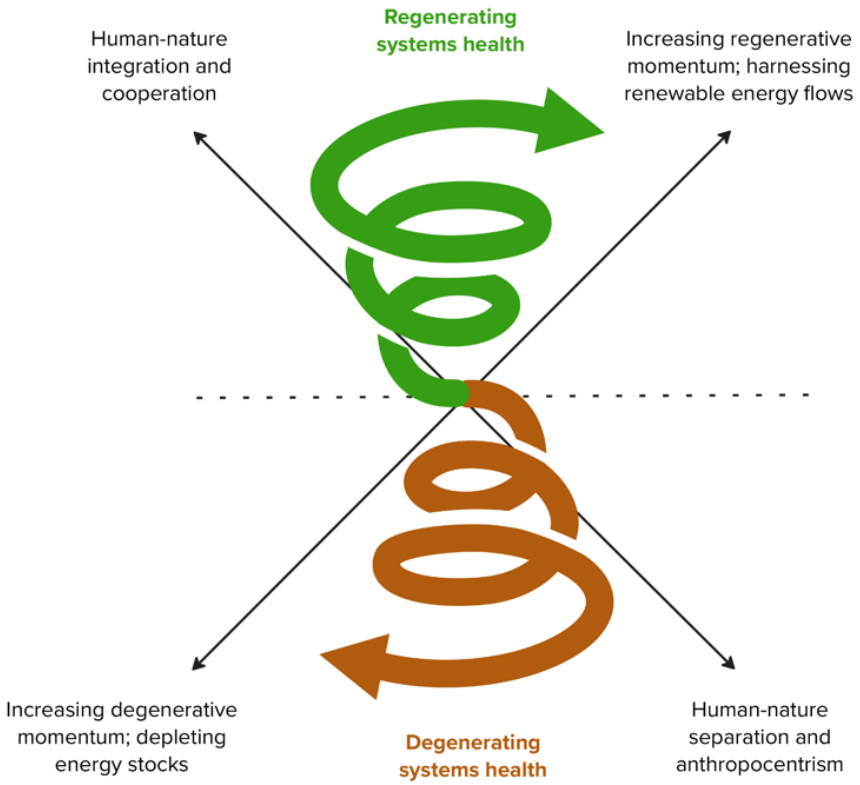
The Regenerative Spiral diagram has become a classic image for conceptualising regenerative dynamics, and is particularly useful for showing how regenerative dynamics go above and beyond traditional approaches to achieving sustainability that focus on incremental improvement and being '100% less bad'.



What is it? A brief explanation of a diagram and a spectrum from extractive to regenerative, with a simple exercise for familiarisation.

Facilitation difficulty: Beginner

Time required: 30 minutes.



Regenerative

Humans collaborating and co-evolving *as* nature

Restorative

Humans doing things *to* nature: restoring damaged natural systems

Neutral

No additional harm - '100% less bad'

Green

Relative improvement (e.g. in efficiency) - a little less harmful

Extractive

Minimal standards required for legal compliance - taking much more than we give back

Purpose and usefulness: many approaches to achieve 'sustainability' are relatively superficial and focus on reducing anthropogenic harm to more acceptable levels, often through improving the efficiency of existing processes – such as a 'net zero' approach to reducing carbon emissions. Such approaches usually fail to improve the health of people and planet at the speed and scale required to mitigate global crises like climate change, and also fail to transform underlying worldviews of human-nature separation. 'Regeneration' itself is also at risk of being greenwashed, with some using this label to describe relatively superficial action.

Tool 3: The Regenerative Spiral

Group size: would work with typical workshop group sizes of around 15-30 people, although it could also be used as an individual reflective tool.

Group stage: Beginner

Useful prior knowledge: Future Stewards' Regenerative Video

Materials required: projector and a presented slide showing the diagram (you could alternatively draw the diagram from scratch, although this will take considerably longer as the diagram has many different elements); paper print-outs of the diagram; pens.

Origins and designers: the early version of this diagram evolved in conversations between Carol Sanford, Bill Reed and other members of Regenesis Group; Bill Reed produced one of the earliest publications of the diagram[28]. Subsequent versions have evolved through contributions by Ethan Roland Soloviev, Daniel Wahl[29,30], Bill Sharpe[27], Leen Gorissen and colleagues[31], and Joern Fischer and colleagues[32]. The diagram in this guide was created by Sam Buckton in Mural (Tactivos, Inc. dba Mural); Sam also designed the corresponding exercise.

Purpose and usefulness (continued): the Regenerative Spiral is therefore useful for emphasising how regeneration has a very different reinforcing dynamic to current patterns, or traditional approaches to achieving sustainability, and helps to frame regeneration as a transformational practice. It helps people to understand regenerative practice as a progression from business as usual, to green (doing less badly), to neutral (no net harm), to restorative (doing good), to regenerative (aligning with life's evolutionary pattern of creating conditions conducive to life, and building capacity and capability in learning communities of practice – which enables true sustainability). Once people understand the diagram, it becomes a powerful image and framing that people tend to remember and relate to.

When to use: present early on in a workshop or other gathering. You could also use it in the context of pushing the ambition of a third horizon future vision in a Three Horizons process.

Facilitation steps:

1. Present the diagram and introduce it by saying something like:
   A helpful way of thinking about regenerative dynamics is this spiral diagram that grew out of work by Regenesis Group.
2. First explain the 'degenerating' part of the diagram. You could say:
   A lot of the systems we see today in societies are degenerative: they're showing vicious cycles that spiral down the health of people and planet. This is because they're extractive, based on the minimal standards required for legal compliance, taking much more than we give back, and degrading natural systems faster than they can repair themselves.
3. Next, explain the 'green' and 'neutral' parts of the diagram. You could say:
   A lot of the action we see to address this might be called 'green', which focuses on relatively superficial, incremental, relative improvement of existing systems, like improving efficiency. A lot of action could also be described as 'neutral', which focuses mostly on minimising further harm, like net-zero carbon or no net loss of biodiversity. However, both green and neutral action don't really shift the underlying degenerative dynamics.

Facilitator notes

Facilitation steps (continued):

4. Next, explain the 'restorative' and 'regenerative' parts of the diagram. You could say:
   We start shifting the dynamics when we take action that's restorative or regenerative. Restoration involves humans doing things to nature to restore degraded systems, like cleaning up a polluted lake. Being regenerative goes even further, and involves humans collaborating and co-evolving with and as nature such that 'life creates conditions conducive to life', like a regenerative food system that replenishes the health of the soil and its communities. The result is a system that is inherently regenerative, resilient and sustainable.
5. Next, explain the axes of the diagram. You could say:
   You can see that as you start moving into restoration and regeneration, you need to input increasingly less energy to kickstart desirable processes because they're starting to gain regenerative momentum of their own. However, it can take a lot of effort initially to achieve this, including wholescale shifts to renewable energy and a zero-waste circular economy built around bio-based materials.
6. Wrap up your explanation by saying something like:
   So overall, this diagram emphasises how being regenerative goes beyond more superficial approaches to sustainability that focus on relative improvement and minimising further harm, and involves people proactively collaborating with nature to spiral up human and planetary health in a mutually reinforcing way.
7. Divide participants into breakout groups of three to four people. Give each group a print-out of the diagram.
8. Ask the groups to spend 10-15 minutes identifying and discussing examples from their own experience that map onto different parts of the spectrum. Participants can write/draw on the print-outs if they wish.
9. Ask for some reflections from different groups in plenary.

Tool 3: The Regenerative Spiral

Facilitator notes

Facilitation tips: the main conceptual misunderstanding and pitfall to highlight when facilitating a session with this tool is to avoid a dualistic framing that dismisses all things 'sustainable' in favour of the new approach 'regeneration'. Therein lies a fundamental misunderstanding of the relationship between sustainability (which is more of an outcome) and regeneration (which is more of a process). There are many people who have spent their lifetime working to create sustainability in a regenerative way. Whereas sustainability is an outcome that we have not yet achieved, regeneration is the process by which life renews, develops, evolves and expresses systemic health. We need to align with life's regenerative impulse to achieve sustainability. The two should be considered related, rather than one replacing the other, or 'sustainability versus regeneration'.

Adapting to online: the same facilitation steps can be applied in online settings.

Other adaptations:

- You might find different examples to illustrate the five tiers on the spectrum (extractive, green, neutral, restorative, regenerative) depending on your audience. For instance, in the context of energy systems you might use examples relating to energy and transport.
- You could focus the breakout groups exercise on evaluating a particular organisation or initiative relevant to the participants. Where on the spectrum does it sit overall? Are any of its individual activities on different parts of the spectrum?
- Alternatively, in a Three Horizons context, participants could evaluate an existing Horizon 2 or Horizon 3 and explore how its ambition could be stretched to align more to the regenerative end of the spectrum.
- See Appendix 1 for a variety of examples of how people have represented the Regenerative Spiral in different ways.

Tool 3: The Regenerative Spiral

Facilitator notes

Take it further:

- Deepen understanding of regenerative dynamics with Mutual Qualities of Life, the Window of Vitality, Principles of Life, Unique Gifts of Life, Recognising Practices of Care, Regen-Degen Quadrants, the Regenerative Lens, the Regeneration Directory, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, or the World Mandala.
- Further discuss the semantics of regeneration and regenerative practice with Regenerative Descriptions, the Window of Vitality, Regen-Degen Quadrants, and the Regenerative Lens.
- You could ask your group to search the Regeneration Directory to find organisations and initiatives that they feel are most strongly embodying the ideas about regeneration presented in the Regenerative Spiral, or categorise them according to the levels of the Spiral.
- Move into exploration of Horizon 3 or Horizon 2 in a Three Horizons process with your new appreciation of regenerative dynamics.
- Move into place-based regenerative practice (see Tools for bioregioning) with Recognising Practices of Care, the Regeneration Directory, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala.
- To explore how you might situate tools like the Regenerative Spiral into your wider evaluation practice, see Twelve Principles for Transformation-focused Evaluation.
- Other frameworks present a similar progression to the one in the Regenerative Spiral, but from different perspectives. The IPBES Values Assessment[2] presents a typology of values relating to nature that shows a similar progression: living *from* nature, living *in* nature, living *with* nature, and living *as* nature. Nan Wehipeihana's Vision for Indigenous Evaluation shows a progression from evaluation imposed on Indigenous peoples by Westerners towards Indigenous-led evaluations that promote self-determination: in other words, from evaluation done *to, for* and *with* Indigenous peoples, to evaluation done *by* and *as* Indigenous peoples.

Tool 4: Regenerative Descriptions

A tool for starting discussions about what it means to be regenerative

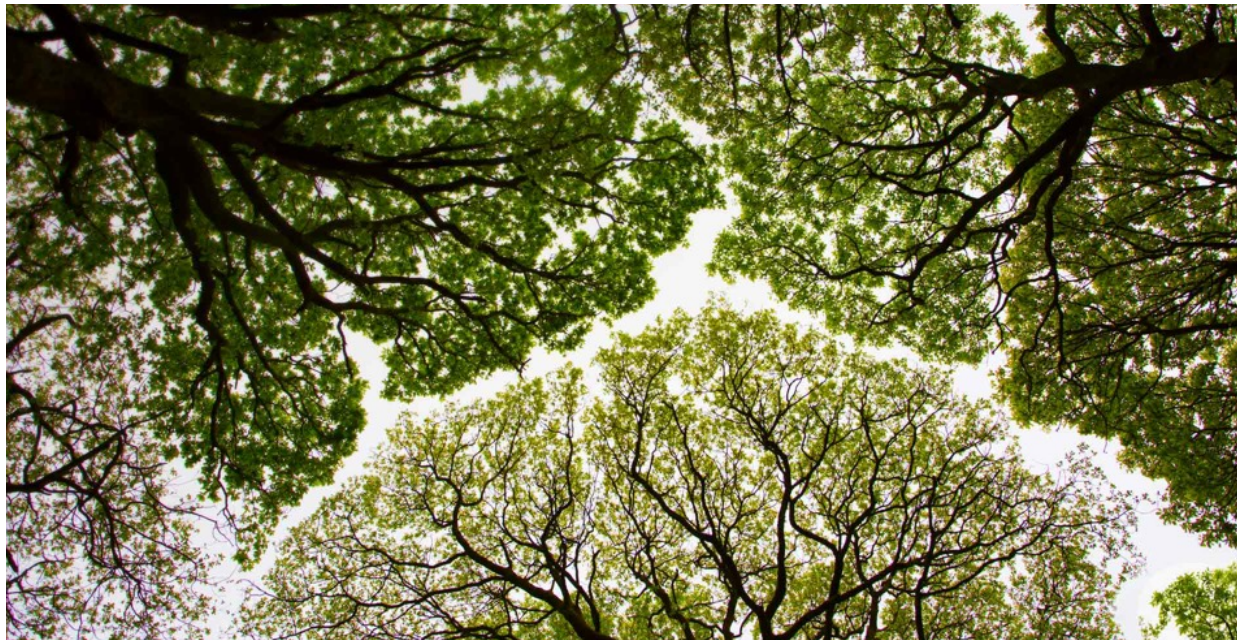
This tool uses a set of descriptions or definitions of regeneration and its dynamics to help people surface their own understandings. Using the descriptions can stimulate rich conversation and quickly gets people engaged with thinking about what it means to be regenerative.



What is it? Getting feedback from participants on a list of definitions and descriptions of regenerative dynamics and systems.

Origins and designers: see the list of quotes below for their sources. Bill Sharpe and Sam Buckton designed the tool, with the help of members of FixOurFood's Regenerative Futures Workshop Group.

Facilitation difficulty: Beginner



Purpose and usefulness: regenerative systems are hard to define in a blanket way and are highly context-specific. At the same time, people often want a clear definition of what a regenerative system is. This exercise reconciles these issues by providing a set of different definitions of regenerative, drawing on a diversity of definitions as a strength for developing a richer understanding of what it means to be regenerative, and helping people to appreciate that there are multiple ways of interpreting what a regenerative system is, rather than treat it as a single well-defined thing. This is a useful first step for building a shared understanding and language around regenerative systems. The descriptions particularly emphasise the link between regenerative systems and the properties of life, resonating with other tools such as Principles of Life and Unique Gifts of Life.

When to use: use early on in a session, particularly for people with little to no prior understanding of regenerative systems. It works well as a warm-up exercise.

Tool 4: Regenerative Descriptions

Time required: at least 20 minutes for a good conversation; you can spend longer discussing the definitions if desired (e.g. 10 minutes in breakout groups followed by 15-20 minutes plenary discussion).

Group size: around 10-20 people would be ideal.

Group stage: Beginner

Useful prior knowledge: Future Stewards' Regenerative Video

Materials required: a presented slide showing the definitions.

Facilitation steps:

1. Before the exercise, prepare a slide with around eight of the descriptions from the longlist below that you think will resonate the most with your audience, perhaps including a balance of simpler descriptions as well as more detailed ones. Present them as a numbered list, with the author's name in brackets after the quote.

   All flourishing is mutual. (Robin Wall Kimmerer[33])

   I am because we are. (Black African *Ubuntu* philosophy)

   Look after country - look after kin. (Australian Aboriginal Custodial Ethic, as retold by Mary Graham[34])

   The Land is the Law. (Chris Black[35]; Australian Aboriginal Custodial Ethic, as retold by Mary Graham[34])

   Life creates conditions conducive to life. (Janine Benyus[15])

   Life is a regenerative community. (Daniel Wahl[30])

   Life is a process of co-evolving mutualism. (Stuart Kauffman[36])

   Weaving humanity back into the web of life. (Daniel Wahl & Kincentric Leadership)

   The goal of regenerative design is for humans and the living world to survive, thrive and co-evolve. (Oliver Broadbent & James Norman[37])

   Regeneration is less about saving the world and more about understanding our role in it again – our relatedness to life. (Daniel Wahl[38])

   Regeneration is a disposition of the heart, an attitude towards the community of life that asks: What serves life – in me, around me, through me? (Daniel Wahl[38])

   A living pattern is regenerative if it creates positive externalities over its lifecycle in the living patterns and systems with which it interacts and on which it depends. (Bill Sharpe)

Tool 4: Regenerative Descriptions

Facilitator notes

Facilitation steps (continued):

Regenerative dynamics occur when desired outcomes, such as social well-being or soil health, regenerate in a system not only once, but over and over. (Adapted from Joern Fischer et al.[32])

Regenerative social-ecological systems maintain positive reinforcing cycles of health within and beyond themselves across multiple scales, including between humans and wider nature. (Adapted from Sam Buckton et al.[16])

The word 'regenerative' means creating the conditions conducive for life to continuously renew itself, to transcend into new forms, and to flourish amid ever-changing life-conditions. (Giles Hutchins & Laura Storm[5])

Having a regenerative mindset means seeing the world as a living system, built around reciprocal and co-evolutionary relationships and wholes, where humans, other living beings and ecosystems rely on one another for health. (Josie Warden, RSA[39])

2. Display the slide to the audience.
3. Introduce the exercise by saying something like:

   To start thinking about what it means to be regenerative, we're going to look at some definitions of regenerative dynamics systems that different people have come up with. Here's an example set of definitions to start us off.

4. Ask participants to take a minute or two to individually look through the list of definitions and identify which of the definitions resonates the most with them, and why.
5. Open up a plenary discussion, asking participants to share with the rest of the group which of the definitions resonated most with them, and why. Try to give everyone a chance to speak.
6. A critical discussion often emerges naturally at this stage, with participants commenting on each others' choices. If this happens, you could let the discussion run its course, whilst making sure that the discussion isn't dominated by a small number of voices.

Tool 4: Regenerative Descriptions

Facilitator notes 

Facilitation tips:

- It helps to number each of the definitions so that participants can easily refer back to them.
- It doesn't matter if some people don't like some of the descriptions – that's actually the point, as it encourages people to engage with the meaning of regenerative.

Adapting to online: the same facilitation steps can be applied in online settings.

Other adaptations:

- After step 2, you could alternatively get people to stand up, find someone they don't already know, and share their thoughts on the definitions. This step could also be done in breakouts of groups of three to five people.
- This exercise could be turned into a longer and more in-depth discussion if desired.
- The set of descriptions used can be chopped and changed depending on what is likely to resonate with a given audience – e.g. using definitions based more around regenerative design might be more appropriate for engineers, architects and designers. Don't feel constrained by our longlist – feel free to find your own descriptions too!

Tool 4: Regenerative Descriptions

Facilitator notes 

Take it further:

- Further discuss the semantics of regeneration and regenerative practice with the Regenerative Spiral, the Window of Vitality, Regen-Degen Quadrants, or the Regenerative Lens.
- Deepen understanding of what it means and feels to be regenerative with Mutual Qualities of Life, Principles of Life, Unique Gifts of Life, or Recognising Practices of Care.
- You could ask your group to search the Regeneration Directory to identify how organisations and initiatives are defining regenerative practice in different ways.
- Move into exploration of Horizon 3 in a Three Horizons process with your new appreciation of what being regenerative means.
- Move into place-based regenerative practice (see Tools for bioregioning) with Recognising Practices of Care, the Regeneration Directory, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala.

Tool 5: Come To Your Senses

A tool for bringing your whole self into regenerative practice

A short guided meditation or recited poem at the beginning of a session can help people connect with their bodies as well as their minds, and create a more embodied experience of regeneration that moves beyond purely conceptual ideas.

framing

visual aid (optional)

audio aid (optional - see Appendix 2)

exercise (optional)

contemplation

What is it? A brief guided meditation or recitation of an appropriately chosen poem that encourages participants to reconnect with their wider suite of senses.

Facilitation difficulty: Beginner to Intermediate – depending on what meditation or poem is used; most people can read a poem without difficulty, although effectively taking participants through a guided meditation might require facilitators to have built up experience and confidence.



Purpose and usefulness: Lao Tsu's classic Chinese text *Tao Te Ching*[40], first written in the 4th century BCE and the foundation of Taoism, famously starts with the lines: 'The Tao that can be told is not the eternal Tao. The name that can be named is not the eternal name.' This highlights how concepts like systems and complexity can only go so far in communicating a participatory, relational reality and lived experience of regeneration. Regenerative practice requires us to bring our 'full selves' into play – not only our heads and intellect, but also our wider suite of senses, intuition, creativity, imagination, and desires. This is important if we are to begin to sense the natural regenerative processes of life and living, and then bring this sense into discussions and our interactions with others.

Tool 5: Come To Your Senses

Time required: flexible and depending on the meditation or poem used. It might take 2 minutes at a minimum; a poem plus an active listening exercise might take 10 minutes; Ioan Fazey's meditation (Appendix 2) plus an active listening exercise might take up to 20 minutes.

Group size: any.

Group stage: Beginner

Useful prior knowledge: none.

Materials required: for a meditation, a copy of the meditation script if it is not memorised or crafted spontaneously in the moment; if using Heather Mackay Young's meditation (Appendix 2), facilities to play an audio file and project the sound through speakers are needed. For a recited poem, read from a copy of the poem if the poem is not memorised.

Origins and designers: see Appendix 2 for sources of example meditations and poems. The poem-based version of the tool draws on the practice of Daniel Wahl, who has been using poetry in workshops and online learning journeys with positive results for the last two decades.

Purpose and usefulness (continued): in the right setting and context, a guided meditation or recitation of a poem can be a powerful means of enabling this more embodied experience of regeneration, moving beyond purely conceptual approximations, and communicating beyond words and intellect. The Irish poet David Whyte suggests that while prose is a way of talking about experience, poetry is the experience itself. As well as helping to bring people back into their bodies and felt experience, and create a change of pace and tone in a facilitated group process, this tool has the power to bring in important elements of regenerative cultures, including reverence for life, sacred dimensions, insights from the world's wisdom traditions, and Indigenous ways of seeing.

When to use: at or near the beginning of a gathering when the group needs to find their way into understanding regenerative concepts and outlook, and to ground participants and help them 'out of their heads' and become more connected with feelings and deeper meaning. The tool can be a useful prelude to Regenerative Descriptions. You could also apply it after a break, like when people have come back into a room after having lunch. It is likely to be particularly useful for groups who are used to relying on their heads, intellect and rational thought rather than their wider bodily senses.

Bear in mind that the meditations provided here are brief and simple, and very different from what more extensive, deeper forms of meditation might achieve.

Facilitation steps:

If you decide on a guided meditation, then apply the following steps:

1. Introduce the meditation by saying something like:

   In this workshop we'd like you all to bring your whole selves into the room, including your heart and hands as well as your head, your intuition and wider senses as well as your intellect. So to start we're going to set the tone with a brief meditation. Make sure you're sitting comfortably, and feel free to close your eyes if you wish.

2. Take participants through the meditation, or play the audio recording if using Heather Mackay Young's meditation (see Appendix 2).

3. Invite people to open their eyes and come back to the room when they're ready.

Tool 5: Come To Your Senses

Facilitator notes

Facilitation steps (continued):

4. You could close the exercise by saying something like:

   We're going to try to bring that kind of multisensory awareness with us in today's workshop.

5. If time permits, a quick debrief could deepen participants' experience and learning following the meditation. Invite people to find one other person and sit down facing each other in pairs in silence at first. Introduce the idea of 'active listening from the heart' as opposed to a dialogue or conversation. First one person speaks for 2 minutes about anything that came up for them during the meditation and the other person simply listens, then they swap (following the facilitator's signal) and the other person shares their experience of the meditation for another 2 minutes (rather than responding to what the first person said). Reconvene people in plenary and ask for a few people to share their experience.

If you decide to recite a poem, then apply the following steps:

1. Choose a brief poem in advance appropriate to your context, which you will read out to your group. It is useful to build up your own collection of powerful poems that resonate with you, and speak to participation in complexity, life's regenerative impulse, a sense of belonging to place, or deeper connection and meaning through acknowledging the dimension of the sacred. See Appendix 2 for possible examples.

2. There are many ways to set the scene for reading a poem. One easy way is simply to invite participants to close their eyes, guide them in taking a series of deep breath cycles (making the outbreath twice as long as the inbreath will calm people down even more), and then read the poem in the moment of silence this creates. You could also ask people to stand or sit in a circle, before inviting them to close their eyes – this creates meaningful eye contact when people open their eyes after the recital.

3. Read out the poem.

4. One approach is to simply let the experience of the poem stand for itself, and omit any kind of debrief. Alternatively, you could elicit a few reflections from the group with a trigger question like: *Would anyone like to share some reflections on what that poem brought up in you?*

Tool 5: Come To Your Senses

Facilitator notes 

Facilitation steps (continued):

5. If time permits, it can be powerful to invite participants to form pairs for an 'active listening' exercise after the poem has been read. Ask participants to find someone to sit or stand across from. Remind them that 'active listening' is not a conversation and that each one of them will have 2 minutes to simply speak to what the poem has moved in them or made them feel or think. The person with the longer hair gets to speak first, and after 2 minutes give a sign for the pair to swap over. You could then invite some voices to share in the wider group.

Facilitation tips:

- The main purpose of this tool is to stimulate people's wider senses and feelings beyond their intellect, so bear this in mind when choosing a meditation or poem.
- Whether you choose a meditation or poem might depend on your confidence as a facilitator as well as what feels appropriate for your particular group. Reading a poem might feel less daunting for some facilitators than taking participants through a guided meditation.
- You can use the three example meditations provided in Appendix 2 or come up with your own. The basic idea is to bring into people's awareness their bodily senses, which might include what they feel inside them, what emotions they are feeling, feeling their weight on their seat, feeling their feet on the ground, their temperature, how they are breathing, what they can hear, sensing all the other people present in the room, and so on. In general you want to encourage a kind of gentle noticing – not necessarily changing anything, but just paying attention to it.
- It is generally more powerful if you can speak your meditation from memory or craft it spontaneously in the moment, but don't worry if you have to read from a script. There is also no obligation to memorise a poem.
- To help a poem unfold the full experience, it is important to take the time to invite people to return to their breath, their bodies and the way their feet touch the ground, before reading the poem; try also not to read the poem too fast.

Tool 5: Come To Your Senses

Facilitator notes

Adapting to online: the same facilitation steps can be applied in online settings (use breakout rooms for the active listening exercise).

Other adaptations:

- Ideas about our 'multiple internal intelligences' (our rational, emotional, gut, and subconscious brains) are provided by Oliver Broadbent in *The Pattern Book for Regenerative Design*[41]; you may find these helpful for structuring a meditation. Alternatively you might base your meditation on recent work extending Aristotle's model of five senses[42]. Or just go with your instincts!
- If appropriate, after reading a poem you could hand out a copy of the poem and give each participant time to find a place in the room or outside to spend 10 minutes drawing or sketching. Engaging non-verbal expression can help to anchor a more embodied sense beyond words of our participation in relational reality.

Take it further:

- For further tools to continue a more reflective, meditative, expansive and experiential approach to understanding regenerative practice, see Structures and Flows, Mutual Qualities of Life, Principles of Life, Unique Gifts of Life, or the Wheel of Wisdom.
- Explore the meaning of regeneration further with the Regenerative Spiral, Regenerative Descriptions, or the Window of Vitality.
- Deepen understanding of what it means to weave ourselves back into the web of life with the Principles of Life or Unique Gifts of Life.
- With your newly attuned sensory awareness, move into Three Horizons practice, or move into place-based regenerative practice (see Tools for bioregioning) with Recognising Practices of Care, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala.

Tool 6: Structures and Flows

A tool for introducing people to dynamic systems thinking

This is a simple way to introduce people to a holistic approach to systems thinking. The tool helps participants see the world as dynamic patterns that evolve over time, and also gets people outside.



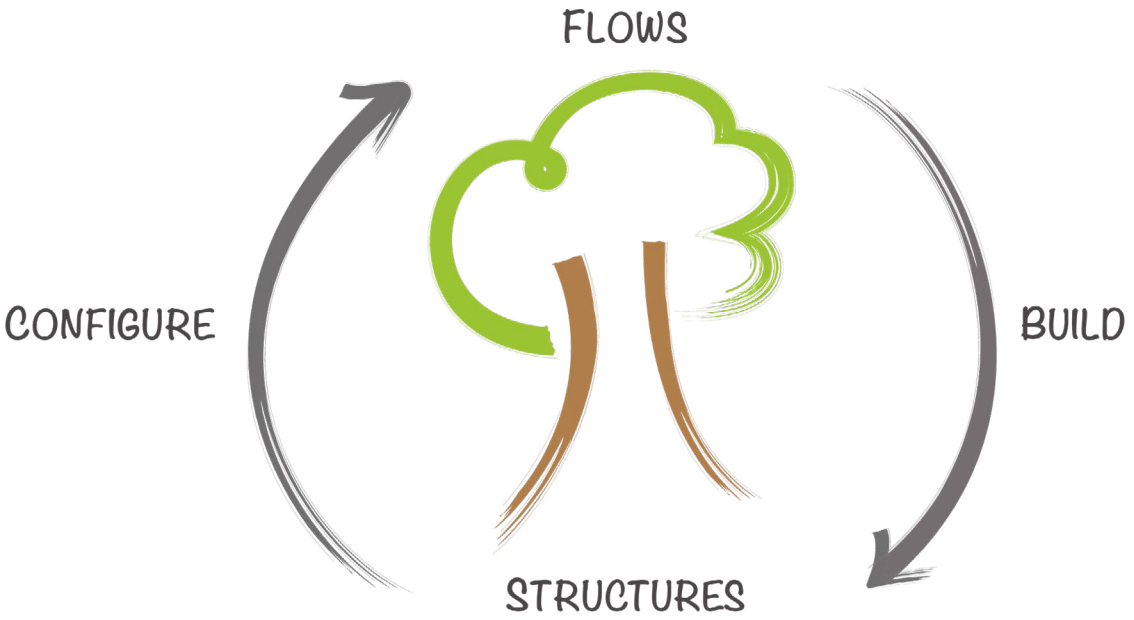
What is it? A reflective exercise for individuals or pairs (ideally outdoors).

Facilitation difficulty: Intermediate

The facilitator needs to be secure in their own approach to systems thinking to introduce this in the context of the training or workshop, and would typically use it to support Three Horizons or other systems thinking methods.

Time required: 45 minutes to 1 hour.

Group size: around 5-30 people.



Purpose and usefulness: helps people develop a more dynamic, systemic, and holistic view of the world as ongoing patterns of activity that rise and fall, providing a foundational systems awareness. Without this perspective, people are likely to struggle to conceptualise regenerative dynamics, and there is a risk of more reductionist perspectives that fail to appreciate interrelationships and the bigger picture.

When to use: typically in a teaching session where there is time for personal reflection and learning, rather than a time-pressured workshop. Best used when people can go outside into a rich built or natural environment that offers a long temporal perspective.

The tool has been used previously for training workshops as a preliminary exercise before Three Horizons, to illustrate the horizons as patterns of activity that are maintained by participation in them, and to develop a sensitivity to the underlying systemic structures that shape surface events. It is also useful before introducing ideas of regeneration, because it gets people thinking about regeneration in more dynamic terms.

Tool 6: Structures and Flows

Group stage: Beginner

Useful prior knowledge: none.

Materials required: flipchart paper or a whiteboard on which to draw the Structures and Flows model, although an illustrative presented slide may also be useful.

Origins and designers: designed by Bill Sharpe, drawing on ideas from dynamic systems theory and related systems concepts, including the work of Stuart Kauffman[36], Ilya Prigogine and Isabelle Stengers[43].

Facilitation steps:

1. Introduce the exercise as a way of seeing patterns, and explain the Structures and Flows diagram (see above) as you sketch it:

   One way to develop an understanding of patterns is by bringing both structures and flows into view. Structures are the relatively stable patterns and arrangements that configure flows – we see these structures easily. Flows are the processes that sustain those structures and change them over time – these flows are often less easy to see.

   For example, look at a tree. What we see immediately is the structure of trunk, branches, and leaves. What we don't see directly are the flows that sustain it: the water and nutrients flowing in through the roots, the energy flowing from the sun and captured by the leaves. For a seed to start growing it puts out a tiny root and its first leaves that get the flows going, which build more structure of roots, branches and leaves, which strengthen the flows, and so on.

   The weather, trees, and mountains all reveal the interplay of structure and flow at very different timescales. Similarly, our patterns of shared life are all changing at short and long timescales, from fashions to the rise and fall of civilisations. I [Bill Sharpe] live on the North Pembrokeshire coast of west Wales, known for its peace and beauty, but in its time, much of the coast was busy with industry now only visible as ruins. On the hills nearby are prehistoric sites where people lived and found the bluestones that were used at Stonehenge.

   As we look at structures we tend to narrow our view of the world, seeing things separately. Attending to flows allows us to work outwards, further and further, taking a holistic view, seeing the relationships from which all things arise. We call the combination of these two modes of perception 'holism with focus'.

   Here is a way to practice holism with focus.

2. If you are applying this exercise in the context of a Three Horizons process, add to your introduction by saying something like:

   To understand the first horizon we need to tune our perceptions into the flows that are sustaining it and the timescales over which they are operating. The third horizon will emerge from new processes that gradually grow and build an expanding range of social patterns to maintain them. Developing a holistic understanding of a situation requires us to suspend our habitual focused way of seeing the world and let our deeper pattern perception get to work.

Tool 6: Structures and Flows

Facilitator notes

Facilitation steps (continued):

3. Hand out the exercise instructions below on sheets of paper and send people out into the local environment with a pen and paper for 20 minutes.

   Take a pen and notebook and go outside and find somewhere you can look at a building that has been around for a long time, and seen a lot of change.

   Sketch your building in the middle of a page, leaving space around it for further sketching.

   Cast your mind back to the time the building was built and think about all the activities and flows of people and resources that gave rise to it, and for which it was used. How did the people make a living, what resources were they using, and where did they come from? Who did they have relationships with, near and far, and what patterns of life connected them? When did that pattern come into being, and why?

   Now scan forward in time to the present day, becoming aware of the way patterns have changed, and how the building has changed with them.

   Bring to mind Winston Churchill's saying: 'We shape our buildings; thereafter they shape us.' Notice how there was the interplay over time between the flows building and adapting the structure, and the structure shaping the flows.

   Keep zooming out in space and time to see the wider patterns at play and how your chosen focus responded to them and maybe influenced them.

   *Sketch as many patterns as you can around your bu*ilding, and tell the story from the building's point of view.

4. Reconvene in plenary and invite people to share what they've done, and use it to support the understanding of patterns rising and falling over time relevant to the teaching or work in hand.

Facilitation tips: if your group will struggle with solo work, participants can do this exercise in pairs.

Tool 6: Structures and Flows

Facilitator notes

Adapting to online: the same facilitation steps can be applied in online settings, assuming that participants have an appropriate place where they can go to create their sketches.

Other adaptations: the version here focuses on social patterns (a building). You can adapt it to pay more attention to the natural world (e.g. a tree, river, or mountain) and which of its structures and flows have been regenerative or degenerative over time.

Take it further:

- For further tools to continue a more reflective, meditative, expansive and experiential approach to understanding regenerative practice, see Mutual Qualities of Life, Principles of Life, Unique Gifts of Life, Compass Directions for Bioregional Mapping, or the Wheel of Wisdom.
- Deepen understanding of regenerative dynamics with the Regenerative Spiral, Regenerative Descriptions, Mutual Qualities of Life, the Window of Vitality, Principles of Life, Unique Gifts of Life, Recognising Practices of Care, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, the World Mandala, or the Wheel of Wisdom. The Window of Vitality provides a helpful illustration of how certain kinds of structure configure more regenerative flows of resources.
- To explore how you might situate perspectives like Structures and Flows into your wider evaluation practice, see Twelve Principles for Transformation-focused Evaluation.
- Move into exploration of Horizon 1 in a Three Horizons process with your new appreciation of the underlying dynamics of current patterns and how they have arisen.
- See Ingrid Burkett's tool, Deepening Three Horizons, from Joseph Rowntree Foundation's Collective Imagination Practices Toolkit, for another approach to deepen exploration of Three Horizons' temporal dimensions.
- Take your new understanding of structures and flows into place-based regenerative practice (see Tools for bioregioning) with Recognising Practices of Care, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala.

Tool 7: Mutual Qualities of Life

A tool for experiencing the feeling of participation in a regenerative system

This is a simple meditation or thought exercise that you can use to give people a sense of what it *feels* like to participate in a regenerative system. Most people can think of an experience from their life that has the quality of reciprocity and flow that the exercise describes.



What is it? A brief, simple guided meditation or thought exercise.

Facilitation difficulty: Beginner

Time required: 5-15 minutes, depending on whether there is some teaching before the exercise and/or reflection afterwards.

Group size: any.

Group stage: Beginner



Purpose and usefulness: a key challenge of working with the idea of regenerative systems is that while we might *intellectually* understand 'regeneration', we may not really feel it. Similarly, we could intellectually know how to ride a bicycle, but that doesn't necessarily mean that we know how to ride it in practice. So working with the idea of regeneration requires having some initial experience of what it feels like.

Many people in westernised cultures are culturally conditioned to walk in the world as if they are separate from it, with a strong sense of self and individualism. For a deeper understanding of regeneration, an important aspect that people then need is to feel how they are part of a wider system and how each of us embodies that whole. As many teachings outside of Western philosophy tell us, being regenerative – and being able to design and develop regenerative systems – requires a sense of how we *are nature*, not separate from it.

This tool, based on people's memory of past experiences, provides a simple entry point into a felt sense of participation in a wider regenerative system. This is particularly with respect to the kinds of mutualistic relationships that characterise regenerative systems, as summarised by the principle of *Ubuntu* – 'I am because we are' – from Black African philosophy.

Tool 7: Mutual Qualities of Life

Useful prior knowledge: none.

Materials required: a presented slide or flipchart/whiteboard and pen for drawing the diagram from scratch (optional).

Origins and designers: designed by Bill Sharpe, based on Stuart Kauffman's characterisation of life as 'a process of co-evolving mutualism'[36].

When to use: use for framing near the beginning of a session when the group needs to find their way into understanding regenerative concepts in a more embodied way. You could then deepen the experience with the Principles of Life or Unique Gifts of Life.

Facilitation steps:

1. Introduce this mode of awareness of patterns and its relevance to regenerative practice:

   Many of the most important qualities of our lives have to be realised through shared patterns of life: for example, you can't have a human language on your own – it has to be shared by a community. Similarly, justice, democracy, knowledge, freedom, love, musicality, are all qualities of life that belong to us in our social lives – if they have any meaning at all for an individual, that meaning is made qualitatively different by its realisation with others.

   These mutual qualities of life are carried forward by everyone's participation in them, always evolving like life itself. We grow into mutual qualities of life by being part of the community that practises them. They have to be developed and transmitted one person at a time. In our participation in these patterns we are constantly balancing 'being for ourselves' with 'being as part of the whole'. We are shaped by the pattern of the past, and contribute to the pattern of the future, in a constant to-and-fro with all other players. This is the heart of being regenerative in relationship with others.

2. Invite people to sit comfortably, and to close their eyes if they wish.

3. Lead the meditation with the following script, adapting to your own understanding and intent of the session it is part of. Two possible options are provided.

   Think of an area of your life where you enjoy doing something with others that you're all good at and do just for the pleasure of doing it – it might be music, dancing, sport, cooking, learning a language, discussing books, going for a country walk…

   Bring to mind how you feel most fully yourself as you take part, and see others as being most fully themselves – the feeling of being in flow together.

Tool 7: Mutual Qualities of Life

Facilitator notes

Facilitation steps (continued):

*Reflect on how each person contributes to the quality of everyone else's participation, and the lack you feel when someone important isn't there. Reflect too on what **you** bring, and how others would feel the lack if **you** were not there.*

Notice how this can be thought of as a community of practice in whatever is being shared, where each person who joins, grows in the mutual quality that it embodies, and carries it forward, making their distinctive contribution by being who they are.

Option 1

Now bring to mind a place in nature that you love, and imagine yourself there with life all around you…

Try to drop into it that sense of being in flow as part of a community of life, each member in relationship to the others, being itself and being part of the whole at the same time.

You can use this way of looking throughout the day, seeing how life flows together in relationship.

Option 2

Now bring to mind an area of current concern, personal or professional. It might be a challenge you're currently facing.

Try to drop into it that feeling of being in flow with others, and just let it spread in your mind, and see what it might reveal in the situation's potential for renewing shared life and growth.

You can use this way of looking throughout the day, seeing how life flows together in relationship.

4. Invite sharing in plenary of what the exercise conjured up for participants, and consolidate the shift to a relational understanding of regenerative qualities of life using the diagram above that you can have on a slide or draw from scratch.

Facilitation tips: make sure you give a pause after each paragraph of the script to give people time to imagine.

Tool 7: Mutual Qualities of Life

Facilitator notes

Adapting to online: the same facilitation steps can be applied in online settings.

Other adaptations: after the meditation you could use the same kind of debriefing exercise that is suggested for Come To Your Senses.

Take it further:

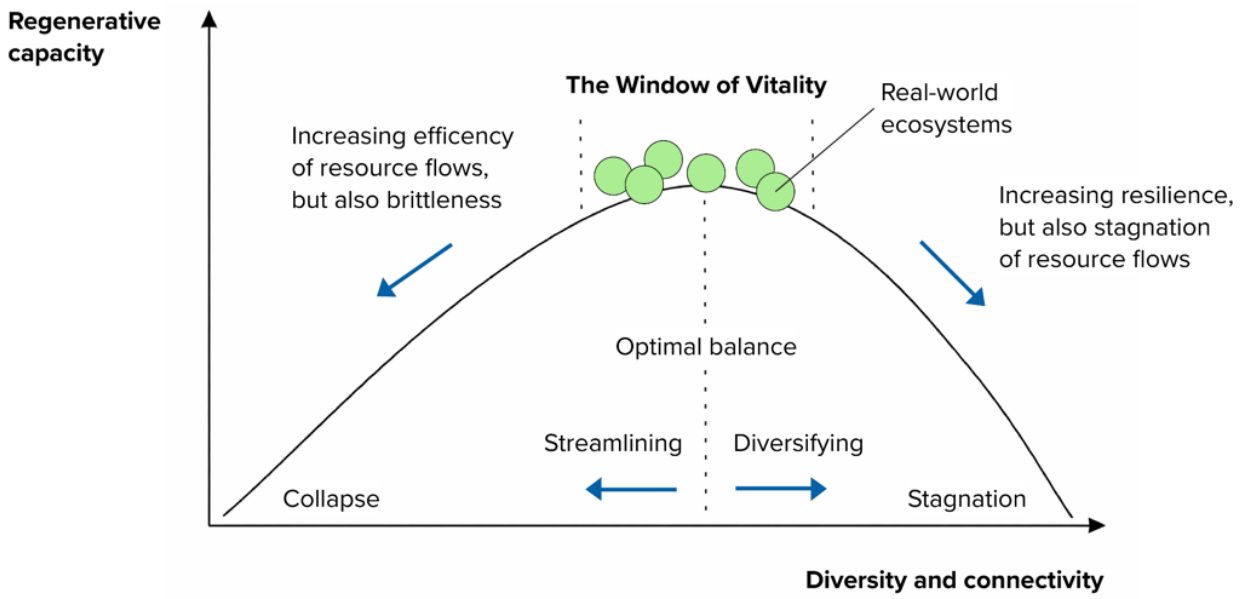
- Deepen the experience of participation in regenerative systems with Unique Gifts of Life, Recognising Practices of Care, or the Wheel of Wisdom.
- Deepen the idea of cross-scale reciprocity with the Unique Gifts of Life, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, Regenerative Dynamics with the 4 Returns Framework, or the World Mandala.
- Bring your new understanding of mutualistic participation in regenerative systems into place-based regenerative practice (see Tools for bioregioning) with Recognising Practices of Care, Compass Directions for Bioregional Mapping, the Regeneration Directory, the Bioregional Quiz, Regenerative Dynamics with the 4 Returns Framework, or the World Mandala.
- You could use this tool to get people into an appropriate frame of mind for exploration of Horizon 3 in a Three Horizons process, Regenerative Actor Mapping, Requests and Offers, or Ambition Loops.
- See the Window of Vitality and Dilemma Navigation for more about the dilemmas of life and how they can be resolved.

Tool 8: The Window of Vitality

A tool for conceptualising regeneration as the balance between efficiency and resilience

Healthy regenerative systems in nature tend to show an optimal balance of efficiency and streamlining versus diversity and resilience: the so-called Window of Vitality. We can learn from this framework in how we design regenerative human systems.





What is it? A brief explanation of a diagram illustrating the Window of Vitality concept, with a simple exercise for familiarisation.

Facilitation difficulty: Beginner

Time required: 30 minutes.

Group size: would work with typical workshop group sizes of around 15-30 people, although it could also be used as an individual reflective tool.

Purpose and usefulness: healthy, regenerative living systems under the influence of natural selection – such as natural ecosystems – tend to display a balance between efficiency (how easily resources can flow through the system without wastage) and resilience (how easily the system can 'bounce back' following disruption), which often trade off against each other.

Life resolves this dilemma through its structure, such as the size, specialisation and connectivity of organisms in an ecosystem, resulting in flows (of energy, carbon, nitrogen, etc.) being maximised while remaining resilient over time. This balance is referred to as the Window of Vitality, and is critical for enabling regenerative dynamics because all regenerative systems rely on sustaining some form of resource supply and waste disposal – such as a plant taking in carbon dioxide and releasing oxygen. The Window of Vitality is typically associated with fractal patterns observed across nature – in leaf veins, your circulatory system, river deltas, lightning bolts, network relationships in ecosystems, and many other examples – that have a balance of small, medium, and large elements to optimise circulation and diffusion of resources across scales and through time[44,45].

Tool 8: The Window of Vitality

Group stage: Intermediate

Some basic knowledge of complexity, system dynamics and regenerative dynamics would significantly enhance the effectiveness of this tool.

Useful prior knowledge: Future Stewards' Regenerative Video; Regenerative Descriptions; Structures and Flows

Materials required: projector and a presented slide showing the diagram (you could alternatively draw the diagram from scratch, although this will take considerably longer as the diagram has many different elements); paper print-outs of the diagram; pens.

Origins and designers: based on the work of Robert Ulanowicz and colleagues[46] and the diagram of Brian Fath and colleagues[44] in Ecological Network Analysis and Energy Network Science, with adaptations by Sam Buckton, who also designed the exercise described in this guide.

Purpose and usefulness (continued): human activities often disrupt this balance, however. For instance, we often prioritise efficiency and streamlining at the expense of resilience. This can boost flows in the short term (e.g. flows of money), but increases their risk of collapse in the long term. It then becomes important to think about our own activity in terms of the Window of Vitality if we want to sustain regenerative capacity over time. This framework is a useful tool for evaluating human activities and designing human systems (e.g. economies) in ways that more closely mimic the structures and flows of regenerative living systems.

When to use: present early on in a workshop or other gathering, perhaps after Structures and Flows.

Facilitation steps:

1. Present the diagram and introduce it by saying something like:

   A helpful way of thinking about the conditions required for regenerative dynamics is the Window of Vitality framework of Robert Ulanowicz, Brian Fath and colleagues.

2. First explain the Window of Vitality. You could say:

   Healthy, regenerative ecosystems under the influence of natural selection tend to show a balance between efficiency – or how easily resources can flow through the system without wastage – and resilience – or how easily the system can 'bounce back' following disruption. Efficiency and resilience often trade off against each other.

   Ecosystems achieve a balance between efficiency and resilience through their structure, such as the size, specialisation and connectivity of organisms, resulting in flows of energy, carbon, nitrogen and so on being maximised while remaining resilient. This balance is referred to as the Window of Vitality, and is at the heart of what enables regenerative dynamics. This is because all regenerative systems rely on sustaining some form of resource supply and waste disposal – such as a plant taking in carbon dioxide and releasing oxygen.

   The Window of Vitality is associated with fractal patterns observed across nature – in leaf veins, your circulatory system, river deltas, lightning bolts, network relationships in ecosystems, and many other examples – that have a balance of small, medium, and large elements to optimise circulation and diffusion of resources across scales and over time.

Facilitator notes

Facilitation steps (continued):

Human activity has often disrupted this balance, however, including by eroding wild biomass (especially of the largest animals and plants) and biodiversity, dramatically reducing both the efficiency and resilience of resource flows in ecosystems and weakening their regenerative potential. Moreover, in human societies we often see an imbalance between efficiency and resilience that either leads to collapse or stagnation, as I'll now explain.

3. Next, explain the left side of the curve. You could say:

   The diagram shows that when you increase efficiency and streamlining, you can increase flows of resources in the short-term but you can also increase the system's brittleness and the likelihood of collapse.

   Humans are adept at doing this. Examples include the financial systems dominated by a handful of large organisations whose brittleness contributed to the 2008/2009 financial crisis, or tendencies towards crop monocultures in agriculture that make harvests more efficient but often have lower resilience in the face of pests and diseases or other shocks.

4. Next, explain the 'Towards stagnation' part of the diagram. You could say:

   On the other hand, you can also go too far in increasing small-scale diversity and connectivity. Although this might increase a system's resilience, you can end up with flows of resources actually stagnating.

   An example might be a landscape where there are lots of independent local energy projects, but a lack of central coordination means that surplus energy in one area doesn't flow to where it's needed, or some local energy grids might become overloaded. On the plus side, though, if any individual energy project failed, it wouldn't affect the rest of the system so much, so it's more resilient to disruption.

   Another classic example is in urban planning and road networks, where having lots of small interconnected roads increases the risk of traffic congestion because there are too many points where drivers have to make decisions about which direction to go.

Tool 8: The Window of Vitality

Facilitator notes

Facilitation steps (continued):

You might also find this problem of stagnation in your own digital connectivity. Do you ever feel as though you've got so many different communication channels vying for your attention – email, social media, text, and so on – that you struggle to get important things done?

5. Next, explain how human systems also need to reach the Window of Vitality. You could say:

   The Window of Vitality provides inspiration for how we could design human societies to increase their regenerative potential. A balance between efficiency and resilience of human resource flows, like food, money, and ideas, is key to meeting human needs and enabling ongoing cultural and intellectual evolution. In economies, for example, a balance between large efficient elements like multinationals and smaller, less efficient elements like local contractors is needed to distribute resources in inclusive but resilient ways.

6. Wrap up your explanation by saying something like:

   So overall, the Window of Vitality framework emphasises how regenerative systems require a balance between efficiency and resilience.

7. Divide participants into breakout groups of three to four people. Give each group a print-out of the diagram.

8. Ask the groups to spend 10-15 minutes identifying and discussing examples from their own experience that map onto different parts of the graph. Participants can write/draw on the print-outs if they wish.

9. Ask for some reflections from different groups in plenary.

Tool 8: The Window of Vitality

Facilitator notes

Facilitation tips:

- Participants can draw on examples of the efficiency-resilience dilemma from any context – they could be personal or things that participants have noticed more widely. They might be human-dominated systems such as businesses, or wider systems that human activity has altered, such as marine ecosystems. A wide range of things could be considered as flows of resources – energy, food, water, nutrients, materials, waste, knowledge, ideas, money…
- The distinction between 'resilience' and 'regeneration'[47] might confuse participants. While resilience emphasises the ability of a system to bounce back after a shock, regeneration emphasises how a system can 'bounce beyond' and continually, creatively adapt and evolve, and maintain positive reinforcing cycles of health within and beyond itself such that 'life creates conditions conducive to life'[15]. A system requires aspects of both resilience and efficiency in order to display regenerative dynamics.

Adapting to online: the same facilitation steps can be applied in online settings, using breakout rooms for the exercise.

Other adaptations:

- You could also ask participants how they would design a system relevant to their context (e.g. a local economy) in a way that mimics the Window of Vitality found in natural ecosystems.
- Participants might identify examples that contradict the Window of Vitality framework. These could provide interesting points of discussion.
- An alternative version of the exercise could use an approach similar to Regen-Degen Quadrants, where you prepare a list of examples that participants have to place on the Window of Vitality graph.
- You could alternatively talk about the x-axis of the graph in terms of 'redundancy': the extent to which there are multiple, alternative pathways or components that can perform similar functions within a network. In general, as the diversity of components and density of small-scale connectivity increases, redundancy increases. Higher redundancy means that more parts of the network are redundant: that is, if they fail, then there are alternative options available that can maintain functioning.

Tool 8: The Window of Vitality

Facilitator notes

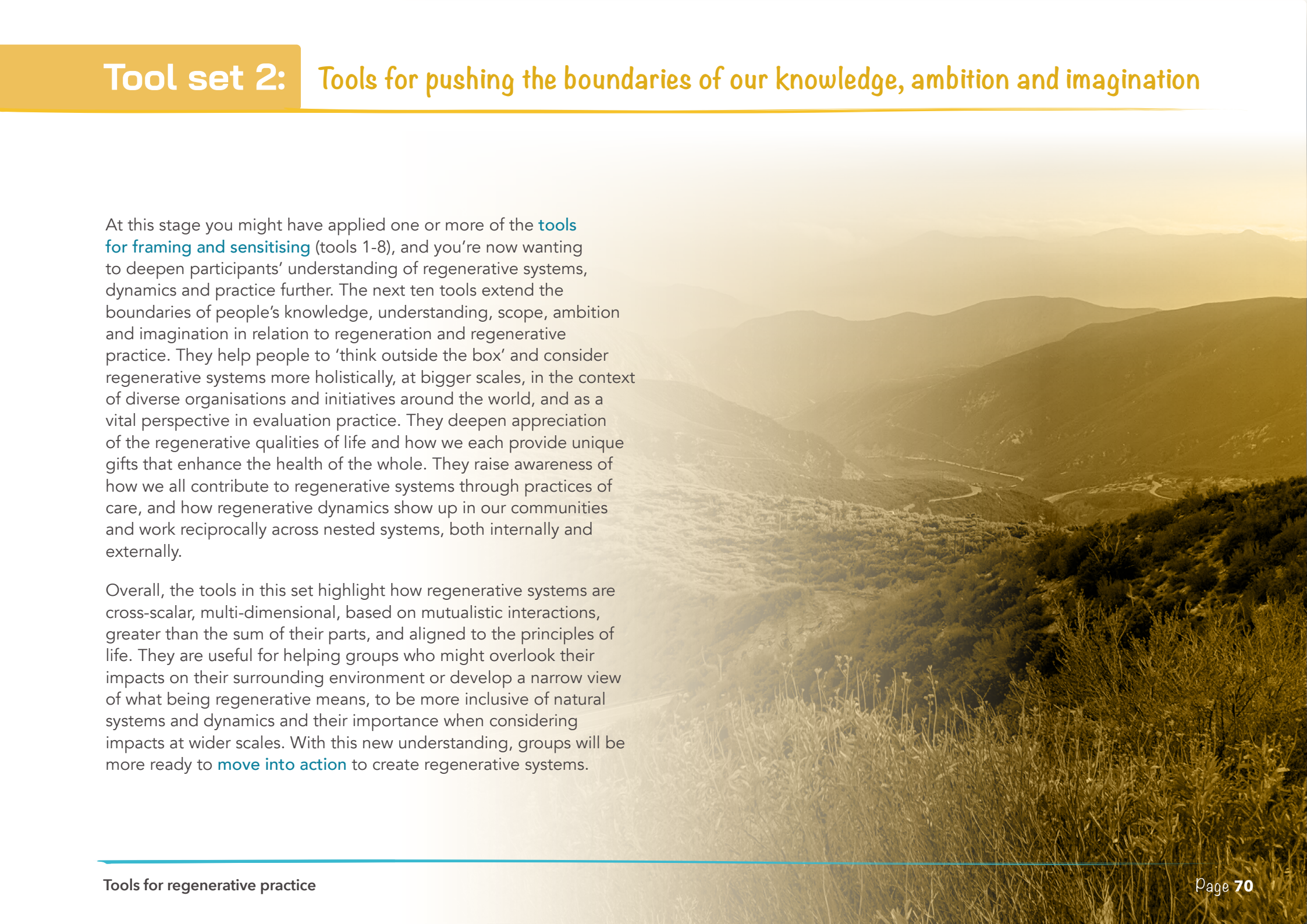
Take it further:

- Deepen understanding of regenerative dynamics with the Regenerative Spiral, Mutual Qualities of Life, Principles of Life, Unique Gifts of Life, Recognising Practices of Care, Regen-Degen Quadrants, the Regenerative Lens, the Regeneration Directory, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, or the World Mandala.
- Further discuss the semantics of regeneration and regenerative practice with the Regenerative Spiral, Regenerative Descriptions, Regen-Degen Quadrants, and the Regenerative Lens.
- Move into exploration of Horizon 3 or Horizon 2 in a Three Horizons process with your new appreciation of regenerative dynamics.
- Move into place-based regenerative practice (see Tools for bioregioning) with Recognising Practices of Care, the Regeneration Directory, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala, and explore what the Window of Vitality might look like in your region.
- To explore how you might situate tools like the Window of Vitality into your wider evaluation practice, see Twelve Principles for Transformation-focused Evaluation. Technical guidance on evaluating the Window of Vitality (e.g. in human economies) is provided by Brian Fath and colleagues[44].
- See Mutual Qualities of Life and Dilemma Navigation for more about creatively resolving dilemmas. As described by Robert Ulanowicz[48], another key dilemma that life has to continually navigate is between structure-building processes and the general tendency of the universe towards increasing 'entropy', which roughly translates as increasing disorder (and is described by the Second Law of Thermodynamics). The dynamic balance between these constructive and destructive forces, like *yin* and *yang*, is also a Window of Vitality, which seems to correspond to the maximal potential for a living system to continually evolve[48].
- Brian Fath and colleagues have applied the Window of Vitality as a principle for designing regenerative economies[44]. The Regenerative Lens applies the Window of Vitality to regenerative social-ecological systems more generally[16].

Tool set 2: Tools for pushing the boundaries of our knowledge, ambition and imagination

At this stage you might have applied one or more of the tools for framing and sensitising (tools 1-8), and you're now wanting to deepen participants' understanding of regenerative systems, dynamics and practice further. The next ten tools extend the boundaries of people's knowledge, understanding, scope, ambition and imagination in relation to regeneration and regenerative practice. They help people to 'think outside the box' and consider regenerative systems more holistically, at bigger scales, in the context of diverse organisations and initiatives around the world, and as a vital perspective in evaluation practice. They deepen appreciation of the regenerative qualities of life and how we each provide unique gifts that enhance the health of the whole. They raise awareness of how we all contribute to regenerative systems through practices of care, and how regenerative dynamics show up in our communities and work reciprocally across nested systems, both internally and externally.

Overall, the tools in this set highlight how regenerative systems are cross-scalar, multi-dimensional, based on mutualistic interactions, greater than the sum of their parts, and aligned to the principles of life. They are useful for helping groups who might overlook their impacts on their surrounding environment or develop a narrow view of what being regenerative means, to be more inclusive of natural systems and dynamics and their importance when considering impacts at wider scales. With this new understanding, groups will be more ready to move into action to create regenerative systems.



Tool 9: Principles of Life

A tool for recognising regeneration in living systems, reconnecting people to nature and inspiring regenerative design

This tool requires participants to engage directly with nature, resulting in a deeper appreciation of the regenerative properties of life and hopefully inspiration for how we could design human activities to be more regenerative.

framing evaluation aid exercise contemplation

What is it? A reflective outdoor exercise where participants find and discuss examples of the principles of life in action and their implications for designing human societies.

Facilitation difficulty: Intermediate

Time required: 1.5 to 2 hours, depending on group size and length of discussion. This tool would likely work best in a longer, more expansive session, similar to the Unique Gifts of Life.



Purpose and usefulness: a helpful first step in reintegrating human activity into the regenerative processes of life is to learn from that wisest of teachers: nature herself. This tool helps to rekindle connection to nature, recognise the innately regenerative properties of living systems and draw inspiration for designing more regenerative human societies. Importantly, the tool does this in an experiential way.

When to use: when you want to help a group go beyond intellectually understanding regenerative systems and develop a sense of what it looks like in practice. This would be useful before embarking on a more comprehensive design process. It could work well with young people.

Tool 9: Principles of Life

Group size: 5-20 people.

Group stage: Beginner

Useful prior knowledge:
the Great (Re)Turning

Materials required: access to an outdoor environment/greenspace, ideally a natural and wildlife-rich one. Paper and pens, and prepared instructions on sheets of paper, are required for the outdoor component of the exercise. A bell would be useful for reconvening participants.

Origins and designers: designed by Sam Buckton and Daniel Wahl, based on the work of Austrian-American author and physicist Fritjof Capra on the principles of life[49,50]. The technique of sending participants out into nature to find examples of the qualities of life was inspired by the practice of regenerative designer and structural engineer Oliver Broadbent, and Ioan Fazey.

Facilitation steps:

1. Present a slide showing Fritjof Capra's four principles of life: 1) self-organising networks; 2) regeneration; 3) creativity; and 4) intelligent sensing. Alternatively, write these out in real time on a whiteboard or flipchart paper.

2. To introduce the slide, you could say something like the following:

   The physicist Fritjof Capra has spent most of his life studying the properties of life and living systems, and what makes them special. He realised that all life shares four key features: it organises itself into interdependent networks; it can regenerate itself, like the leaves on a tree in spring; it's inherently creative, like how new species and adaptations have emerged through evolution; and it can intelligently make sense of itself and its environment through its sensory systems and cognition. To illustrate what these mean, we're going to find examples of them for ourselves in nature, and discuss how we could bring these principles into our own activity.

3. Instruct people that they need to go outside for 30 minutes and individually find one example of each of the four principles. You can provide the following instructions on sheets of paper, along with spaces for people to write notes or sketch:

   Your task is to head outside into nature and find a physical example related to each of the four principles of life.

   1) Find an example of two organisms that are purposefully interacting with each other. What is the nature of the relationship? What does it feel like for each of the two actors?

   2) Find an example of regeneration in action. You might look for where nutrients are being recycled, for instance, or where an organism has regrown or reproduced itself, in whole or in part. What resources are enabling that regeneration to occur?

   3) Find an example of where an organism has creatively adapted to its environment. How do you think it is adapting to the impacts of human activity?

   4) Find an example of an organism sensing and responding to its environment. By what mechanisms is this taking place?

   Make some notes or a sketch for each example. If you can do so in a respectful and non-invasive manner, keep a small physical specimen that illustrates your example for showing to the other participants.

Tool 9: Principles of Life

Facilitator notes 

Facilitation steps (continued):

4. Bring people together again, whether outdoors or inside (perhaps by ringing a bell), and ask for a couple of people, in turn, to share an example of what they found for the first principle of life. Do the same for the other three principles. If you're short on time, ask only one person to feed back on each principle.
5. Tell the group that you're going to ask them which of the four principles they found the most inspiring or the most important for us to understand, and that they are then going to pair up based on their responses, so they should take note of other people's responses.
6. Ask for people who found the first principle the most inspiring to raise their hands. Do the same for the other three principles.
7. Ask participants to pair up with another person who shared the same principle as them, and have a 10-minute discussion about their ideas for how this principle could be brought into the human activity or initiative of interest. You could provide the pairs with pens and paper to sketch their ideas if desired.
8. Ask for some of the pairs to feed back their ideas in a plenary circle. Try to include examples of each of the four principles.
9. Invite any final comments from the group on what has been shared, such as priority next steps for their initiative (if relevant).
10. Round off the discussion and ask participants to return any of their physical specimens to where they found them.

Facilitation tips: don't worry if participants don't pair up perfectly at step 7 – it's fine if pairs represent two different principles, or if you have a threesome instead.

Adapting to online: in online settings, ask participants to go outside to their nearest greenspace (e.g. their garden), complete the exercise, and then reconvene online.

Tool 9: Principles of Life

Facilitator notes

Other adaptations:

- For more artistic groups, you could encourage people to draw, paint or sculpt more elaborate artworks of each of the examples they find.
- You could go deeper into the first principle (self-organising networks) by asking participants to find examples of particular kinds of relationships (e.g. symbiosis, mutualism, parasitism, predation), and/or sketch out more elaborate networks of ecological relationships, like a 'food web' or similar, for a particular area.

Take it further:

- For further tools to continue a more reflective, meditative, expansive and experiential approach to understanding regenerative practice, see Unique Gifts of Life, Compass Directions for Bioregional Mapping, or the Wheel of Wisdom.
- Deepen the experience of participation in regenerative systems with Unique Gifts of Life, Recognising Practices of Care, or the Wheel of Wisdom.
- Deepen understanding of regenerative dynamics with Unique Gifts of Life, Recognising Practices of Care, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, the Regeneration Directory, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, the World Mandala, or the Wheel of Wisdom.
- You could ask your group to search the Regeneration Directory to find organisations and initiatives that they feel are most strongly embodying the principles of life.
- With your new appreciation of life-inspired design, move into exploration of Horizon 3 or Horizon 2 in a Three Horizons process, or place-based regenerative practice (see Tools for bioregioning) with Recognising Practices of Care, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala.
- To explore how you might situate tools like the Principles of Life into your wider evaluation practice, see Twelve Principles for Transformation-focused Evaluation.

Tool 10: Unique Gifts of Life

A tool for deepening the sense of what it means to be regenerative and part of the web of life

This is a fun way of helping people develop an experiential understanding of how they are intrinsically part of something bigger than themselves, and recognise the unique value that they bring to it.

exercise contemplation

(Version 1)

What is it? Two different versions of an interactive group exercise to experience the reciprocity between self and whole. At least part of version 1 takes place outside, and version 2 can be held inside or outside.

Facilitation difficulty: Intermediate

Time required: 1.5 - 2 hours per exercise.

Group size: 5-20 people.

Group stage: Beginner



Purpose and usefulness: like the Mutual Qualities of Life, this tool helps to overcome the challenge of how to feel regeneration in a more visceral way, and human-nature disconnection. To be able to feel regeneration requires getting a sense of the inherent value of both the whole and its parts. In a forest, each element has its own unique value in both sustaining the forest and in the way the forest also contributes to the sustenance of the wider system in which it resides, such as to regulate the climate. So understanding regeneration involves getting a sense of the value and qualities of different elements and how they contribute to the value and qualities of the whole.

The Unique Gifts of Life provides two alternative ways of developing a felt sense of that quality of human-nature connection, and reciprocal relationships with a greater whole.

Tool 10: Unique Gifts of Life

Useful prior knowledge: none. Version 2 of the exercise only works with a group of participants who already have some experience of working with each other.

Materials required: for version 1, outdoor space, string or other long thin objects (e.g. grass stems), preferably made from natural/biodegradable materials, and a bell might be helpful for letting participants know when they need to reconvene; for version 2, large-format post-it notes, pens, and string.

Origins and designers: developed by Ioan Fazey for helping students and groups learn about regenerative systems and for leadership and team development. The tool has similarities to Rafael Ramirez and Ulf Mannervik's concept of value-creating systems[51] and H3Uni's Value Constellations exercise.

When to use: when you want to help a group go beyond intellectually understanding regenerative systems and develop a sense of what it feels like. This would be useful before embarking on a more comprehensive design process. It can work well with young people.

Facilitation steps for version 1: this version deepens understanding of regeneration by learning from nature.

1. Find a place out in nature. It could be a woodland, garden, common – anywhere with an obvious interaction between different elements of nature taking place.
2. Start with everyone sitting in a circle. Introduce the following three points:

   To understand regenerative systems, we need to experience what it feels like.

   *This includes the need to sense how we embody the wider whole, and how we are not separate from nature, but **are** nature.*

   We also need to experience how each aspect of an ecosystem, like a forest or a river, plays a unique role in enabling that ecosystem to be regenerative.
3. Then give each participant about 10-15 minutes to go for a short walk to identify and respectfully collect three different natural items (a leaf, stick, feather, stone, shell, etc.) that symbolise a different aspect of the ecosystem. They should do this in silence; emphasise that this part should be reflective and is a chance for them to connect with the natural world around them.
4. Reconvene participants, ringing a bell if necessary.
5. When everyone has returned, sit them in a circle again. Get each person to reflect on the connections between their own items for 1-2 minutes in silence.
6. Now invite someone to place one item in the centre of the circle, stating what it represents and the value or unique role it brings to the ecosystem as a whole.
7. Invite another person to place a new item in the circle that represents another part of the ecosystem and draws on the value/role of the first item to support itself. Add a piece of string or other long item (e.g. a grass stem) to represent the connection between the two items.

Tool 10: Unique Gifts of Life

Facilitator notes

Facilitation steps for version 1 (continued):

8. Repeat with one item in turn that connects to another. Gradually build the sense of an emerging web of nature. Emphasise that this shows connections of the value and role that each item brings, such that what is being built is not just how things are linked, but how they each draw on the unique value of something else.

9. Once you have a large web of items and connection, ask for reflections on what, collectively, the unique individual values are generating. What are the outcomes of the web that are greater than the sum of the outcomes of the individual parts?

10. Develop the discussion further to explore how this ecosystem sustains itself and helps sustain a wider ecosystem around it.

11. If you have time, ask each person to find one item that is clearly of human origin (a discarded cigarette, plastic bag, other litter, man-made building material, etc.), and add those into the web in a similar way. This additional exercise can be used to explore how humans break the regenerative pattern and/or contribute to it (there may be unexpected outcomes, such as a pile of rubble providing a home for small animals).

12. Draw the exercise to a close with final reflections on how participants feel about regenerative systems, and perhaps how this feeling might have changed from the beginning of the exercise. Reiterate the purposes of the exercise – to embody a sense of 'regeneration' in connection rather than separation, and how regenerative systems can be viewed as 'value-creating systems'.

Facilitation steps for version 2: this version deepens understanding of regeneration by learning from the qualities within a group of people. It requires a team of around 5-20 people that already have experience of working with each other. It can take place in a large room or outside.

1. Start with everyone sitting or standing in a circle. Introduce the following three points

   To understand regenerative systems, we need to experience what it feels like.

   This includes the need to 'sense' how we embody the whole and are not separate from that whole. This can be experienced within a group of people or a community.

Tool 10: Unique Gifts of Life

Facilitator notes 

Facilitation steps for version 2 (continued):

In a group of people or a team each person brings something unique to the world – a collection of qualities – that can support the whole. It's helpful to find ways to get a sense of how these unique values enable not just the basic functioning of the group but also enable it to flourish.

2. Give each person about 5-10 minutes to reflect on a quality embodied by another person in the group and how they personally – or their work – have benefitted as a result of that other person expressing that quality. They should write this quality on a post-it note. They should then repeat this step, identifying a different quality brought by a second person in their group, again writing the quality on a post-it note. Clarify to the group whether you as the facilitator are going to include or exclude yourself in this exercise; this will depend on how familiar you are with the group.

3. Check in with the group to make sure that each person has been identified by someone else before you progress. If not, ask a couple of people to write a new post-it note for anyone that has been missed.

4. When ready, still with everyone in a circle, ask someone to share one of the people and qualities that they identified. Invite the person whose quality was identified to step forward into the circle, take the post-it note, and stick it somewhere on their front (e.g. their chest). They can sit or remain standing. The original contributor then explains the impact that this person and the quality they embodied had on them.

5. Ask the person now standing or sitting inside the circle to share one of the qualities that they identified embodied by someone else, inviting that new person forward. The quality and impact of this person is shared, as before.

6. Give the first person inside the circle the end of a ball of string and extend the ball to the second person.

7. The second person then identifies a third and the string is extended, and so on, until a web of connection is created. Continue the process until everyone is included, including you as the facilitator if this is appropriate. New connections can originate from people who have already identified connections, if this is the way to ensure that everyone ends up included in the network.

Tool 10: Unique Gifts of Life

Facilitator notes

Facilitation steps for version 2 (continued):

8. While still interconnected by the string, ask the group to identify reinforcing feedback in the system of qualities that has been created. So, for example, they might trace the impact of one person on another, who has impacted another, and so on until it leads back to the person the loop began with.

9. Explain that this highlights how the quality of one person is enhanced by a combination of other qualities. Emphasise that this web shows not just how people are linked, but how they each draw on the unique value of someone else. Each person is both contributing their gift to the wider system, which is in turn offering their gifts to that person. This is regeneration in action.

10. When ready, remaining in the web or after dismantling it and reconvening in a circle, begin to ask for initial wider reflections about regeneration in this group, such as:

    How does it make you feel when you experience this combination of qualities and value? Do you feel any different to when you began?

    What does this regenerative effect enable the group as a whole to achieve, that would not be possible without the diversity of qualities in the group?

    What are the outcomes of the group that are greater than the sum of the impacts of the individual people involved?

    What might be needed to get even greater positive effects from the group? How could people's inherent qualities be mobilised further to have maximal effect?

11. If relevant, you can then ask some wider questions about lessons learned by the group in relation to another system, such as:

    What does the experience – which has focused on human-to-human interactions – tell us about human-nature relations?

    How could this exercise help us to understand what a regenerative business or city might look like?

    What might we need to take forward from this exercise in our way of working as a group? (E.g. if the group is going to enter into a deeper regenerative design process.)

Tool 10: Unique Gifts of Life

Facilitator notes 

Facilitation tips:

- In version 2, it is not necessary for each person to be linked to every other person in the group – one to two connections per person is sufficient for this exercise. The purpose of having each person identify two different people/qualities is to help ensure that everyone can be included in the web of value that is created.
- When considering the reflection questions it can sometimes be useful to divide participants into breakout groups of two to three people to discuss the questions first, before asking each group to feed back to the wider group in plenary. This helps to further embed learning in the group.

Adapting to online: these two exercises are much more powerful in person. They can, however, also be delivered online if set up appropriately with an online whiteboard for mapping out the webs of value. For version 1, you could place a large set of items on the whiteboard that participants choose from (with each item only able to be chosen once). The process can then be followed in a similar way to the in-person version. A co-facilitator to move items as they are discussed and add arrows would be helpful. Version 2 can also be done online by asking participants to add their post-it notes to the whiteboard and connecting those.

Other adaptations: if you have less time you could simplify the steps and reduce the number of reflection questions. However, note that both exercises are meant to be reflexive and so work best when they are not rushed and where participants have time to feel rather than think their way through them.

Tool 10: Unique Gifts of Life

Facilitator notes

Take it further:

- For further tools to continue a more reflective, meditative, expansive and experiential approach to understanding regenerative practice, see Principles of Life, Compass Directions for Bioregional Mapping, or the Wheel of Wisdom.
- Deepen the experience of participation in regenerative systems with Principles of Life, Recognising Practices of Care, or the Wheel of Wisdom.
- Deepen understanding of regenerative dynamics with Principles of Life, Recognising Practices of Care, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, the Regeneration Directory, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, the World Mandala, or the Wheel of Wisdom.
- With your new understanding of value-creating systems, move into exploration of Horizon 3 or Horizon 2 in a Three Horizons process; or bring that inspiration into more design-oriented exercises of Requests and Offers or Ambition Loops; or bring that understanding into place-based regenerative practice (see Tools for bioregioning) with Recognising Practices of Care, the Regeneration Directory, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala.
- See Dilemma Navigation for more about the fundamental dilemma of life (being as self and being as part of the whole).
- See the Value Constellations exercise in the H3Uni Resource Library for an alternative way of exploring value-creating systems.

Tool 11: Recognising Practices of Care

A tool for recognising how regeneration shows up in your community and culture

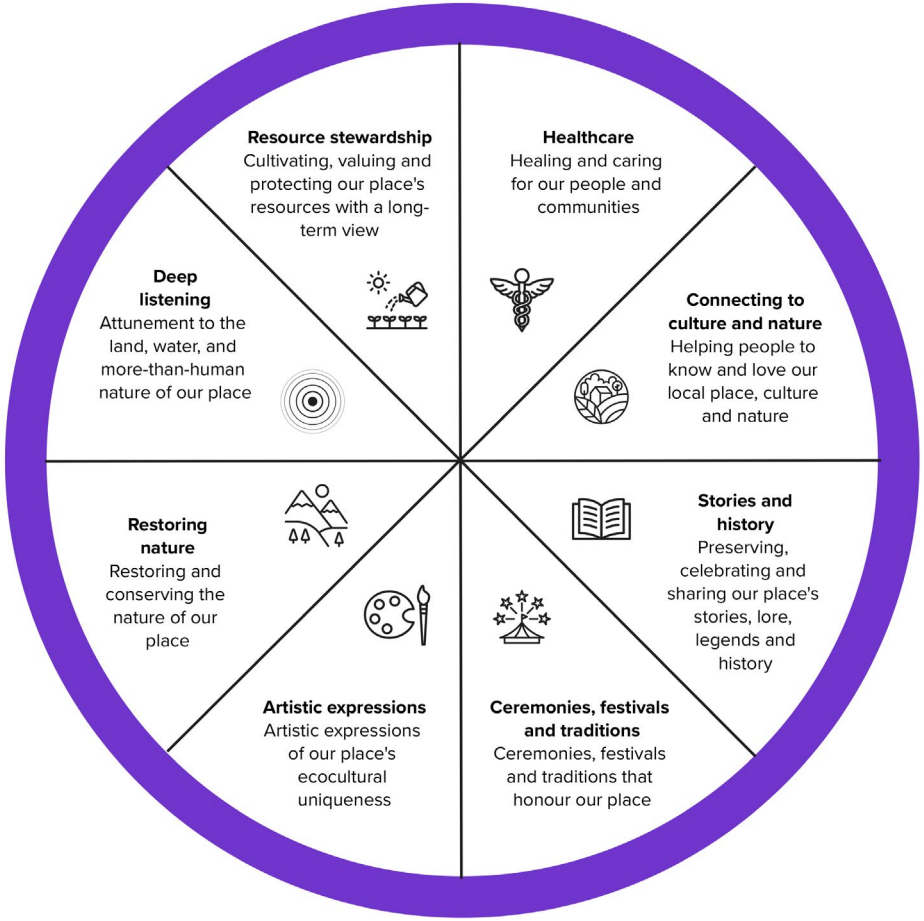
This is an eye-opening tool for helping people realise that regenerative practices of care are already taking place all around them, and that they, too, are contributing to that regenerative system through their caring practices.

exercise visual aid

What is it? An exercise based around an eight-sectored wheel diagram suggesting different areas of society where caring practices might show up.

Facilitation difficulty: Intermediate

Time required: around 45 minutes to 2 hours, depending on the number of participants and depth of process.



Purpose and usefulness: caring practices are activities that generously support the wellbeing of others, demonstrate empathy, morality, and selflessness, and are often strongly directed towards our local community, place, culture, and home. These practices are vital for a system to develop mutualistic relationships with the systems within and beyond it, and for the health of humans and wider nature to spiral up together in a reinforcing way. Being regenerative additionally requires a shift from seeing regeneration as some fundamentally new, unfamiliar, external thing, to something that is a core pattern of life all around us that we can tap into and are already connected to.

Tool 11: Recognising Practices of Care

Group size: large enough to represent a diversity of perspectives from your local region. You might need at least ten or so people to have a meaningful conversation; the maximum number could be much higher (e.g. around 50 people), as long as the exercise is completed in breakout groups of three to six people. The eight-sectored wheel diagram implies a 'lower maximum' of about 48 people, i.e. one breakout group of up to six people focusing on each sector of the wheel. However, you could potentially have two breakout groups independently focusing on the same sector(s).

Group stage: Beginner

Useful prior knowledge: none.

Materials required: post-it notes and pens, and flipchart paper if drawing the diagram from scratch, or large-format paper (e.g. A2 or A1) if printing out the pre-designed diagram; you could even print the diagram onto a tablecloth-sized fabric. Draw a 'master copy' of the diagram (including just the basic segments and segment theme titles) on a whiteboard or on four joined-together sheets of flipchart paper stuck onto a wall at the front of the room. A projected slide showing the diagram may be useful when introducing the exercise.

Purpose and usefulness (continued): bringing those two aspects together, this tool helps people to reconnect to regeneration as an inherent property of life, namely as a caring impulse that shows up in many different ways already in our communities. It is through this impulse that regenerative dynamics can emerge. The tool also helps people to appreciate that through their practices of care, they are actively contributing to a wider regenerative system.

When to use: for a group wanting to identify examples of the practices and dynamics in their local community or region that they could build on to develop a wider regenerative system.

Facilitation steps:

1. Introduce the exercise by saying something like:

   Regeneration can often seem like a new and unfamiliar thing, but it's actually all around us and within us – we just need to recognise it. So this exercise is all about recognising the regenerative impulse of life and how it already shows up in practices of care in our community and our region. We can then think about how we can work with this impulse and the different actors, organisations and initiatives we identify to enrol people into a regenerative system.

2. Explain the eight-sector wheel diagram, drawing it from scratch if necessary (and using the emboldened short titles rather than writing out the full description of each sector). Ensure you have a 'master copy' of the diagram at the front of the room somewhere, e.g. on a whiteboard or flipchart paper. The eight sectors of the wheel are:

   - 'Healthcare': practices focused on healing and caring for people and communities (including medical care and social care).
   - 'Connecting to culture and nature': helping people to know and love their local place, culture and nature. Charities and volunteer groups are often active in this sector, which might also include tourism companies.

Tool 11: Recognising Practices of Care

Origins and designers: based on the work and ideas of Daniel Wahl, who designed the tool with Sam Buckton. The diagram in this guide was created by Sam Buckton in Mural (Tactivos, Inc. dba Mural).

Facilitation steps (continued):

- 'Stories and history': preserving, celebrating and sharing the stories, lore, legends and history of a place.
- 'Ceremonies, festivals and traditions': ceremonies, festivals and traditions that honour a place. These could include formal gatherings as well as more informal traditions that have still been preserved in everyday life.
- 'Artistic expressions': artistic expressions of the ecological and cultural uniqueness of a place. Consider artistic expression in a broad sense: art, writing, poetry, music, theatre, dance, film, gardening, architecture…
- 'Restoring nature': restoring and conserving the nature of a place. Again, charities and volunteer groups are often active in this sector. Consider nature-friendly farming practices too.
- 'Deep listening': attunement to the land, water, and more-than-human nature of a place to more deeply understand its needs and how it can guide us. These kinds of practices might be harder to identify in your region, but consider your region's Indigenous cultures, for instance, or examples of religious and other spiritual and more transpersonal practices that try to connect with your region at a deeper level (see Box 2).
- 'Resource stewardship': cultivating, valuing and protecting the resources of a place, with a long-term view of intergenerational equity. For instance, consider your region's sources of food, water, energy and materials, its agroecological farming practices, renewable energy infrastructure, etc.

3. Divide participants into breakout groups of three to six people, ensuring that each group contains a mix of people who have lived in the local region for most of their lives and/or were born there, and people who might have more recently arrived and hence have less knowledge and experience of the local region and its culture. For in-person settings, each group should be sat around its own table.

Tool 11: Recognising Practices of Care

Facilitator notes

Facilitation steps (continued):

4. Ask the groups to identify actors, organisations or initiatives that are currently active in one or more sectors of the wheel. Delegate the sectors between the groups: for example, if there are two breakout groups, one breakout group would focus on four of the sectors, and the other breakout group would focus on the other four sectors.
5. Ask participants to write down each actor/organisation/initiative example on a separate post-it note and stick it onto the corresponding sector of the wheel. Encourage them to be as specific as possible, and to identify at least two examples per sector.
6. Allow participants to spend up to about 10 minutes on each sector. So if there are two breakout groups, the discussion might be 40 minutes; if three breakout groups, then 30 minutes; if four breakout groups, then 20 minutes; and so on.
7. Keep tabs on the momentum in the room – if participants are naturally moving quite quickly through the different sectors, you might choose to close the breakouts early, or if people are enjoying some in-depth conversations about their sector(s) then you could leave the breakouts open for a little longer.
8. In plenary, ask for someone from each group to feed back on the actors/organisations/initiatives that they identified and explain a bit about their activities. Collect their post-it notes and stick them onto the master copy of the diagram at the front of the room.
9. Invite participants to have a second discussion in their breakout groups for around 10 minutes about where they each individually see themselves playing a role in the wheel, or whether they have an affinity to an area that isn't currently represented in the sectors of the circle.
10. In plenary, invite any of the participants to share something that came up during the last discussion.

Tool 11: Recognising Practices of Care

Facilitator notes

Facilitation steps (continued):

11. Round off the discussion by saying something like:

    So as you can see, there are already lots of examples in our region demonstrating practices of care, including the people in this room. These practices are reflections of the regenerative impulse of life – the impulse to nurture, share, and regenerate the health of our communities, culture, nature, and places. These are the kinds of practices that we want to connect with and build on to grow regenerative dynamics across our region.

12. If you have time, you could ask for participants to discuss their initial ideas on how they might strengthen or cohere these caring practices for the purpose of fostering a regenerative system (e.g. for 15 minutes followed by plenary feedback).

Facilitation tips:

- There's no right or wrong answer as to where a particular entity fits on the wheel – some might cut across multiple sectors.
- Remain sensitive to gendered and economic aspects of the discussion that may arise. Practices of care are carried out disproportionately by women, whose caring responsibilities are often the result of patriarchal power structures in society[52,53]. Furthermore, caring practices are often unpaid, under-valued or ignored altogether in the way that economies measure economic activity (e.g. in Gross Domestic Product)[53]. It may be helpful to draw attention to these issues if they are not emerging naturally. For example, you might ask how the under-valued care work of women could gain the recognition it deserves in the local or regional economy, or whether there are power dynamics at play that shape the practices of care observed in the area of interest.
- You or the participants may notice a difference between caring practices that are aimed at survival and dealing with immediate crises and emergencies, versus caring practices in service of deeper long-term regeneration[52]. If so, you could discuss this contrast and their implications for regenerative practice.

Tool 11: Recognising Practices of Care

Facilitator notes

Adapting to online: the same steps could be applied in online settings with breakout groups, and working from the diagram on an online whiteboard.

Other adaptations: you could turn this tool into a longer discussion of a half-day or more if you are aiming to be relatively comprehensive in identifying actors in each sector and how they could be enrolled into a wider regional regenerative system.

Take it further:

- The Regeneration Directory is another source of regeneration-focused organisations and initiatives that might be relevant to your region.
- Further develop the sense of participation in regenerative systems with Mutual Qualities of Life, Unique Gifts of Life, or the Wheel of Wisdom.
- Continue a strong place-based focus in your regenerative practice (see Tools for bioregioning) with Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala.
- Use the actors and initiatives you've identified in an exploration of Horizon 2 in a Three Horizons process; you could more directly explore the relationships between them using Regenerative Actor Mapping, Requests and Offers, Ambition Loops, or the World Mandala.

Tool 12: Nested Systems

A tool for bringing awareness of cross-scale linkages into our actions

This tool provides a simple way to bring into our consciousness the wider systems that support us. Keeping these wider systems in mind, and how we interact with them, is vital when exploring the potential for regenerative dynamics.

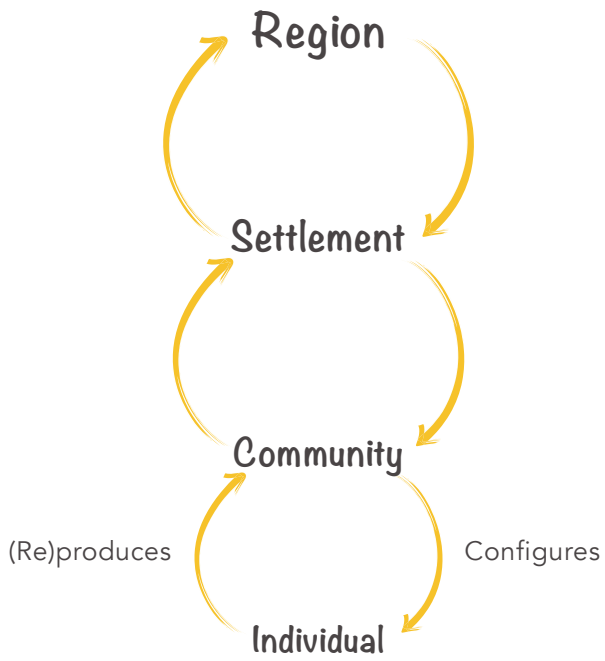


What is it? A simple exercise based on the notion of nested systems.

Facilitation difficulty: Intermediate

Time required: 1 hour.

Group size: would work with typical workshop group sizes of around 15-30 people, although it could also be used as an individual reflective tool.



Purpose and usefulness: for systems to be regenerative, they must support the health of the communities and environments within and beyond them, which in turn nurture the system in question. However, many of us, including our businesses, governments, organisations and communities, tend to be more focused on our immediate sphere of influence. This makes it easy to lose sight of how we interact with the wider systems in which we are embedded. Ultimately, this neglect can lead to environmental harm that in turn threatens our own health and survival, particularly when the costs of pollution are not factored into our economic models. Appreciating how our actions influence wider systems is essential if we are to build in dynamics of care and 'giving back' to the ecological systems on which we depend.

This nested system tool provides a simple way to expand the spatial boundaries of people's thinking and bring into our consciousness the wider systems that support us, providing a basis for the understanding of the cross-scale reciprocity critical to regenerative systems.

Tool 12: Nested Systems

Group stage: Beginner

Useful prior knowledge: Structures and Flows; Mutual Qualities of Life

Materials required: printed copies of one of the nested system diagrams (Appendix 3); coloured pens.

Origins and designers: designed by Sam Buckton and Ioan Fazey based primarily on the work of Daniel Wahl[30], Bill Sharpe, and the Regenerative Lens framework[16], although the idea of nested systems is by no means new, and is found across many cultures and philosophies. The Scope 1/2/3 approach is based on the *The Greenhouse Gas Protocol* by the World Business Council for Sustainable Development and The World Resources Institute[54].

When to use:

- The facilitation guide below could work well with a group of people who are part of a common organisation or initiative needing to explore its relations with wider systems, although this is not essential, and the tool can also be applied as an individual reflective exercise.
- It could be a good warm-up exercise before applying the Regen-Degen Quadrants exercise. The Nested Systems tool is more about relating to wider scales, while Regen-Degen Quadrants is more about the mutual support between these scales.
- You might use Nested Systems to push the ambition of an envisioned third horizon future in a Three Horizons process.
- The associated diagrams (Appendix 3) can be useful to revisit in many different contexts of working, including place-based regenerative practice (see Tools for bioregioning), as a reflective aid that continually encourages you to think about the systems beyond the scale that you usually work at.

Facilitation steps:

1. Choose whichever nested systems diagram and framing you think will resonate most with the context of your group (see Appendix 3). Print off a copy of this diagram for every participant prior to the exercise.
2. Introduce the exercise by saying something like:

   This next exercise is designed to help us think about our impacts in a more systemic way. We know that regenerative systems have to be cross-scale, such that they support the health of the wider systems beyond them and within them, which in turn support the system in question – like a city that restores its hinterlands that provide it with food and water. Without these kinds of reciprocal, cross-scale dynamics, there's a risk of degrading our wider life-support systems which ultimately threatens our own survival. So this exercise encourages us to think in terms of 'nested systems', or a 'Russian dolls' view of the world where you recognise the parts that comprise you and that you are also situated within wider systems. It's similar to the Scope 1, 2 and 3 approach to thinking about carbon emissions, where you bring increasingly wider systems and more indirect impacts into view.

Tool 12: Nested Systems

Facilitator notes

Facilitation steps (continued):

3. Divide your group into pairs.
4. Ask each person to first locate the scale on the diagram that feels closest to home, or where they are usually operating at. This could be for the person as an individual, or for the wider initiative or organisation that they represent. You could call this the 'Scope 1' scale. Give participants a couple of minutes to do this.
5. Now ask participants in each pair to take it in turns to identify their top positive impact, and top negative impact, on both ecosystems and people, at the scale they just identified. This means that each person should be identifying four impacts in total at this scale: i.e. positive on ecosystems, negative on ecosystems, positive on people, and negative on people. At any one time, one participant in each pair will be the 'interviewee' and the other person the 'interviewer'. Give participants 10 minutes to do this, reminding the interviewer and interviewee to switch over at the 5-minute mark. Reassure participants that it doesn't matter if each person doesn't have time to identify all four impacts in their allotted 5 minutes; the main thing is to get a sense of what it's like to consider different scales. Encourage participants to write on their printed diagrams if they wish, perhaps using different colours for the positive and negative impacts.
6. Ask participants to now examine the scale above the one they've just been focusing on (e.g. city scale if they've previously looked at community scale), and again identify their top positive and top negative impact on both ecosystems and people. You could call this the 'Scope 2' scale. They should use the same interviewer-interviewee approach, 5 minutes each way (so 10 minutes total).
7. Ask participants to now examine the scale below the one they've just been focusing on, and again identify their top positive and top negative impact on both ecosystems and people. This is like the flipside of the 'Scope 2' scale. They should use the same interviewer-interviewee approach, 5 minutes each way (so 10 minutes total).

Tool 12: Nested Systems

Facilitator notes

Facilitation steps (continued):

8. Finally, ask participants to examine a 'Scope 3' scale: two levels above their home scale (e.g. landscape or bioregion if their Scope 1 is at a community scale), and again identify their top positive and top negative impact on both ecosystems and people, with the same interviewer-interviewee approach, 5 minutes each way (so 10 minutes total).

9. Reconvene all participants in plenary. Ask for a show of hands for how many people picked a given scale as their 'home scale'. Start with a scale that you suspect most people will have picked, then the scales above and below it, then any scales beyond those.

10. Ask for a couple of pairs to share examples of the impacts that they identified at the Scope 1 scale, requesting that they clearly state what scale on the diagram they were considering. Do the same for a Scope 2 and Scope 3 scale.

11. Finally, ask for any wider reflections from participants about what it was like to consider these nested scales. For example: which direction felt easier to think about?

12. Round off the discussion by mentioning how this way of thinking, where you zoom in and zoom out beyond the scales that you typically operate at, can be helpful to bring into many different contexts, including as a personal reflective tool, and is particularly helpful for encouraging regenerative systems.

Facilitation tips: it is possible that participants will 'run out' of scales on their diagram, particularly for the Scope 3 part. If this is the case, ask participants to add their own wider scale to the diagram, or simply focus on the opposite scale direction.

Adapting to online: the same steps can in principle be applied in online settings using breakout groups, although it may be worthwhile giving participants a sheet of instructions. The facilitator should broadcast messages to the breakout groups at the different time-keeping points, e.g. when interviewer and interviewee should switch over, and when to move on to the next scope up.

Tool 12: Nested Systems

Facilitator notes 

Other adaptations:

- If you're pushed for time, you could leave out the Scope 3 discussion.
- An alternative way of applying the tool would be for participants to choose a particular system intervention that they are either planning to implement or already implementing, and explore the impacts of this on ecosystems and people at the different scales.

Take it further:

- A natural follow-on to explore reciprocal support between different scales, would be Regen-Degen Quadrants, the Regenerative Lens, Regenerative Dynamics with the 4 Returns Framework, or the World Mandala. Adaptive Waves also deepens appreciation of how regenerative dynamics relate across different scales.
- You could ask your group to search the Regeneration Directory to find organisations and initiatives that they feel are most strongly applying ideas about nested systems.
- Bring this nested way of thinking into place-based regenerative practice (see Tools for bioregioning), such as Recognising Practices of Care, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala.
- With your new appreciation of cross-scale linkages, move into exploration of Horizon 3 or Horizon 2 in a Three Horizons process.
- To explore how you might situate tools like Nested Systems into your wider evaluation practice, see Twelve Principles for Transformation-focused Evaluation.

Tool 13: Regen-Degen Quadrants

A tool for demonstrating the cross-scale reciprocity needed for regenerative systems, and sparking discussion about their definition

This is a simple, hands-on exercise that gets people thinking about regenerative dynamics across different scales. The tool involves asking where different examples of activities and scenarios fit within four quadrants. Although a simplification of regenerative dynamics that can create false binaries, it is helpful for stimulating critical discussion about what it means to be regenerative.

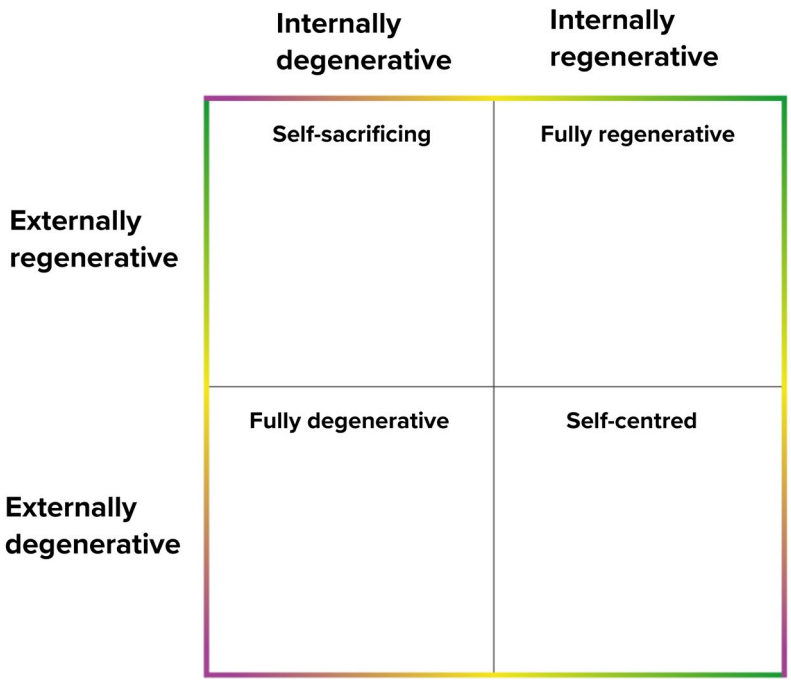


What is it? A simple exercise based on matching examples to one of four quadrants in a diagram.

Facilitation difficulty: Intermediate

Time required: 30-40 minutes.

Group size: group sizes of around 15-30 people. Could also be used as a personal reflective tool.



Purpose and usefulness: this tool is a relatively quick, simple and easily grasped exercise that helps people understand how being regenerative requires a focus on reciprocity across different scales, and generates constructive critical debate about what it means to be regenerative. To use the tool, different examples are provided and participants have to decide in which of four quadrants to place each example. It highlights that there are four different archetypal patterns that can emerge when a focal scale (e.g. individual, community, organisation) considers its relationship to other scales. Examples that can be used with participants are provided below. See Nested Systems for more about the importance of appreciating nested scales and their interaction.

Tool 13: Regen-Degen Quadrants

Group stage: Intermediate

Useful prior knowledge: some familiarity with basic regenerative definitions or descriptions is assumed. Prior exposure to Future Stewards' Regenerative Video, Regenerative Descriptions, Structures and Flows, Mutual Qualities of Life and Nested Systems is desirable.

Materials required: paper print-outs of the 2x2 grid and examples, and a whiteboard/ flipchart and pen(s); presentation slides may also be useful for introduction.

Origins and designers: designed by Sam Buckton, Ioan Fazey, and members of FixOurFood's Regenerative Futures Workshop Group, based originally on the ideas of Bill Sharpe. The Regen-Degen Quadrants framework is described in a paper about the Regenerative Lens[16]. The diagram in this guide was created by Sam Buckton in Mural (Tactivos, Inc. dba Mural).

When to use:

- Use the tool after applying some of the other framing and sensitising tools, e.g. Regenerative Descriptions and Mutual Qualities of Life, or Nested Systems. Using the Regen-Degen Quadrants tool will reinforce some of these ideas.
- You could use the tool to push the ambition of an envisioned third horizon future in a Three Horizons process.
- The nature of this exercise means that it can be useful for younger audiences (e.g. students).

Facilitation steps:

1. Introduce the exercise by sharing a picture of the diagram (e.g. on a projected slide) and saying something like:

   We're now going to try and deepen our understanding of regenerative systems by doing an exercise called Regen-Degen Quadrants.

2. Explain what 'internal' and 'external' mean in this context. You could say:

   If we're in a regenerative system then we have to consider both how we're supporting the internal health of the system in question, and also the external health of the surrounding systems that support us. So the kind of relationship that we have to our internal and external systems is important for the health of the overall system.

3. Explain the four quadrants of the diagram. You could say:

   The diagram shows four quadrants. The bottom left quadrant is called 'fully degenerative': this is where we're degrading our internal health as well as the health of surrounding systems, so we're being internally and externally degenerative.

   The bottom right quadrant is called 'self-centred' or 'self-interested': this is where we're looking out for ourselves but at the expense of wider systems, so we're being internally regenerative but externally degenerative.

Tool 13: Regen-Degen Quadrants

Facilitator notes

Facilitation steps (continued):

The top left quadrant is called 'self-sacrificing': this is where we're supporting the health of our surrounding communities and environment but we're burning ourselves up in the process, so we're being externally regenerative but internally degenerative.

Finally, the top right quadrant is called 'fully regenerative': this is where we're being both internally and externally regenerative.

4. Explain that participants will be split into breakout groups and that each group will have a list of examples that they have to match to one of the four quadrants. We have typically used the following examples (suggested quadrant provided in brackets, although other interpretations are possible. Don't show the answers to participants!):

   - A country that invests in social infrastructure using profits from activities driving climate change and biodiversity loss (self-centred)
   - A social enterprise that burns out its employees (self-sacrificing)
   - Humanity prioritising its reproduction and population growth at the expense of millions of other species' reproduction (self-centred)
   - A predatory company merger or acquisition that reduces the value of both companies and leads to redundancies (fully degenerative)
   - A country that becomes carbon-negative through ecosystem restoration and regenerative agriculture (fully regenerative)
   - A martyr for a regenerative cause (self-sacrificing)
   - A social enterprise that nourishes society and (therefore) its employees (fully regenerative)
   - A person whose addiction to a harmful drug also damages the person's social relationships (fully degenerative)
   - A regenerative farm forced to sell its land because its affordably priced produce brings in insufficient revenue (self-sacrificing)

Tool 13: Regen-Degen Quadrants

Facilitator notes

Facilitation steps (continued):

- A society that extracts and burns fossil fuels, causing climate change and extreme weather that is increasingly deadly to the society's citizens (fully degenerative)
- A city that meets the food and water needs of its citizens by restoring its hinterlands (fully regenerative)
- A country that starts a war with another country, killing people and crippling the economy on both sides (fully degenerative)
- A business that pays and treats its employees well but pollutes the environment (self-centred)
- A thriving farm that boosts biodiversity in the wider landscape and acts as a hub for community interaction (fully regenerative).

5. Split the group into breakouts of around two to four people. Give the groups 10-15 minutes to complete the matching exercise.

6. For the next 10-15 minutes or so, go through the list of examples, asking where the groups placed each one. Based on the groups' responses, you could write the number corresponding to each example on a blank version of the quadrants diagram drawn on a whiteboard or flipchart paper.

7. Finish by asking the whole group whether the exercise raised any other thoughts or questions, leaving at least 5-10 minutes for discussion. This can potentially lead to an interesting discussion about the definition of 'regenerative', and can raise issues like the scales of regeneration (both spatial and temporal), whether a system can be regenerative and degenerative simultaneously, whether a system needs to be degenerative before it can be regenerative, and so on.

Facilitation tips: in some groups, we've found that people criticise the use of binaries in this exercise. You can respond that the framework is purposefully built around binaries for the sake of simplicity and to stimulate discussion and debate, whilst acknowledging that in reality, regenerative systems cannot be defined so rigidly.

Tool 13: Regen-Degen Quadrants

Facilitator notes

Adapting to online: in online settings, get participants to complete the matching exercise on an online whiteboard, with a post-it note per example that participants have to place onto an image of the four quadrants.

Other adaptations:

- The set of examples can be chopped and changed depending on the audience. If you have less time available you could use a smaller number of examples (although making sure that there is at least one example for each quadrant)
- You could try an alternative version of this exercise where you ask people to place themselves or their own organisation in one of the four quadrants and explain their choice. You could even set up the quadrants on the floor and get people to stand in a quadrant. This version of the tool could also be used as a personal reflective exercise.
- A more complex 'brainteaser' version of the exercise for advanced groups might combine the quadrants with the Regenerative Spiral, such that each quadrant also contains a spectrum within it (e.g. from 'green' to 'regenerative'). The spatial placement of an example within a quadrant would then also reflect where it lies on the regenerative spectrum. You might tailor the list of examples to support this additional lens. For example, where would you place 'A war fought over oil that encourages global shifts to renewable energy by hiking up oil prices and restricting supply'? In which quadrant, and how far along the regenerative spectrum in each quadrant?

Take it further:

- Deepen understanding of regenerative dynamics with Principles of Life, Unique Gifts of Life, Recognising Practices of Care, the Regenerative Lens, the Regeneration Directory, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, or the World Mandala.
- To explore how you might situate tools like Regen-Degen Quadrants into your wider evaluation practice, see Twelve Principles for Transformation-focused Evaluation.
- With your new appreciation of cross-scale reciprocity, move into exploration of Horizon 3 or Horizon 2 in a Three Horizons process.
- To deepen understanding of the dilemmas in regenerative practice and how to navigate them, see Dilemma Navigation.

Tool 14: The Regenerative Lens

A tool for evaluating and pushing the ambition and imagination of envisioned futures

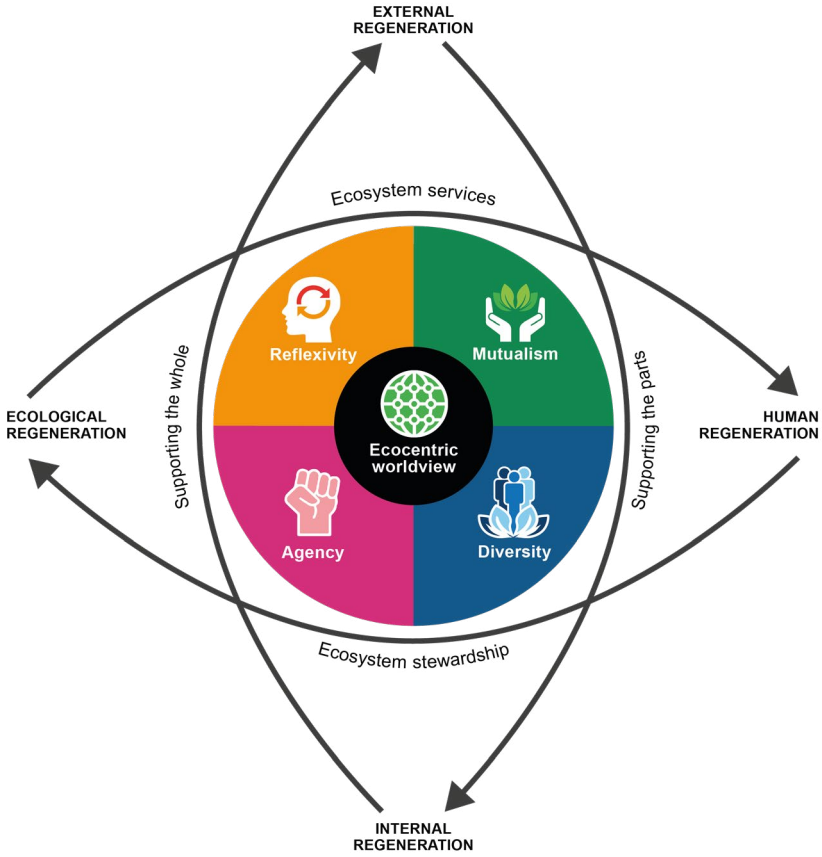
This tool is meant to be used as a lens to scrutinise existing patterns or visions of the future to evaluate their alignment to regenerative dynamics and qualities. It's one of the more complex tools in our guide because there are multiple dimensions to it, but it's also flexible, and one that we'd encourage people to adapt and experiment with. It's a relatively comprehensive framework of key qualities, dynamics and outcomes of regenerative systems, based on a wide synthesis of literature exploring the foundations of regenerative thinking[16].



What is it? A regenerative systems framework that can be applied in various kinds of evaluative exercises.

Facilitation difficulty: Intermediate

Time required: 1-2 hours.



Purpose and usefulness: without an audacious envisioned future or orientation, featuring radically different (and more regenerative) dynamics to current systems, we are unlikely to encourage the genuinely systemic or transformational change needed to overcome current global crises. Instead, the result will likely be relatively marginal reforms that fail to move us significantly beyond our status quo or beyond sustaining or restorative approaches (see the Regenerative Spiral). For example, a 'circular economy' is a common goal for transformations, but many approaches to circular economies fail to transform underlying extractive dynamics. Many visioning processes fail to adequately consider the underlying dynamics needed for a future to be 'regenerative', or fail to incorporate the new kinds of human-nature relations and economies that will be needed.

Tool 14: The Regenerative Lens

Group size: ideally at least 16 participants, and probably not more than 32.

Group stage: Intermediate

Useful prior knowledge: some familiarity with basic regenerative definitions or descriptions is assumed. Prior exposure to Future Stewards' Regenerative Video, the Regenerative Spiral, Regenerative Descriptions, Structures and Flows, Mutual Qualities of Life, Principles of Life, Nested Systems and Regen-Degen Quadrants is desirable.

Materials required: presentation slides and projector; printouts of the Regenerative Lens.

Origins and designers: originates from conceptual work by Bill Sharpe, Anthony Hodgson and Daniel Wahl, and additionally shaped by other members of Regenesis Group, H3Uni and International Futures Forum. Sam Buckton, Ioan Fazey, Bill Sharpe and colleagues designed the tool, building on the previous work of many others[16]. The diagram in this guide was rendered by Dave Gledhill of 1790 Creative.

Purpose and usefulness (continued): establishing ambitious visions is then necessary to encourage audacious action. Regenerative systems provide a powerful framing for this because they encourage you to shift underlying dynamics rather than just surface outcomes. The Regenerative Lens, which is based on a wide synthesis of literature about regenerative systems[16], is a useful 'lens' for critically evaluating existing things (e.g. Horizon 3 visions from Three Horizons, strategies, initiatives, systems, or regions) to assess the extent to which they are being regenerative in a multi-dimensional way, and for pushing their ambition, imagination, and regenerative alignment.

The Regenerative Lens defines a regenerative social-ecological system (e.g. a farm, food system, community, city, or region) as one that maintains mutually reinforcing cycles of health both within and beyond itself, particularly between humans and wider nature. It identifies reinforcing cycles between internal and external regeneration (see Regen-Degen Quadrants): the cycle between human regeneration and ecological regeneration is an important example to pay attention to. It also describes the human, ecological, and interdependent outcomes of regenerative systems, and identifies five key qualities for enabling regenerative systems, including an ecocentric worldview, mutualism, diversity, agency, and reflexivity. For more information, see the open-access paper on the Regenerative Lens by Sam Buckton and colleagues[16]. The suggested script in the facilitation guide below explains the framework in more detail. Regen-Degen Quadrants explains the reciprocity between internal and external regeneration.

When to use: the Regenerative Lens is relatively complex and may be hard for people to grasp without having already gone through some kind of introduction to regenerative systems; the Lens provides additional detail and depth. It could be used in a workshop or review setting. It can be applied as part of the exploration of Horizon 3 in a Three Horizons process. We've used the Regenerative Lens as a 'lens' through which to evaluate existing material, particularly envisioned futures from Three Horizons, and the extent of its alignment to the Lens (see Appendix 4).

Tool 14: The Regenerative Lens

Facilitator notes

Facilitation steps: one possible way of applying the Lens in evaluating existing material is provided below.

1. Introduce the framework. You could say something like:

   The Regenerative Lens is a conceptual framework that describes the important qualities, outcomes and dynamics of regenerative social-ecological systems, such as a farm, community, business, food system, city, or region. It is based on a wide synthesis of literature.

2. Explain the arrows in the framework. If your group has already done the Regen-Degen Quadrants exercise, you could remind people what that exercise showed about regenerative dynamics. You could say something like:

   The Lens defines a regenerative social-ecological system as one that maintains mutually reinforcing cycles of health both within and beyond itself, particularly between humans and wider nature, such that 'life creates conditions conducive to life'. For example, a regenerative business would not only support the health of its finances and employees, but also care for the wider ecosystems and life-support systems upon which the business depends. So you have this reciprocal relationship between inner and outer regeneration that creates resilient systems, and the example of this between humans and wider nature is a particularly important one to pay attention to.

3. If you are using the full version of the Regenerative Lens diagram in Appendix 4, introduce the 'outcomes'. You could say something like:

   When we use the term 'health' as an outcome of regenerative systems, what we really mean is that we're maximising the ability of Earth's biosphere to build, maintain, repair and reproduce itself, as well as adapt and evolve. For people, it means meeting everyone's full suite of needs, beyond just basic material needs, like our need for love, belonging, and meaning, and enabling ongoing cultural and intellectual evolution. These outcomes are of course interdependent.

Tool 14: The Regenerative Lens

Facilitator notes

Facilitation steps (continued):

4. Introduce the five 'qualities' that make up the 'iris' of the diagram. You could say something like:

   The Lens identifies five qualities that are vital for enabling regenerative systems.

   The first one is an ecocentric worldview, whereby people deeply embody an understanding that they are part of the web of life and not separate from it. Without this quality we are likely to fall back on human-centred approaches that fail to adequately support the health of wider nature.

   The second quality is mutualism. Mutualistic, cooperative and reciprocal relationships, including between humans and wider nature, are important for spiralling up the health of people and planet in self-reinforcing ways.

   The third quality is ecological and cultural diversity. This is particularly important for the resilience and creativity of regenerative systems.

   The fourth quality is agency for humans and non-humans to act regeneratively. This brings in ideas about justice and decolonisation, for instance.

   The fifth and final quality is the capacity of the system for continuous reflexivity, experimentation, adaptation and co-evolution, that enable it to dynamically navigate ever-changing conditions.

5. Introduce the material that participants will be evaluating (e.g. an envisioned future, a particular initiative, or a possible model of an organisation).

6. Split the group into breakouts for 15-20 minutes, each evaluating based on a specific dimension of the Lens (e.g. one group looking at mutualism, another group looking at diversity, a third group looking at the reinforcement between human and ecological regeneration, and so forth).

7. For the next 20-30 minutes, let the groups feed back in plenary and collectively reflect on what the overall messages are, including the implications for how the ambition and imagination of the material being scrutinised might be enhanced so that it incorporates regenerative dynamics and qualities.

Tool 14: The Regenerative Lens

Facilitator notes 

Facilitation tips:

- The Regenerative Lens is a tool to evaluate the extent to which an initiative is likely to hold regenerative dynamics or qualities. So careful design of the facilitation process – including how to ensure it remains engaging for participants rather than intellectually too heavy – is important to maintain focus.
- Remain cognisant of the Lens' limitations, which include its bias towards published academic literature that omits many Indigenous and Global South voices, for instance.

Adapting to online: the same facilitation steps can be applied in online settings, using an online whiteboard. Participants may find it useful to have an image of the evaluated material that they can place post-it notes on.

Other adaptations:

- For contexts where more detail is appropriate, a fuller version of the Regenerative Lens can be used which includes descriptions of the outcomes of regenerative systems as well as their dynamics and enabling qualities (Appendix 4). Where there is a greater risk of overwhelm, you could focus only on the five regenerative qualities, or only on the reinforcing dynamics, or only on regenerative outcomes, for instance.
- You could also use the Regenerative Lens as a personal reflective tool, or as a solo evaluator of something, or to structure a much more in-depth half-day or full-day workshop that focuses on the underlying dynamics of current and regenerative systems.

Tool 14: The Regenerative Lens

Facilitator notes

Take it further:

- Deepen understanding of regenerative dynamics with Principles of Life, Unique Gifts of Life, Recognising Practices of Care, Regen-Degen Quadrants, the Regeneration Directory, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, or the World Mandala.
- You could ask your group to search the Regeneration Directory to find organisations and initiatives that they feel are most strongly embodying different elements of the Regenerative Lens.
- Continue your Three Horizons journey with a focus on Horizon 2 transitional patterns of innovations.
- Bring this multi-dimensional understanding of regenerative systems into place-based regenerative practice (see Tools for bioregioning) with Recognising Practices of Care, the Regeneration Directory, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala.
- To explore how you might situate tools like the Regenerative Lens into your wider evaluation practice, see Twelve Principles for Transformation-focused Evaluation.
- Many other tools are available for evaluating the regenerative potential, qualities or dynamics of a system (e.g. a development initiative, economy, business, or even an individual person), including the interdependence of inner and outer regeneration, similarly to the Regenerative Lens. Examples include the Regenerative Development Evaluation Tool of Leah Gibbons and colleagues[55], Capital Institute's 8 Principles of a Regenerative Economy, Positive's Compass for Regenerative Business[56], the Compass for Just and Regenerative Business developed by Forum for the Future in partnership with the World Business Council for Sustainable Development[57], the Inner Development Goals[58–60], the DNA Diagnosis Wheel for regenerative leadership[5], the Biomimicry DesignLens[61], the Permaculture Design Principles[62], the Ecovillage Map of Regeneration[63], and Commonland's 4 Returns Framework[64].
- See Unearthodox's summary of its learnings about regeneration and regenerative practice from its Regenerative Futures programme, for a different perspective based on in-depth and diverse exploration. The summary includes the tensions inherent in regenerative practice, and what regeneration should *not* be.

Tool 15: Twelve Principles for Transformation-focused Evaluation

A tool for focusing evaluation practice on catalysing transformations towards regenerative futures

These principles provide a relatively comprehensive and holistic picture of the different aspects to keep in mind in evaluation practice for it to become geared towards catalysing transformations towards regenerative futures, based on a large literature review and synthesis.



What is it? A set of twelve principles for bringing an orientation towards transformation and regeneration into the way you evaluate things.

Facilitation difficulty: Beginner

Time required: flexible; as a tool for personal reflection, it might take 15-20 minutes for a scan through all the principles. A group exercise could potentially be a much more in-depth discussion of 1-2 hours or more.



Purpose and usefulness: evaluation practice – the process of determining the quality of something – profoundly shapes the action we choose to take in the world, and can be a powerful way of embedding a focus on regeneration and transformation more deeply into our work, lives, organisations and initiatives. While evaluation can be used as a more formal exercise – like an evaluation at the end of a project to understand its impacts – it can also be treated as a more continuous practice that applies particular lenses or criteria to what we see and do in the world, and an opportunity to increase our alignment to ideas about transformation and regeneration.

Tool 15: Twelve Principles for Transformation-focused Evaluation

Group size: flexible.

Group stage: Intermediate

Useful prior knowledge: some basic understanding of transformation and regeneration is assumed.

Materials required: the twelve principles, whether as a digital copy or a print-out.

Origins and designers: based on a large review and synthesis of transformation-focused evaluation literature by Sam Buckton and colleagues[66]. The visual summary above was created by Sam Buckton in Mural (Tactivos, Inc. dba Mural).

Purpose and usefulness (continued): however, many mainstream evaluation approaches are poorly suited to contexts of transformation and regenerative practice in complex systems. Widely used evaluation criteria tend to encourage relatively superficial or marginal improvements to existing systems (such as the OECD Development Assistance Committee criteria[65]) rather than transformational change, and maintain constraining power structures that marginalise more diverse forms of knowledge and practice.

The twelve principles in this tool therefore suggest what would be needed if evaluation practice took to heart a fundamentally different purpose of catalysing transformations towards regenerative futures. The principles recognise that it is not just about the evaluation criteria we use, but how we can actually embody a transformative and regenerative orientation in the way we carry out our evaluation practice more broadly. As the tool illustrates, a lot comes down to the kinds of questions we ask. Principles are useful in the context of regenerative practice because they are clear enough to act as guides, but are also more adaptable to different contexts than, say, a rule or regulation.

When to use: you could apply this tool in different ways. A more in-depth application might use it to design a whole monitoring, evaluation and learning system for a transformation initiative, for example. You could also use it to structure a review or evaluation exercise in a group, or for personal reflection. There are also many different things that you might be evaluating in contexts of transformation and regenerative practice: an initiative, project, programme, strategy, portfolio, policy, business, community, sector, food system, region, society...

Facilitation steps: the facilitation steps below are the basic reflective and evaluative questions that you might ask in association with each principle. You could apply the tool in a group (e.g. evaluating an initiative that the group belongs to) by delegating the principles to different breakout groups. If you have enough people, you could assign a single principle per breakout group, but each group could also explore several principles. Allow sufficient time for each breakout group to have an expansive, thoughtful discussion based on the questions associated with each principle, before feeding back in plenary.

Tool 15: Twelve Principles for Transformation-focused Evaluation

Facilitator notes

Facilitation steps (continued):

1. Consider the Complex Systems Principle. This encourages you to treat what you're evaluating as a nested, entangled system with complex interactions, rather than isolated, independent, 'closed' systems.
    - Are we keeping an eye on the 'bigger picture' and local-to-global linkages? (See Nested Systems and Regen-Degen Quadrants)
    - Are we remaining attentive to complex system dynamics? (E.g. emergent and unanticipated outcomes, trade-offs, spillover effects, synergies, feedbacks, rebound effects, lock-ins, tipping points…)
    - Are we thinking about outcomes across and between social, ecological and economic domains? (See Regenerative Dynamics with the 4 Returns Framework and the World Mandala)
    - Are we thinking about flows, dynamics and relationships as well as structures and more discrete things? (See Structures and Flows)
2. Consider the Context Principle. This encourages you to treat what you're evaluating as unique and in need of context-adapted evaluation.
    - Are we honouring the uniqueness of this context?
    - Are we adapting our approach appropriately to this context?
    - What ideas, commitments and enabling conditions can and should travel between contexts?
3. Consider the Detective Principle. This encourages you to be a mixed-methods detective, drawing on diverse tools and perspectives to make sense of changes that you're seeing.
    - How can we gain a richer understanding of what's going on?
    - Do we have a sufficient balance of quantitative and qualitative methods?
    - Are we obtaining a sufficient diversity of perspectives and integrating them appropriately?
    - What patterns and trends are we noticing in our system of interest?
    - What mechanisms underlie the change we're seeing?
    - What contributions are we making to change, in light of many other influences?

Tool 15: Twelve Principles for Transformation-focused Evaluation

Facilitator notes 

Facilitation steps (continued):

4. Consider the Developmental Principle. This encourages you to remain agile, adaptive and developmental in response to dynamic conditions.
    - Is our frequency of feedback sufficient to match the speed of change in our system?
    - What outcomes and ripple effects of our work are already evident?
    - Are we still doing relevant things?
    - Are we building on strengths?
    - Are we thinking sufficiently about the long term?
5. Consider the Foresight Principle. This encourages you to use foresight methods (such as Three Horizons) alongside evidence from the past and present.
    - What are our desired futures?
    - How can we push the ambition and imagination of our desired futures? (See the Regenerative Lens)
    - How might things play out in the future, given current trends and megatrends?
    - How future-proof are we?
6. Consider the Justice Principle. This encourages you to promote justice and decolonisation, and honour diverse and often marginalised voices and ways of knowing.
    - Are we challenging problematic power structures?
    - Are we being culturally sensitive and responsive?
    - Are we upholding the voices and rights of marginalised and colonised groups, including Indigenous and Global South societies?
    - Are we imposing particular worldviews?
    - Are we honouring diverse ways of knowing? (E.g. more embodied, tacit, practical and intuitive knowledge as well as rational and intellectual)

Facilitator notes 

Facilitation steps (continued):

7. Consider the Power Shift Principle. This encourages you to facilitate rather than direct as an evaluator, and shift power to the users of evaluations.
    - Who are the primary intended users of this evaluation?
    - Are we being sufficiently focused on the utilisation of our evaluation and its findings, and genuinely meeting users' needs?
    - Are we empowering evaluation users?
    - Are we building capacity for transformation, regenerative practice, and transformation-focused evaluation?
8. Consider the Autonomous Evaluation Principle. This encourages you to stand by your ethical stance and speak truth to power, particularly to the people and organisations that commission and fund evaluations.
    - Are the funders/commissioners of this work genuinely focused on transformation and regeneration?
    - Are we legitimising the unsustainable status quo?
    - Have we been given a genuine platform to speak truth to power?
    - Do we understand and take account of all the dimensions of power at play in how this evaluation has been set up?
9. Consider the Partnerships Principle. This encourages you to foster cross-boundary partnerships and focus on the alignment of different transformation efforts.
    - How strong is our partnership?
    - Is our partnership sufficiently diverse?
    - Are we fostering mutualistic partnerships of knowledge-sharing and action?
    - How can we effectively influence and accessibly share our progress, impacts and learning with others?
    - Are we being respectful in how we share knowledge?
    - How effectively are we aligning with other transformation and regeneration efforts?

Tool 15: Twelve Principles for Transformation-focused Evaluation

Facilitator notes 

Facilitation steps (continued):

10. Consider the Values Principle. This encourages you to 'put the value back into evaluation' by surfacing, questioning and uphold values.
    - What are the underlying values and assumptions at play, and where do they reveal tensions? (See Dilemma Navigation)
    - What values do we want – and need – to uphold?
    - Are our assumptions helpful and accurate?
    - Are we upholding transformation- and regeneration-focused values?
11. Consider the Learning Principle. This encourages you to develop evaluation cultures centred around ongoing experimentation and learning.
    - Are we remaining accountable for learning as well as successful transformation?
    - Can we see 'failures' as opportunities for learning?
    - Are we creating a wider culture of transformation-focused evaluation and learning?
    - Are we enabling deeper forms of learning and reflexivity about our underlying assumptions?
    - What are we learning about how to learn?
12. Consider the Transformation Principle. This encourages you to focus on evaluating and supporting transformations towards regenerative futures: the fundamental purpose of your evaluation.
    - Is transformational and regenerative intent being maintained?
    - Is rhetoric about transformation and regeneration being substantiated by action?
    - Are desirable transformations occurring?
    - Is there evidence of regenerative dynamics?
    - Is our action sufficiently reflecting the urgency of the need to transform towards regenerative futures?
    - How are we contributing to transformation or regeneration?
    - Are we regenerative?
    - How can we embody transformation and regeneration in our ways of working?

Tool 15: Twelve Principles for Transformation-focused Evaluation

Facilitator notes

Facilitation tips:

- Although not essential, it would make sense to cycle through the principles in the order presented, because they are grouped into themes: the first five relate to awareness of complexity, the next four relate more to power relations, and the last three relate to the deeper purpose and values of evaluation practice.
- The questions above have a collective focus ('we'). Just replace with 'I' for more personally directed reflective questions.
- You and your group might notice tensions as well as complementarities and reinforcement between the principles. For example, relatively independent and external evaluations may be important for holding powerful organisations to account, which might result in a clash between the Power Shift and Autonomous Evaluation Principle. Alternatively, over-contextualisation might reduce opportunities for cross-case learning (Context versus Partnerships Principle). There is also a balance between accepting systems' uncontrollability (Developmental Principle) and maintaining responsibility for supporting desired transformations (Transformation Principle). Lean into such tensions as engaging points of discussion.

Adapting to online: this tool can be applied online.

Other adaptations: the principles have also been turned into a set of haikus[67], which some people might find helpful in summarising the essence of each principle.

Take it further:

- There are many frameworks in this guide that can help to focus attention on transformation and regeneration in evaluation practice, including the Regenerative Spiral, the Window of Vitality, Principles of Life, Regen-Degen Quadrants, the Regenerative Lens, Three Horizons, H2+ Criteria, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, and the World Mandala. You may also find other examples in the Regeneration Directory.
- For more guidance on how these evaluation principles might be incorporated into the design of a monitoring, evaluation and learning system for a transformation-focused initiative, see work by Sam Buckton and colleagues based on the Food for the Future in North Yorkshire food system transformation initiative[68].

Tool 16: The Regeneration Directory

A tool for navigating the landscape of regenerative practice

A growing number of organisations and initiatives worldwide are orienting themselves towards regenerative practice, but few tools are available to help people navigate this diverse, dynamic landscape. The Regeneration Directory is an evolving searchable database of organisations and initiatives active in the arena of regenerative practice.



database



exercise



Organisation/initiative	URL	Broad type	Detailed type	Location of origin	Location of focus	Themes	Collaborators	Link to regeneration
1000 Landscapes for 1 Billion People	https://la...	Supporter of regener...	Network	Global	Global	Ecosystem restoration		1000 Landscapes for 1 Billion People (1000L...
7-Generation GTB	https://le...	Regenerative initiativ...	Convener, Tools	Greater Tkaronto bioregion, Canada	Greater Tkaronto bioregion, Canada	Bioregioning		7-Generation GTB is empowering people (g...
AVINA Stiftung	https://a...	Supporter of regener...	Foundation, Funder	Hurden, Switzerland	Europe	Regenerative food systems	ETH Zürich	AVINA Stiftung nurtures systemic change b...
AdaptivePurpose	https://a...	Supporter of regener...	Consultancy, Evaluator, Facilitation	Copenhagen, Denmark	Global	Regenerative futures, Reg...		We partner with change agents working to...
Advaya	https://a...	Supporter of regener...	Education and training, Healing, M...	London, UK	Global	Inner regeneration, Indige...		advaya invites you to relearn what it means ...
Alaska Outdoor Alliance	http://ala...	Supporter of regener...	Network, Advocacy	Sitka, Alaska, USA	Alaska, USA	Indigenous rights, Regene...		Building the best outdoor economy in the w...
Aliança Mar i Terra di Mallorca (Mallorca Land and Sea Alliance)	https://c...	Regenerative initiativ...	Network, Knowledge exchange	Mallorca, Balearic Islands, Spain	Mallorca, Balearic Islands, Spain	Bioregioning		The Aliança Mar i Terra di Mallorca (Mallorc...
Amazon Sacred Headwaters Alliance	https://c...	Regenerative initiativ...	Network, Advocacy	Napo, Pastaza, and Marañon River Ba...	Napo, Pastaza, and Marañon River Ba...	Indigenous rights		We are an Alliance of 30 Indigenous nations...
Antarctic Rights Initiative	https://a...	Supporter of regener...	Advocacy, Legal	Southern Hemisphere	Antarctica and Southern Ocean	Rights of Nature		Antarctic Rights campaigns for the recognit...
Bioferia	https://w...	Supporter of regener...	Festival	Buenos Aires, Argentina	Latin America			Big festival in Buenos Aires celebrating sust...
Bioregional Earth	https://w...	Supporter of regener...	Funder, Education and training	Barichara, Colombia	Global	Bioregioning		This is the gathering place for Earth Regene...
Bioregional Finance for Planetary Regeneration (The BioFi Pr...	https://w...	Supporter of regener...	Funder, Tools	San Francisco, California, USA	Global	Bioregioning		The ecological crisis requires urgent, large-s...
Bioregional Learning Alliance	https://w...	Supporter of regener...	Knowledge exchange, Network	Totnes, Devon, England, UK	Global	Bioregioning, Regenerativ...		From conversations to formal learning oppo...
Bioregional Learning Centre	https://w...	Supporter of regener...	Education and training	Totnes, Devon, England, UK	South Devon bioregion, England, UK	Bioregioning		We're here to open up conversations and bu...
Bioregional Weaving Labs	https://w...	Supporter of regener...	Living lab, Network, Knowledge ex...	Netherlands	Europe	Bioregioning	Ashoka, Commonlan...	BIOREGIONAL WEAVING LABS We are mobi...
Bioregioning Tayside	https://bi...	Regenerative initiativ...	Convener	Tayside, Scotland, UK	Tayside, Scotland, UK	Bioregioning		Our mission is to make visible all those in Ta...
Body as Earth	https://b...	Supporter of regener...	Business, Healing	Bali, Indonesia	Bali, Indonesia	Regenerative healing		Somatic Bodywork | Facilitation | Guidance | ...
Buckminster Fuller Institute	https://w...	Supporter of regener...	Network, Education and training, N...	San Francisco, California, USA	Global	Regenerative design, Reg...		We seek to honor the legacy of R. Buckmins...
Capital Institute	https://c...	Supporter of regener...	Thinktank, Non-profit	New York, New York State, USA	Global	Regenerative economics/...		The Capital Institute is a 501(c)3 non-profit ...
Cascadia Department of Bioregion	https://c...	Supporter of regener...	Network, Non-profit	Cascadia bioregion, North America	Cascadia bioregion, North America	Bioregioning		The Department of Bioregion is dedicated t...
Chumash Heritage National Marine Sanctuary	https://s...	Regenerative initiativ...	Nature reserve	California, USA	California, USA	Indigenous rights		Indigenous peoples co-custodians of huge n...
ClientEarth	https://w...	Supporter of regener...	Charity, Legal	Registered offices in UK, Belgium, Ge...	Global	Rights of Nature		ClientEarth is one of the world's most ambit...
Climate Water Project	https://cl...	Supporter of regener...	Research, Knowledge exchange, N...	USA	Global	Regenerative water		Focused on the field of regenerative water
Collaborative for Bioregional Action Learning and Transforma...	https://c...	Supporter of regener...	Network, Foundation, Knowledge e...	Casco Bay bioregion, Maine, USA	Global	Bioregioning		COBALT is ALL About Co-Creating A Deeper ...
Collective Transitions	https://w...	Supporter of regener...	Research, Education and training, ...	Switzerland	Global	Inner regeneration, Regen...		Building shared capacity for fostering and ...

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What is it? A Google Data Studio searchable database of organisations and initiatives worldwide implementing and supporting regenerative practice, based on a continually updated linked Google Sheet.

Facilitation difficulty: Beginner

Time required: flexible.

Group size: any.

Purpose and usefulness: despite a growing number of organisations and initiatives worldwide orienting themselves towards regenerative practice, few tools are available to help people navigate this diverse and dynamic landscape. Aside from those that strongly embody regenerative practice across their activities, and have often done so for millennia – such as Indigenous land stewards, and bioregioning initiatives (see Tools for bioregioning) – various charities, NGOs, social enterprises, consultancies, banks, foundations, thinktanks, advocacy groups, networks, alliances and communities are establishing themselves to build resources and capacities for regenerative practice and encourage its growth and spread worldwide. It can be challenging for regeneration-focused initiatives to situate themselves and their niche in this landscape, locate potential funders, collaborators, educational resources, and sources of inspiration, and gain a sense of what regenerative practice looks like on the ground. It also risks duplication of efforts and limited cross-case learning.

Tool 16: The Regeneration Directory

Group stage: Beginner

Useful prior knowledge: none.

Materials required: access to the Regeneration Directory online database.

Origins and designers: conceptualised and created by Sam Buckton.

Purpose and usefulness (continued): the Regeneration Directory aims to be a comprehensive online, open-access, searchable database of organisations and initiatives worldwide that are active in the arena of regenerative practice. It is a continuously evolving work in progress. Organisations and initiatives are screened for inclusion based on their alignment with regenerative practice. Frameworks used to aid this screening include the Regenerative Lens, 4 Returns Framework, and criteria developed by Unearthodox, amongst others. A particularly important criterion is the consideration of the health of both humans and non-human life, and how they reinforce each other, rather than focusing purely on human social health, or purely on non-human health, for instance. Organisations and initiatives suspected of greenwashing or 'regen-washing' and adopting shallow approaches to regeneration are not included. Our criteria are not fixed, however, and are also continually evolving as our understanding deepens.

When to use: you might use this tool when you want to:

- search for regeneration-focused organisations and initiatives in your area;
- get a sense of what niche your own organisation or initiative might be filling in the landscape of regenerative practice;
- search for potential funders and collaborators committed to regenerative practice;
- search for resources related to regenerative practice;
- search for sources of inspiration;
- get a sense of what regeneration looks like on the ground;
- or explore the landscape of regenerative practice more generally.

Tool 16: The Regeneration Directory

Facilitator notes

Facilitation steps: the database could be used in groups to explore different examples of regenerative work, such as to find those that feel most regenerative in their orientation and why, with small breakout groups exploring and then feeding back in plenary. You might set aside an hour for this in total (e.g. 10 minutes introduction, 30 minutes in breakout groups, and 20 minutes of plenary feedback).

Some tips on navigating, sorting and searching the database table:

- If the text in any cells is truncated, hover your cursor over it to display the full text in a pop-up.
- Click on a column name to sort the table according to that field (e.g. in alphabetical order of organisation/initiative name). Click on it again to reverse the order.
- To filter the table according to particular search criteria, use the search and filter boxes above the table. These allow you to filter according to 'Detailed type' (of initiative/organisation), 'Location of origin', 'Location of focus', and 'Themes', by typing text into the box. When you apply the filter, only the rows of the table containing the text of interest in the filtered field will be displayed. Note that the text boxes are case-sensitive, so remember to capitalise words appropriately!
- For instance, you could search for organisations and initiatives active in your own country, region or city (type into the location filter boxes), or search for funders (type 'Funder' into 'Detailed type').
- You can export the data as a spreadsheet if you want to work with the data in your own way.

The database is continually being updated. To suggest additions or modifications to the database, contact the corresponding author Sam Buckton (sam.buckton@york.ac.uk).

Facilitation tips: the Regenerative Directory excludes as much as it includes, and might create the wrong impression of regeneration as something new that only a few people are involved in. It is therefore important to emphasise that regeneration is something that takes place across and within all living systems, and that regenerative practices have been sustained by many cultures since time immemorial. The Regenerative Directory aims to highlight organisations and initiatives that embody and support regenerative practice in a relatively explicit and holistic way.

Tool 16: The Regeneration Directory

Facilitator notes 

Adapting to online: the same steps can be applied in online settings.

Other adaptations:

- In an educational setting, you could ask students to search the database and identify some key principles that they think regenerative organisations or initiatives are commonly applying.
- You could export the data and link them to mapping tools to visualise the organisations and initiatives in the database geographically.

Take it further:

- To drill down on where regenerative practice shows up in your home region, use Recognising Practices of Care.
- You might use actors identified in the Regeneration Directory for Regenerative Actor Mapping, Requests and Offers, Ambition Loops, or the World Mandala.
- For other databases of regenerative organisations and initiatives, see for example Regen10's Regenerative Landscape Initiatives.

Tools for bioregioning



To nurture the complexity of nature's regenerative systems, we need to think beyond the scale of our day-to-day actions, and consider the health of the wider regions and life-support systems that sustain us. A helpful scale to work with in regenerative practice is a 'bioregion'. Bioregions define an appropriate scale for regional self-reliance, responsible environmental action, and human participation in the community of life[69]. They refer 'both to geographical terrain and a terrain of consciousness – to a place and the ideas that have developed about how to live in that place'[70].

A bioregion's boundaries are ecologically and culturally defined and meaningful, rather than based purely on human politics and administrative boundaries.

For example, your bioregion might be approximated by a river catchment, valley, mountain or mountain range, desert, National Park, island, archipelago, bay, lake, or sea.

Reasons why bioregions are an important scale for regenerative practice include:

- Collective action is often most effectively founded in a shared narrative, stewardship of place, and regional identity; people often care strongly about their local region.
- Bioregions are large enough to make sense as a coherent whole for ecological functioning, whilst not being overwhelmingly large.
- Bioregions are often scales at which human communities can reach a high degree of self-reliance based on regional production from regionally generated resources (e.g. food and energy).

Bioregions can powerfully illustrate how humans and nature intertwine, since they typically feature strong cultural dimensions – how we relate to our bioregion, how it weaves into our history, stories and legends and underpins our economies and livelihoods, how our worldview shapes the boundaries of our bioregion, and so on – as well as biogeophysical dimensions (terrain, climate, etc.).

A growing number of 'bioregioning' initiatives around the world are working to restore the health of their local bioregions.

Such work often (implicitly or explicitly) focuses on supporting regenerative dynamics. Bioregioning is therefore itself an approach that can support action towards regenerative systems. For example, as part of your business seeking to be regenerative, you might recognise that your business needs to contribute in beneficial ways to its surrounding bioregion.

You might also be a collaboration of different organisations seeking to support regenerative dynamics at scale, such as transforming a regional food system. Bioregions, and lessons from bioregioning, are then helpful for orienting such work.

We therefore outline two tools below related to bioregioning: Compass Directions for Bioregional Mapping, which you might include in your explorations of what being regenerative might mean within your home region; and the Bioregional Quiz, which helps you delve deeper into understanding your bioregion as part of a regenerative initiative.

For more information on the many different approaches to bioregioning, see guides such as BioFi Project's *A Guide to Bioregional Mapping & Planning*[71], Commonland's 4 Returns Framework[64], Gaia Education's SDG Toolkit for Designing Community Projects, and resources from r3.0's Relational Bioregional Knowledge Commons, the Bioregional Learning Centre, and Regenesis Institute.

Tool 17: Compass Directions for Bioregional Mapping

A tool to help you get started in bioregional mapping

This is a simple tool for supporting regenerative initiatives to orient themselves in relation to their bioregion.



What is it? A self-led exercise in groups based on exploring a map in four compass directions.

Facilitation difficulty: Beginner

Time required: the more expansive version of this exercise should take 2-2.5 hours or longer. The shortest version could take around 1 hour.

Group size: would work with typical workshop group sizes of around 15-30 people.

Group stage: Beginner



Purpose and usefulness: thinking in terms of bioregions can feel unfamiliar to many of us. We might be used to thinking about our more immediate environment, such as our city, but we more rarely consider our location with respect to our wider bioregion – which might be a river catchment, a valley, a bay, or an island, for example. This tool provides a way to begin to map the relationship of your focal issue to your bioregion. It includes exploration of biogeophysical and cultural dimensions, and enhances collective consciousness of relationships, builds familiarity within groups and with bioregions, and helps to establish common purpose.

When to use: this tool is for a group with an interest in getting to know their region better. It is assumed that the majority of people present will live within the same region or are otherwise strongly associated with it. It could be applied before or after the Bioregional Quiz.

Tool 17: Compass Directions for Bioregional Mapping

Useful prior knowledge: none, although it is assumed that participants have an interest in regenerative practice and bioregioning.

Materials required: either physical maps of your local area, ideally showing biogeophysical features as well as man-made features (e.g. roads) – such as an Ordnance Survey Explorer map in the UK – or Google Maps, using the Satellite or Terrain basemap.

Origins and designers: designed by Sam Buckton and Ioan Fazey, loosely inspired by the Medicine Wheel of Indigenous American cultures (it is not intended to be a copy). The idea to create a tool of this nature came from Adrian Lovett, who used an example of the Yorkshire and Humber bioregion and its river catchments, the heart of which some might consider to be the famous Rose Window of York Minster.

Facilitation steps: the following steps describe the longer version of the exercise.

1. Explain how the exercise will work: participants will be asked to divide into breakout groups, and starting from their current location (e.g. from the room where the exercise is taking place), go outwards on their map along the compass points in turn to explore what biogeophysical or cultural features they notice. Associated with each direction is a broader question for the group to discuss.

2. Divide participants into breakout groups of three to six people, trying to ensure that each group contains a mix of people who have lived in the local region for most of their lives and/or were born there, and people who might have more recently arrived and hence have less knowledge and experience of the local bioregion and its culture. For in-person settings, each group should be sat around its own table. It could be helpful to have a co-facilitator in each group, or otherwise encourage one person to be in charge of reading the exercise instructions for each group.

3. Give each breakout group a printed copy of the exercise instructions below.

    1) *First, invite a discussion amongst your group about what sparked the beginning of each participant's interest in regenerative practice in your region. Try to give each person a chance to speak. Let the conversation flow for as long as it needs to, although if it goes beyond 15 minutes then you will probably want to redirect attention to the mapping.*

    2) *From your current location, travel **east**, towards the rising sun. What biogeophysical or cultural features (e.g. rivers, topography, lakes, islands, habitat changes, roads, settlements, nature reserves, political or administrative boundaries) do you notice along the way? Try to verbally describe how the land or water changes as you go. Stop if you reach a boundary that feels significant in some way: ask yourself whether this is a biogeophysical boundary, or a cultural boundary, or both. Do you reach a boundary that feels like a bioregional boundary? Spend up to 15 minutes exploring this direction.*

Tool 17: Compass Directions for Bioregional Mapping

Facilitator notes 

Facilitation steps (continued):

3) *Take a pause, and invite a discussion about the geographical history of each participants' family and ancestors. Have any families been based in the local region for multiple generations? For more recently arrived participants, where did their family originate from? Facilitate the conversation as before.*

4) *Turn back to the map. From your current location, now travel **north**, remaining attentive to notable features as before. Spend up to 15 minutes exploring this direction.*

5) *Take a pause, and invite a discussion about the legacy that each person would like to leave in their region for future generations. Facilitate the conversation as before.*

6) *Turn back to the map. From your current location, now travel **west**, towards the setting sun, remaining attentive to notable features as before. Spend up to 15 minutes exploring this direction.*

7) *Take a pause, and invite a discussion about what each person feels most driven to contribute to in supporting the health of their region. Facilitate the conversation as before.*

8) *Turn back to the map. From your current location, now travel **south**, remaining attentive to notable features as before. Spend up to 15 minutes exploring this direction.*

9) *If you had to sketch the boundaries of your bioregion based on what you've found during this exercise, where would you place them?*

10) *Is there anywhere on the map that for you geographically or culturally represents the 'heart' of your bioregion?*

4. Reconvene the participants in plenary and ask each group to share back what conclusions they came to regarding a) the boundaries of their bioregion, and b) the heart of their bioregion.

Tool 17: Compass Directions for Bioregional Mapping

Facilitator notes 

Facilitation tips:

- Make it clear that this is an in-depth exercise and that groups are welcome to take brief breaks as and when they need. Every 30 minutes (or whatever time allotted), nudge people to move on to the next compass direction if they haven't already.
- One of the risks of focusing on a bioregion is losing sight of other scales, and particularly larger scales, including the whole Earth. It therefore becomes important to maintain a focus on the relationship between the bioregion and other scales, which you could explore with your group using Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, or the World Mandala.

Adapting to online: the same steps could be applied in online settings with breakout groups. Every 30 minutes (or whatever time allotted), nudge people to move on to the next compass direction if they haven't already by broadcasting a message across the breakout groups.

Other adaptations:

- For a short version of this exercise, cut out the discussion questions (steps 1, 3, 5 and 7 in the written instructions). This would likely take up to 1.5 hours. For an even shorter version, ask participants to spend up to 10 minutes exploring each compass direction rather than 15, and cut out steps 9 and 10, instead simply asking for participants' thoughts about bioregional boundaries in the plenary sharing. This would likely take up to an hour.
- This tool could also be applied as a reflective exercise for individuals.

Tool 17: Compass Directions for Bioregional Mapping

Facilitator notes 

Take it further:

- A huge array of tools is available to support the biogeophysical mapping of bioregions, such as Story.Earth and GIS-based bioregional story maps.
- Based on this tool guide, you could deepen your place-based regenerative practice with Recognising Practices of Care, the Regeneration Directory, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala.

Tool 18: The Bioregional Quiz

A tool for establishing the extent of your bioregional knowledge

This tool is a fun way to help participants engage more deeply with their bioregion and make explicit aspects that may be unknown to them. It raises awareness of our often limited connectedness to nature and place, and how much we have to learn if we are to develop regenerative relationships with our region.

exercise

What is it? A quiz about your local bioregion.

Facilitation difficulty: Beginner

Time required: depends on how many questions you choose to include in the quiz. The original version of the quiz includes 20 questions, which you might give participants 30 minutes to answer. Along with some discussion afterwards, the whole exercise might come to 45 minutes. A more in-depth quiz and discussion might take 1 hour. But if you're pushed on time, you could just select fewer questions – ideally choose at least one question in each of the seven themes in the template provided in Appendix 5.



Purpose and usefulness: this quiz provides a fun way to engage people in discussions about what they recognise around them, reconnect people to their place – their home, town, city, region, or bioregion, and its nature, culture, and history – and open up possibilities for enhancing people's sense of care towards it.

When to use: you might use this after applying the Compass Directions for Bioregional Mapping, although not necessarily – it could be more of an initial exercise. It helps if you have a group (e.g. business representatives) that is interested in developing more of a regional awareness to support a more regenerative approach. The quiz could work well for young people.

Tool 18: The Bioregional Quiz

Group size: can be used by individuals for personal reflection, up to workshop group or class sizes of about 30 people.

Group stage: Beginner

Useful prior knowledge: none.

Materials required: print-outs or online copies of the quiz questions. Participants don't have to write down their answers, but if you prefer them to (e.g. if you use a peer-marking process), then make sure there is space on the quiz sheet to write answers, and provide pens for in-person settings.

Origins and designers: the questions in the quiz template in Appendix 5 are based on the Bioregional Quiz of Leonard Charles and colleagues[72], with additional questions and sections added by Sam Buckton.

Facilitation steps: after choosing your quiz questions (e.g. based on the original Bioregional Quiz of Leonard Charles and colleagues, our suggested template in Appendix 5, or other variations) you can apply this tool in different ways. At its simplest, use it as a personal interrogation tool and answer it by yourself to gauge your own bioregional awareness. You don't need to write down your answers. However, the quiz can also be applied as a group exercise – see the facilitation guide below.

The original Bioregional Quiz implies a maximum score of one point per question. You can use this approach if you want to keep things simple, but some of the questions require more extensive answers (e.g. 'Name five resident and five migratory birds in your area') so you could offer a higher points maximum for these questions (e.g. 10 points for the example given). The template provided in Appendix 5 suggests a points maximum per question, and in many cases shows how the points are broken down.

Suggested scoring brackets are as follows:

- 0-25% correct: where have you been all this time!?
- 26-50% correct: you have a reasonable grasp of the obvious.
- 51-75% correct: you're pretty tuned in.
- 76-100% correct: you're a bioregional superstar!

Below is a basic facilitation guide for applying the quiz in groups.

1. Before participants begin the quiz, lay down some ground rules:
    - Participants are not allowed to google the answers until after completing the quiz (although you could try an alternative version where googling is allowed – see 'Other adaptations' below).
    - Participants don't have to write down their answers (unless you are using a peer-marking process – see 'Other adaptations' below).
    - If participants are self-marking, they should do this honestly, and as they go.
    - If relevant, remind participants that some of the questions require more elaborate answers and have multiple points available. Participants should mark themselves fairly according to how elaborately they can answer the question, e.g. 1 point for a rudimentary answer, 2 points for a more detailed answer but still missing some key things, and 3 points for a well-rounded answer that covers all the key things.

Tool 18: The Bioregional Quiz

Facilitator notes 

Facilitation steps (continued):

2. Let participants start the quiz. You could ask people to do this silently and individually, or (the more fun way) encourage people to answer the quiz in pairs or threes and discuss their answers together.
3. Give participants a set amount of time to answer the quiz, depending on how many questions you've included. You could set an alarm that makes an animal noise when the time is up (perhaps the call of one of the birds in your bioregion?), or ring a bell, etc.
4. Give people a couple of minutes to add up their scores.
5. Ask if anyone would be happy to share their score with the group, what they did best on, and where they struggled the most.
6. If your group is on a longer journey of getting to know their bioregion and enhance its regenerative dynamics, you could ask what people think are the most important areas for the group to learn more about going forward.

Facilitation tips:

- This tool is likely to work best as a fun, interactive, and relatively informal exercise. Focus on using the tool to raise awareness about your bioregion and its richness, rather than criticise how little people know.
- Consider having a reflective discussion about how participants feel after taking the quiz.

Adapting to online: the same steps can be applied online, although peer-marking might be trickier; make sure there are editable answer boxes on the quiz sheet.

Other adaptations:

- This is a highly flexible tool and you can easily adapt it to your particular group, context, and time constraints. Feel free to make up some more questions of your own. Some of the questions in pre-existing templates are relevant only to terrestrial bioregions; for aquatic bioregions, take these questions out, and add in additional relevant ones if necessary.

Tool 18: The Bioregional Quiz

Facilitator notes

Other adaptations (continued):

- You could alternatively use a peer-marking process where each person hands their quiz sheet to the person next to them to mark. Give markers a set amount of time to mark the quiz, depending on the number of questions. Invite people to discuss their marks in their groups as they're marking. At the end of the marking time, markers should hand the sheets back to their owners.
- An alternative way of applying the quiz would be to let people search for the answers and ask their colleagues for help during the quiz, or to allot some dedicated time to answer-finding after the quiz – in other words, using the quiz as an opportunity to start plugging gaps in people's knowledge about their bioregion.

Take it further:

- Deepen your place-based regenerative practice with Recognising Practices of Care, the Regeneration Directory, Compass Directions for Bioregional Mapping, Regenerative Actor Mapping, or the Wheel of Wisdom.
- There are many routes into raising people's awareness of the non-human life in their region, which you might identify with the help of Recognising Practices of Care. For example, nature conservation charities are often at the forefront of public engagement to raise the profile of local wildlife, and foraging also provides a powerful way of reviving cultural connections between humans, nature and place (Box 3). Apps such as iNaturalist and Merlin, which feature increasingly sophisticated AI-powered species identification, make it easy for anyone with a mobile phone to find out what wildlife lives around them. The City Nature Challenge is an example of a global public engagement event to raise awareness of local wildlife (using iNaturalist).

Box 3: Foraging as a way to revive cultural connections between humans, nature and place



Foraging involves the gathering of wild natural resources for human use such as for food, drink, medicine, materials, fuel, religious and spiritual ceremony, and other purposes. It is distinct from cultivation, which involves more active human management and manipulation of crops.

Because foraging involves learning about and attuning to the nature around us, how its patterns unfold over the seasons, and how people have interacted with it through history, it can help people to reconnect to the cycles of life, their local area, and cultural roots.

Such knowledge and understanding about nature and our relationship to it, developed through foraging, has been central to many Indigenous cultures for millennia.

In the UK, foraging (particularly of plants) has been popularised by books such as *Food for Free* by Richard Mabey[73], although it is far from a common practice, particularly in urbanised populations. Many older traditions (e.g. from Celtic and druidic cultures) have all but vanished, although some have been preserved or reinterpreted.

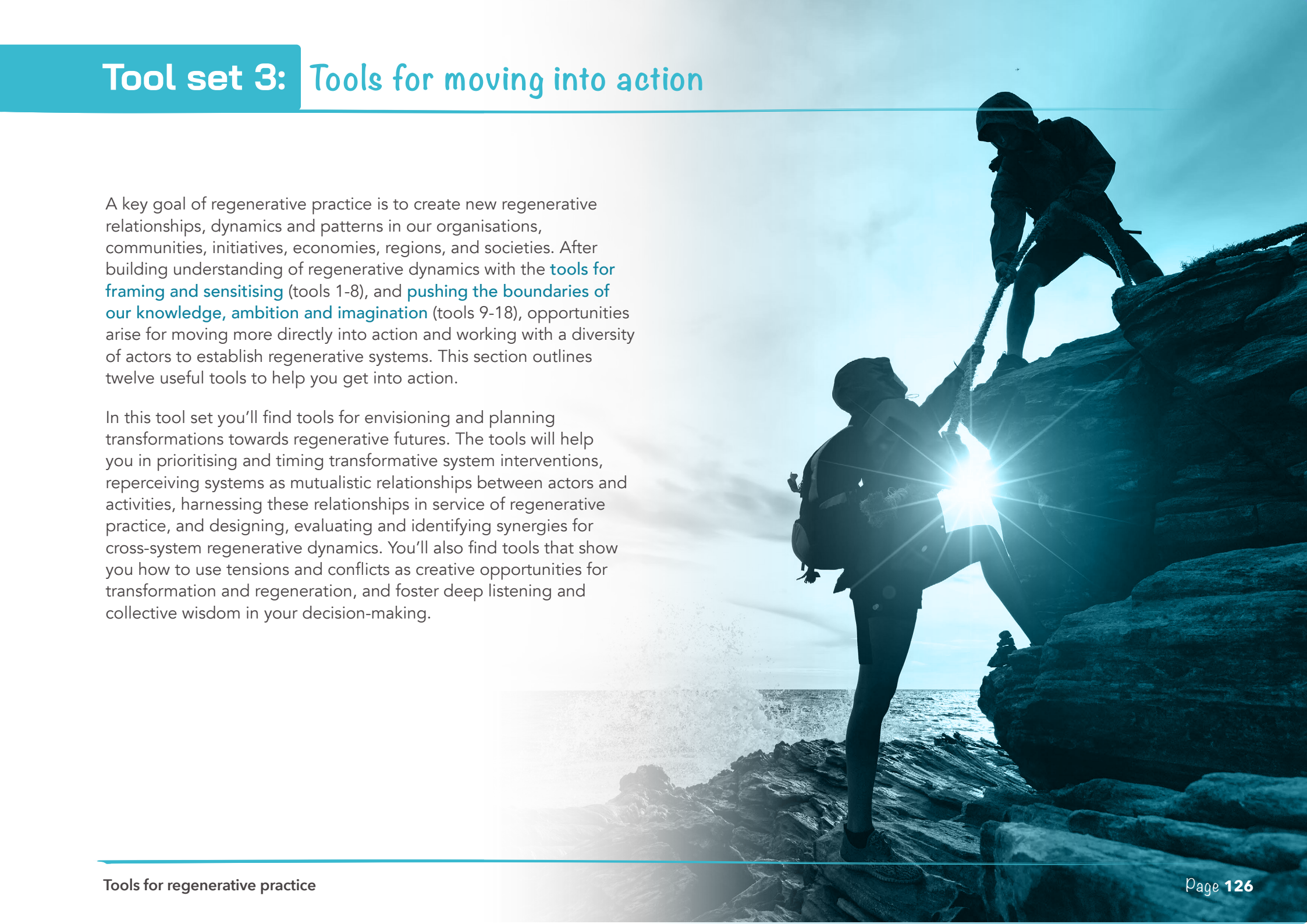
If you know teachers or facilitators who are confident in foraging, knowledgeable about cultural uses of plants and other wildlife, and familiar with local foraging sites, then organising a foraging excursion for your group could be a powerful way of reviving these rich cultural connections between humans, nature, place and season[74], including as part of a bioregioning learning journey (see Tools for bioregioning). Foraging also builds inherently practical skills to diversify people's diets and sources of healthcare, amongst other useful aspects. A foraging walk could be as simple as blackberry-picking.

All foraging should be carried out respectfully, without over-harvesting, and with great care to avoid toxic species of plants and fungi (learning how to recognise these is also a key part of foraging practice). In the UK, websites including Totally Wild UK, Wild Food UK, Robin Harford's Eatweeds, and the Woodland Trust have useful free online plant foraging and identification guides. Plants For A Future contains a more global database of plants and their uses. While apps such as iNaturalist are improving all the time in species identification accuracy, they are by no means infallible and should not be relied upon as an identification authority, particularly for fungi. Working with Indigenous knowledge-keepers requires the following of appropriate protocols.

Tool set 3: Tools for moving into action

A key goal of regenerative practice is to create new regenerative relationships, dynamics and patterns in our organisations, communities, initiatives, economies, regions, and societies. After building understanding of regenerative dynamics with the tools for framing and sensitising (tools 1-8), and pushing the boundaries of our knowledge, ambition and imagination (tools 9-18), opportunities arise for moving more directly into action and working with a diversity of actors to establish regenerative systems. This section outlines twelve useful tools to help you get into action.

In this tool set you'll find tools for envisioning and planning transformations towards regenerative futures. The tools will help you in prioritising and timing transformative system interventions, reperceiving systems as mutualistic relationships between actors and activities, harnessing these relationships in service of regenerative practice, and designing, evaluating and identifying synergies for cross-system regenerative dynamics. You'll also find tools that show you how to use tensions and conflicts as creative opportunities for transformation and regeneration, and foster deep listening and collective wisdom in your decision-making.



Tool 19: Three Horizons

A tool for envisioning and planning transformations towards regenerative futures

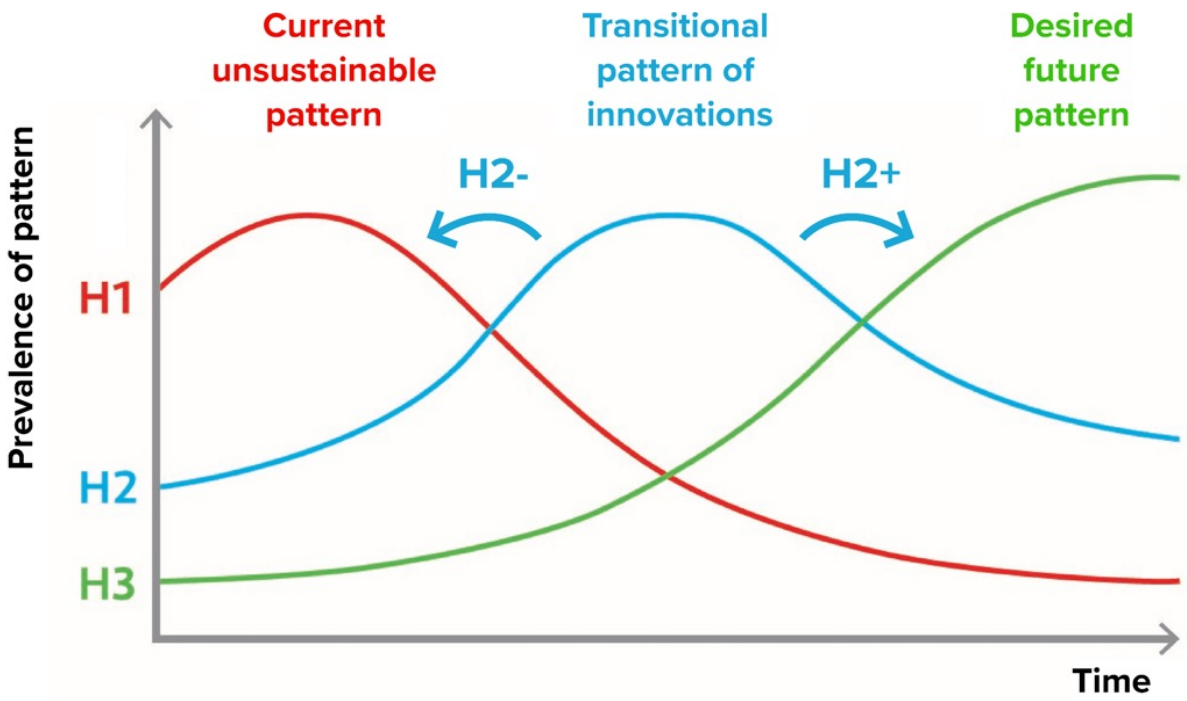
Three Horizons is hugely valuable for anyone exploring pathways of transformation. It's a simple, easily understood, flexible tool that's being used by a growing community of organisations and initiatives around the world. Three Horizons uses a framework for exploring how transformational change might come about – such as towards a regenerative future – and for exploring how action in the present can start growing new regenerative relationships and patterns. It can be used as a foundational approach around which other tools from this guide can be applied.



What is it? A simple framework and process for structuring dialogue about how to support transformation towards desired futures.

Facilitation difficulty: Intermediate to Advanced

– depending on depth of process.



Purpose and usefulness: Three Horizons provides a simple but powerful framework and associated language for 'mapping out' and convening dialogue about how societal patterns are to become regenerative. Such change requires transformation – a fundamental, systemic change involving shifts in underlying dynamics, power structures, values, assumptions, purpose, and worldviews – rather than superficial or marginal change. Without understanding regeneration as involving a process of transformation, we risk 'regen-washing' and relatively superficial regenerative practice. Regenerative systems ultimately also rely on the development of new regenerative relationships between actors – both human and non-human – and therefore some understanding of where there is already potential and momentum to build on.

Tool 19: Three Horizons

Time required: typically a minimum of one half-day, up to three whole days or more (with between-workshop surveys and working group activity) for more in-depth applications – so it could take as long as a year in total!

Group size: typically at least ten or so people, up to a maximum of around 30. It can be applied with many different group sizes, however; it has been used anywhere from an individual reflective tool up to groups as large as 340 people[79].

Group stage: Beginner

Useful prior knowledge: Future Stewards' Regenerative Video; Structures and Flows.

Materials required: in-person Three Horizons workshops generally require materials such as post-it notes, pens, whiteboards and flipcharts as well as a projector and slides.

Origins and designers: originally adapted from McKinsey & Company's 'three horizons of growth' framework from around 2006 onwards by Anthony Hodgson, Bill Sharpe, Andrew Curry and Ian Page. These people along with Graham Leicester, Andrew Lyon and Ioan Fazey have subsequently shaped the practice of Three Horizons[76–78].

Purpose and usefulness (continued): depending on how it is used, Three Horizons can: help participants work through complex issues; identify actors and actions that genuinely support transformation; and identify the core values, assumptions and worldviews underpinning our degenerative patterns and how they need to change to support transformations. Three Horizons has been described as the 'patterning of hope'[75] given the way it raises awareness of how the abundance of innovative actors, organisations and initiatives already active in the present can give rise to new futures, fostering inspiration and proaction.

When to use: for a group of people deepening their understanding of how to support change towards regenerative futures, including in strategic planning. Three Horizons has been used in a diverse range of contexts around the world.

Facilitation steps: in Three Horizons, the future is viewed as three horizons, or societal patterns:

- Horizon 1 (H1) is the pattern that dominates the present, but is declining as many aspects of it – ways of working, values, assumptions, technologies, and so on – become less fit for purpose as the wider environment changes.
- Horizon 3 (H3) represents an envisioned, radically different future that aligns with the wider emerging context – the sense of what a collective wants to bring into being. This might be framed as a regenerative future.
- Horizon 2 (H2) is a transitional pattern of innovations, where actions are strategically oriented to help create space for the longer-term H3 to emerge, such as the building of new networks of regenerative relationships.
- Some innovations (H2-) are captured by H1, extend its lifespan and delay the diffusion of H3, whereas others (H2+) create space for H3 to diffuse and ultimately reconfigure the system.

The scaling used in the graph is not intended to be taken literally, but rather for rough qualitative comparison. 'Prevalence' describes the relative prevalence of a horizon (e.g. the amount of resources it holds or transmits, or the proportion of human activity taking place related to the horizon). Time flows from left to right: the present is found where H1 is dominant, and all information to the right of this is in the future.

Tool 19: Three Horizons

Facilitator notes

Facilitation steps (continued): various facilitation guides for Three Horizons are available, e.g. in the H3Uni Resource Library, the International Futures Forum Practice Centre, and the Three Horizons Toolkit by Louisa Petchey from the Future Generations Commissioner for Wales and Public Health Wales[80]. These resources, and many others related to Three Horizons, are additionally all available from Future Stewards' resources page. See also the journal article from 2016 about Three Horizons and its use[77]. See the Three Horizons Use Case Library and Three Horizons' Wikipedia page for examples of how the framework has been applied. We invite you to use these pre-existing resources to find out more about facilitating Three Horizons.

Broadly speaking, a minimum Three Horizons process would involve exploration of H1, H3, and the contrast in values and worldviews between them (in that order), with breakout groups writing ideas on post-it notes, followed by plenary feedback for each part and placing post-it notes on a large Three Horizons diagram at the front of the room. This can usually be achieved in half a day. More in-depth processes would thematically cluster results and explore H2 after the value contrasts.

Facilitation tips: see the resources above. In addition:

- Prime participants for using Three Horizons by sending them a link to Future Stewards' 6-minute introductory video to Three Horizons to watch prior to the first workshop. Kate Raworth provides an alternative, 7-minute introductory video.
- The order in which the three horizons are explored is important for regenerative practice. By exploring H1, followed by H3, followed by H2, a powerful contrast can first be established between current degenerative patterns and an envisioned regenerative future, which then enables better decisions about the kind of action that needs to be supported in H2.
- A 'value contrasts' exercise, where the core values, worldviews, assumptions and paradigms underlying H1 and H3 are identified, is very useful for reinforcing the transformational contrast between an envisioned regenerative future and current societal patterns. Do this exercise after exploring H1 and H3, and before exploration of H2.

Tool 19: Three Horizons

Facilitator notes 

Facilitation tips (continued):

- It is worth noting that all three horizons are present at any one time: the future is not a complete obliteration of H1 (some H1 aspects may be important to maintain), and nor is H3 only something in the far-off future (pockets of regenerative practice already exist today in small, isolated, radical niches). This focuses attention on how to reinforce, grow and cohere existing regenerative practice rather than expending time and effort creating something entirely new.
- It is important to push the ambition and imagination of your envisioned future to establish a stronger contrast with current patterns, and therefore encourage more transformative action in the present. You can use many of the other tools in our guide to do this (see 'Take it further' below).
- Particularly when applying Three Horizons in contexts of transforming large-scale systems towards regenerative futures (e.g. regional food systems), it becomes important to combine exploration of H2 with other tools in this guide including Three Stages of Change, H2+ Criteria, Reinforcement Clustering and Requests and Offers, to focus attention on the existing actors who must be convened, cohered and supported to drive transformation, identify action domains (groups of actors whose activities mutually reinforce each other), and create more joined-up, cross-system frameworks for action.

Adapting to online: Three Horizons can also be applied effectively in online settings, using online whiteboards.

Other adaptations:

- Three Horizons is a simple framework that is likely to be understood by most people. It is widely applicable in many different contexts and also highly adaptable.
- Some people describe the vertical axis of the Three Horizons graph differently, such as 'fitness for purpose', 'energy', or 'dominance', which may make more sense to some audiences. Simply the word 'pattern' is sometimes used here, understood as the relative scale and scope of the horizon patterns, although some may prefer 'prevalence of pattern' or similar to add clarity.

Tool 19: Three Horizons

Facilitator notes

Other adaptations (continued):

- Although use of the term 'pattern' is usually intuitive for participants, the word 'system' could alternatively be used. We generally prefer 'pattern' because it sounds less mechanical and more fluid.
- Red is typically used for H1, but brown or purple could alternatively be used to cater for colour-blind participants (green is typically used for H3). Brown might help to evoke the idea of H1 decaying over time, like an autumn leaf. Yellow is sometimes used for 'predetermined factors' (see below).
- There are many other exercises that can be carried out in a Three Horizons context beyond the essential H1, H3, value contrasts, and H2. These include explorations of: predetermined factors or changes (megatrends that transformations will inevitably have to align to, such as the spread of artificial intelligence, or climate change); 'pockets of the future in the present' (H3-in-H1), or radical niche initiatives and practices that exist today and already embody H3 and its values; and aspects of current mainstream systems that are important to maintain in the future (H1-in-H3)[77].
- Three Horizons can be a powerful way of evaluating existing systems. It is likely to make you think more critically about the innovations that you see being promoted in society – are they H2+, H2-, or ambiguous? Are they genuinely going to help a regenerative future to emerge, or just prop up existing degenerative patterns? Are the people you know Horizon 1 managers, Horizon 2 entrepreneurs, or H3 visionaries (see Future Stewards' video on the 'three voices' of change)? Can you spot 'pockets of the future in the present' who are already embodying regenerative values and applying regenerative practice?
- You could also use Three Horizons as a tool to develop your own personal regenerative practice. Use it to map out your own personal three horizons: envision your personal regenerative future where your health, work and life are flourishing in ways that also support the health of the wider systems around you (see Regen-Degen Quadrants), the current challenges and barriers you're facing, and the stepping stones that might help you get to your desired future. As in any Three Horizons process, this works best if you are audacious and visionary with regards to your H3. Also consider your life holistically: not just your professional career, but your personal life too, your health, relationships, location, home, etc.

Tool 19: Three Horizons

Facilitator notes

Take it further:

- Three Horizons provides an overarching framework within which many other tools can be integrated.
- Three Stages of Change and Adaptive Waves provide ways of deepening appreciation of the different phases of change in Three Horizons and how to work strategically with them.
- Pair Three Horizons with tools such as the Regenerative Spiral, Regenerative Descriptions, Mutual Qualities of Life, the Window of Vitality, Principles of Life, Unique Gifts of Life, Nested Systems, Regen-Degen Quadrants, the Regenerative Lens, or the World Mandala, in order to envision radically different, regenerative futures.
- Tools including H2+ Criteria, the Regenerative Lens, Regenerative Actor Mapping, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework and the World Mandala could be used to identify, scrutinise and prioritise transformative H2+ actions or interventions identified in a Three Horizons process, to start building more mutualistic and regenerative dynamics between actors.
- Use Reinforcement Clustering and Requests and Offers as part of your Horizon 2 exploration to help people reperceive systems as mutualistic, reinforcing relationships between existing actors and activities.
- You could apply Three Horizons as part of place-based regenerative practice (see Tools for bioregioning), accompanied by tools such as Recognising Practices of Care, the Regeneration Directory, Compass Directions for Bioregional Mapping, the Bioregional Quiz, Regenerative Actor Mapping, or the World Mandala, to help identify important bioregional H2+ actors.
- To explore how you might situate tools like Three Horizons into your wider evaluation practice, see Twelve Principles for Transformation-focused Evaluation.
- Use Dilemma Navigation or the Wheel of Wisdom to deepen understanding of the dilemmas and challenging questions inherent in transformations and how to navigate them.
- There are many other extensions of Three Horizons, such as exploring the deep history and power dynamics that led to the degenerative patterns of H1, different archetypes of Three Horizons system transition (e.g. investment bubbles, or collapse and renewal) and their implications for governance[81], or investigating the coherence in findings between Three Horizons processes in different regions[82]. Different futures methods have also been incorporated alongside Three Horizons, such as scenario planning and Otto Scharmer's Theory U framework[83]. The Berkana Institute's Two Loops model is similar to Three Horizons and Theory U, with a greater focus on how current patterns 'let go' and deal with loss to become new patterns[84].

Tool 20: Three Stages of Change

A tool for framing the key stages of transformations towards regenerative futures in terms of *what actors do*

This simple add-on to Three Horizons helps people plan strategically for different phases of change in a transformation – in the case of regenerative practice, transformation towards a regenerative system.

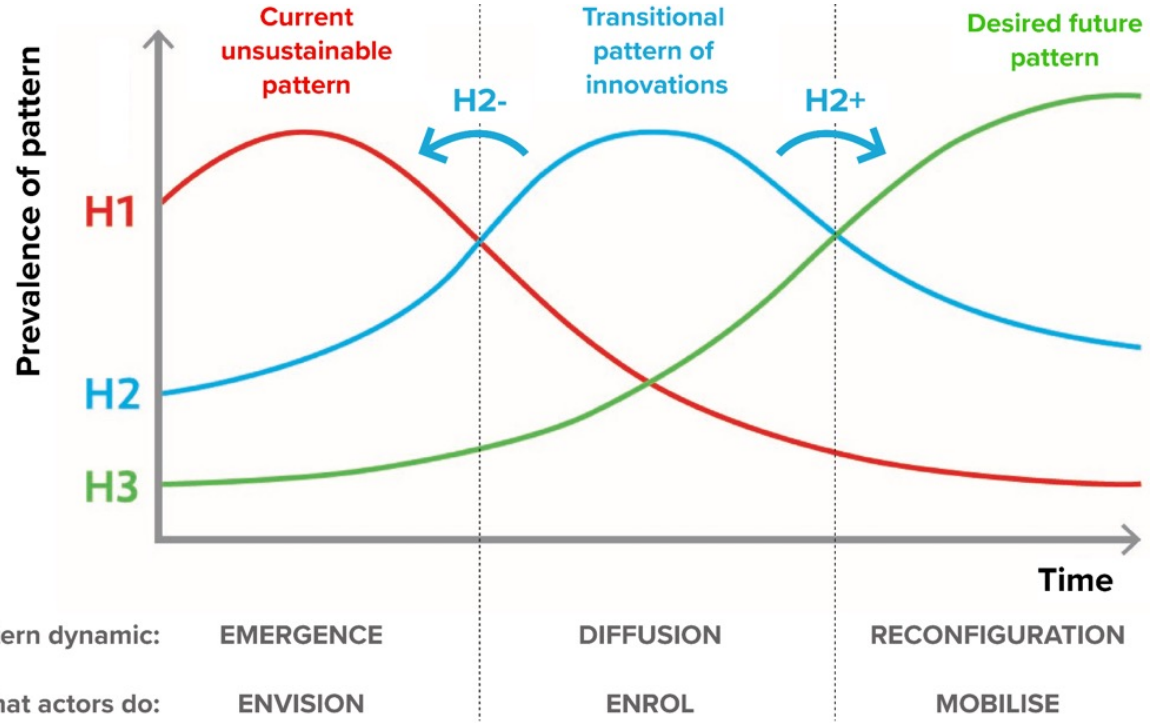
framing visual aid exercise

What is it? A framework compatible with Three Horizons that conceptualises transformational change in three distinct stages of transition, in terms of what actors do: 1) envision; 2) enrol; and 3) mobilise.

Facilitation difficulty: Beginner

Time required: 20 minutes.

Group size: works with typical workshop group sizes of around 15-30 people, although could also potentially work with larger groups.



Purpose and usefulness: the Three Stages of Change framing helps people to conceptualise the different stages of change needed to bring a radically different regenerative future into being, and therefore make better-informed strategic decisions about their action in the present. Importantly, it reframes the pattern dynamics described in traditional socio-technical transitions theory[85,86] (e.g. emergence, diffusion and reconfiguration) in terms of *what actors do*. This creates a more action-oriented framing, given that it is the actors who can be convened to support action and enrolled into transformation efforts.

Tool 20: Three Stages of Change

Group stage: Intermediate

Useful prior knowledge: basic knowledge of the Three Horizons framework is assumed. Also useful are Future Stewards' Regenerative Video, Structures and Flows, and Adaptive Waves.

Materials required: presented slides or whiteboard/flipchart and pen(s).

Origins and designers: designed by Bill Sharpe based on socio-technical transition theory and the multi-level perspective, where niche innovations sometimes grow to become new 'regimes' and potentially even go on to transform the wider 'landscape' of regimes[85,86], combined with the Three Horizons framework. The tool also has foundations in actor network theory and its application to innovating new value-creating systems[51].

Purpose and usefulness (continued): the initial envisioning stage involves collectively imagining the desired regenerative future that we want to bring into being, e.g. via a Three Horizons process, and starting to cohere a core group of catalysts with a common purpose of stimulating transformation. The enrolment stage involves bringing more actors on board, cohered by their shared vision, to form new regenerative relationships and networks and create a 'Minimum Viable Pattern': the minimum set of actors and relationships required to start a process of system transformation (Box 4). In the final mobilisation stage, the momentum of the Minimum Viable Pattern draws in more and more actors from the wider system until it becomes the new dominant pattern in society.

When to use: use this as a quick introductory framing and visual aid for:

- a group of people developing a strategy of change towards a regenerative future;
- deepening exploration of Horizon 2 in a Three Horizons process;
- and in combination with Minimum Viable Pattern, Regenerative Actor Mapping, Requests and Offers, and Ambition Loops.

Facilitation steps:

1. Present a slide showing the Three Stages of Change diagram, or draw it live on a whiteboard/flipchart as you talk through it.
2. Introduce the framing by saying something like:

   A helpful way to think about how we organise and plan for transformation is to think about three distinct stages of change, which is based on Frank Geels' multi-level perspective and socio-technical transitions theory, as well as actor network theory.

3. Explain the envisioning stage. You could say:

   The envisioning stage involves collectively imagining the desired regenerative future that we want to bring into being, and starting to cohere a core group of catalysts with a common purpose of stimulating transformation.

   If the group has already been involved in a Three Horizons process, you could refer to the exploration of Horizon 3 as an example of the envisioning stage.

Tool 20: Three Stages of Change

Facilitator notes

Facilitation steps (continued):

4. Explain the enrolment stage. You could say:

   The enrolment stage involves bringing more actors on board, cohered by their shared vision, to form new regenerative relationships and networks and create a 'Minimum Viable Pattern' – the minimum set of actors and relationships required to start a process of system transformation.

5. Explain the mobilisation stage. You could say:

   In the final mobilisation stage, the momentum of the Minimum Viable Pattern draws in more and more actors from the wider system until it becomes the new dominant pattern in society.

6. Explain how those stages relate to the stages of socio-technical transitions. You could say:

   The result of this is that you get the 'emergence' of the third horizon pattern, its 'diffusion' and spread across the system, and ultimately the 'reconfiguration' of the whole system as the new third horizon pattern becomes dominant.

7. Ask participants to spend 10 minutes in small breakout groups exploring where they see themselves, or other actors, in relation to the three stages. Then invite feedback from the groups in plenary and facilitate an open discussion.

8. Close off the introductory session by saying something like:

   So what we're going to focus on now is exploring how we could enrol actors to create the Minimum Viable Pattern that we need to get things moving.

Facilitation tips:

- Prime participants for working with this framing by sending them a link to Future Stewards' 4-minute introductory video to the Three Stages of Change to watch prior to your session.
- If possible, think of an example from your own life where you enrolled yourself as an early adopter into some new product or service, and how that was a step on the way to it becoming more widespread in your community or society.

Tool 20: Three Stages of Change

Facilitator notes 

Facilitation tips (continued):

- Note that socio-technical transitions theory offers a retrospective analysis of how change has historically unfolded, whereas Three Horizons is a prospective framework for understanding how change could happen. Mapping the three stages of change onto the Three Horizons might therefore be confusing for people who are more familiar with socio-technical transitions theory. In such cases, you can explain the different purposes of the two frameworks, and emphasise that the Three Stages of Change is a simplification of how change actually takes place in complex systems.
- Note also that the mapping of the pattern dynamic (emergence, diffusion and reconfiguration) onto Three Horizons refers primarily to Horizon 3 in relation to Horizon 1. In the first stage, Horizon 3 is only just beginning to emerge. In the second stage, Horizon 2 (i.e. H2+) action is helping Horizon 3 to diffuse. In the third stage, Horizon 1 is being reconfigured as Horizon 3 replaces it. This is a simplification of how socio-technical transitions theory considers transitions to happen.

Adapting to online: the same facilitation steps can be applied in online settings, using an online whiteboard if drawing from scratch.

Other adaptations: see Adaptive Waves as an alternative approach to thinking about the different phases of transitions and their implications for system interventions.

Take it further:

- If you have more time, you could ask the group to reflect on the system in question (e.g. the local food system, or the change initiative itself) and suggest where they think it is in relation to the Three Stages of Change. Is it still in the envisioning stage? Has it started to move into the mobilisation stage? Is it already starting to mobilise other parts of the system?
- To get further into action-planning, see H2+ Criteria, Reinforcement Clustering, Regenerative Actor Mapping, Requests and Offers, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, or the World Mandala.

Box 4: Minimum Viable Pattern



A 'Minimum Viable Pattern' is a term introduced by Bill Sharpe to describe the minimum set of actors and relationships required to start a process of system transformation.

The power structures that hold current systems in place can be very resistant to direct change. Often, an effective starting point is not to push for sweeping top-down change straight away, but to work with existing agency, energy and momentum to create something small (but which embodies the values and dynamics of a radically different kind of pattern), which further actors can then be enrolled into, and builds momentum over time from the ground up. This is a Minimum Viable Pattern, riffing on Eric Ries' idea of a 'minimum viable product' from entrepreneurial product design[87].

Minimum Viable Patterns are part of the 'enrolment' stage of system transition (see Three Stages of Change). An example of a Minimum Viable Pattern might be an Ambition Loop such as the introduction of doorstep recycling in the UK, which is described further in the Ambition Loops facilitation guide and Oliver Broadbent's book *The Pattern Book for Regenerative Design*[88]. For further introduction to Minimum Viable Patterns, see Future Stewards' 4-minute introductory video to the Three Stages of Change (the image shown here is a still from the video; animation by The Media Workshop Ltd).

Tool 21: H2+ Criteria

A tool for identifying and prioritising transformative actors, initiatives and actions

These criteria add clarity to the concept of H2+ and H2- innovations in Three Horizons to help people become more discerning about the kind of action that will genuinely encourage transformation and regeneration (H2+) versus action that is likely to be co-opted to reinforce the status quo (H2-).



What is it? A set of criteria for identifying transformative actors and initiatives in a Three Horizons context.

Facilitation difficulty: Beginner

Time required: introducing the concept of H2+/H2- takes about 3 minutes. As part of an extensive Three Horizons process, a consultation phase (where working groups of participants go out and identify H2+ actors and initiatives using the criteria) might take 2 months or more. A prioritisation exercise using the criteria would take about 45 minutes.

CRITERION 1: **DISRUPTION** Positively disrupting the status quo	The extent to which the actor/action positively disrupts the status quo rather than becoming co-opted by it and propping up current problematic patterns.
CRITERION 2: **HOSPICING** Dissolving, repurposing and retraining the status quo	The extent to which the actor/action helps to 'dissolve' or retire the structures of the status quo, redefine its purpose, reallocate its resources, and retrain its actors with capacities and competencies appropriate for the emerging transition and envisioned future.
CRITERION 3: **INCUBATION** Protecting and growing 'pockets of the future in the present'	The extent to which the actor/action protects and grows niche radical exemplars that already embody aspects of your envisioned future.
CRITERION 4: **DEPTH** Encouraging value shifts	The extent to which the actor/action encourages deeper shifts in underlying values, paradigms, purpose and worldviews towards those that align with the envisioned future.
CRITERION 5: **BREADTH** Supporting system-wide change	The extent to which the actor/action supports system-wide change.
OVERALL H2+ POTENTIAL	The potential of the actor/action to be H2+ (positively disruptive and helping a radically different kind of systemic pattern to emerge) rather than H2- ('change to keep things the same' that props up current problematic patterns and/or is co-opted by the status quo).

Tool 21: H2+ Criteria

Group size: works with typical workshop group sizes of around 15-30 people, although it can also work with larger groups.

Group stage: Intermediate

Useful prior knowledge: basic knowledge of the Three Horizons framework is assumed. Also useful are Future Stewards' Regenerative Video, Three Stages of Change, Minimum Viable Pattern, and Adaptive Waves.

Purpose and usefulness: see Three Horizons. The H2+ Criteria help people to become much more discerning about the kinds of action that need to be supported in the present to enable genuinely transformative change and the emergence of regenerative futures (H2+ innovations), as opposed to action that ultimately becomes captured by the status quo and props up problematic patterns (H2- innovations).

When to use: typically used for identifying and prioritising transformative actors and initiatives as part of exploration of Horizon 2 in a Three Horizons process. You could also potentially use the criteria to evaluate promising relationships between actors or action domains identified in Regenerative Actor Mapping or Requests and Offers.

Facilitation steps: the following steps are for a prioritisation exercise using the criteria.

1. Introduce the concept of H2+ and H2-, illustrating them on a Three Horizons diagram as you do so (sketching from scratch if desired). You could say something like:

   In Three Horizons we distinguish between two different types of innovation that we see in Horizon 2. The first type is what we call 'H2- innovations'. These are innovations that ultimately just get co-opted by the status quo and prop up problematic patterns. On the other hand, 'H2+ innovations' genuinely disrupt the status quo and provide space for a radically different future to emerge.

   As an example, consider electric cars. Although these reduce the carbon emissions and other pollution from cars, they still don't transform our underlying extractive economic model – think of the mining for the elements required in electric batteries and the environmental damage this causes, for instance – or our model of private car ownership. So you might consider these to be an H2- innovation. On the other hand, an H2+ innovation might involve transforming the whole physical infrastructure of our cities to turn them into '15-minute cities' where people can easily and quickly access everything they need to meet all their needs via active transport or public transport, and repurposing our infrastructure for private vehicle ownership, like parking spaces and car parks, into spaces for nature and food-growing.

   However, this example also illustrates how the categorisation of H2+ and H2- can be subjective. For instance, for a traditional car manufacturer, making the shift to electric cars might be their H2+.

Tool 21: H2+ Criteria

Materials required: projector and presented slide (if showing pre-created Three Horizons diagram with H2+/H2-, and for the list of criteria), and/or whiteboard/flipchart and pens (if drawing diagram from scratch); printed sheets with the H2+ Criteria for participants; printed cards with information about the actors, initiatives or actions being prioritised (these would typically include name, type (e.g. type of organisation), geographical area of focus, a brief description of its main activities, a sentence describing why it is H2+, and the working group(s) or theme(s) it is associated with). Blank cards should also be provided for any additional, missing actors/initiatives/actions that participants identify during the exercise. See Three Horizons and Three Stages of Change for Three Horizons diagrams including H2+/H2-.

Origins and designers: designed by Sam Buckton and Ioan Fazey based on the Three Horizons framework and Three Stages of Change. Has some coincidental similarities to the 'transformative outcomes of experimental policy engagements' criteria of Bipashyee Ghosh and colleagues[89], as well as the 'scaling out, scaling up, scaling deep' framework of Michele-Lee Moore, Darcy Riddell and Dana Vocisano[90,91], and Tim Strasser's SCALE 3D framework[92].

Facilitation steps (continued):

2. Introduce the prioritisation task and the H2+ Criteria. Explain that participants will be divided into breakout groups, ideally according to pre-existing working groups that were involved in identifying the actors in the first place. They will prioritise the material they are working with (e.g. cards of actors/initiatives or actions) into a shortlist, potentially discarding some cards and adding new cards if necessary. If you are going to proceed to Reinforcement Clustering afterwards, you will need to end up with about 30-40 actors, so use this number to gauge the size of the shortlist that each group should aim towards.
3. Divide the participants into breakout groups of three to five people and let them carry out the prioritisation for 20 minutes.
4. For the next 15-20 minutes, ask each group to share its findings with the others in plenary, including which actors/initiatives/actions made it into the shortlist, any that were discarded, and any that were added.

Facilitation tips:

- Discarding actors/initiatives/actions during the prioritisation doesn't necessarily mean that they're gone for good – the purpose of this exercise is to generate a shortlist of a manageable size to work with for a Minimum Viable Pattern, Reinforcement Clustering, or an initial action framework, and other actors might be enrolled at a later stage.
- Another helpful criterion to consider (which is not unique to H2+) is *additionality*: the extent to which the proposed action being evaluated is new, needed, and not already being implemented by others.
- Some more visually-oriented groups may find it helpful to work on spider charts (also known as radar charts) that graphically represent the extent to which a proposed action meets each criterion. Figure 1 shows an example of what this might look like. Spider charts can be created online for free on platforms such as Draxlr.

Tool 21: H2+ Criteria

Facilitator notes

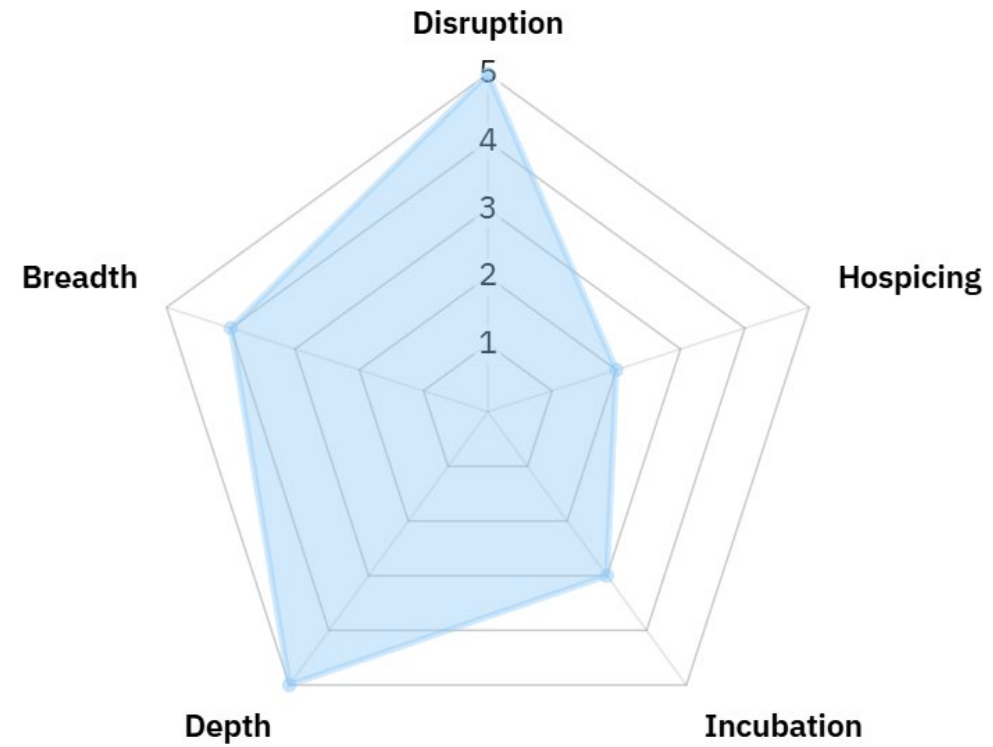


Figure 1. An example of how a spider chart (also known as a radar chart) can be used to visually illustrate the extent to which a proposed action being evaluated meets the H2+ criteria, on a scale of 0-5 (0 indicating that the criterion is not met at all, and 5 indicating that the criterion is strongly met). Diagram created by Sam Buckton in Draxlr.

Adapting to online: the same steps can easily be applied in online settings.

Other adaptations: you could use these criteria in various other situations where you are evaluating actors, action and relationships in a Horizon 2 context.

Tool 21: H2+ Criteria

Facilitator notes

Take it further:

- See the 'transformative outcomes of experimental policy engagements' criteria of Bipashyee Ghosh and colleagues[89] for more detailed H2+ type criteria. See also the resources for transformative innovation in the International Futures Forum Practice Centre, as well as specific applications in education and healthcare.
- You could now cluster your priority shortlist of actors into domains of action using Reinforcement Clustering, or go directly into a Requests and Offers exercise.
- You could ask your group to search the Regeneration Directory to find organisations and initiatives that they feel are most strongly H2+, and identify why.
- Evaluate and stress-test priority actions further using the Regenerative Lens, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, or the World Mandala.

Tool 22: Reinforcement Clustering

A tool for reperceiving systems as mutualistic reinforcing relationships between actors

This simple tool is a way of clustering actors or activities based on how they mutually reinforce each other, rather than how similar they are, which is how people tend to generate higher-level themes. An analogy is that rather than creating wardrobes filled with the same item of clothing (like all shirts or all skirts), Reinforcement Clustering creates wardrobes filled with suits (different items of clothing that complement each other). This helps people to reperceive systems in terms of mutualistic, regenerative relationships.

framing exercise

What is it? An exercise where actors are clustered together according to how they reinforce or enhance each other's activities, rather than how similar they are.

Facilitation difficulty: Intermediate



Purpose and usefulness: Reinforcement Clustering enables two key things. Firstly, it establishes better understanding of mutualistic relationships between actors and activities that might not have been noticed before, identifying new opportunities for collaboration. Secondly, it allows actors and activities to be visualised as a system of interacting elements with the potential to stimulate desired transformations. For example, the exercise can identify 'domains of action': collections of actors whose activities are mutually reinforcing each other in service of transformations towards regenerative futures in a complex system, such as a food system (Figure 2).

Tool 22: Reinforcement Clustering

Time required: 30-45 minutes, depending on whether conversational or silent clustering is used, and how many independent clusterings of the same material are taking place (see below).

Group size: this is an exercise for groups of between c. five and eight people; more than this and it becomes tricky for everyone to participate. We usually split the main group into two to three breakout groups to carry out independent Reinforcement Clustering of duplicates of the same material (the results of which are then used to carry out a final 'master clustering' post-workshop), so overall this exercise would work with typical workshop group sizes of around 15-25 people.

Group stage: Advanced

Useful prior knowledge: familiarity with the Three Horizons framework, Three Stages of Change, Minimum Viable Pattern, and H2+ Criteria is assumed, if Reinforcement Clustering is being applied in a Three Horizons context.



Figure 2. Example of what the result of Reinforcement Clustering might look like, based on an example from work between FixOurFood and the Food for the Future in North Yorkshire food transformation initiative. Each cluster of actors is an 'action domain', whose titles are on bordered white post-it notes.

Tool 22: Reinforcement Clustering

Materials required: pre-written post-it notes or pre-written/printed A5 or A4 cards, each with an actor named and described on it, and ideally colour-coded according to some initial thematic areas (based on similarity). For example, in a food system context, thematic areas might include 'Land use and biodiversity' and 'Nutritional security'. These actors would have already been prioritised beforehand (see H2+ Criteria) so that they represent a shortlist of the most transformative/regenerative actors currently active in the system. 30-40 actors is a good number to work with. Too few and you may struggle to create enough meaningful clusters; too many and you risk overwhelming participants. You will also need a large wall space or whiteboard, pens, and blank post-it notes (if using a wall space).

Origins and designers: adapted from Anthony Hodgson's Hexagon Mapping method by Ioan Fazey and Sam Buckton. The tool's title photo is from an application of Reinforcement Clustering by the Moving North Yorkshire initiative, coordinated by North Yorkshire Council and North Yorkshire Sport, that aims to create a physical activity and movement framework supporting people in North Yorkshire to be 'stronger for longer' in mind and body through movement, play, and sport.

When to use: the most powerful use of Reinforcement Clustering for regenerative practice is in the context of exploring Horizon 2 in a Three Horizons process, additionally framed by Three Stages of Change and Minimum Viable Pattern, where actors are clustered into action domains. For example, this process has been used to identify domains of action in the Yorkshire food system and the UK higher education system. You might have already identified those actors with Recognising Practices of Care and the Regeneration Directory.

Facilitation steps: there are two main ways of applying this tool. One is 'conversational' clustering, where participants have to justify their clustering choices to the rest of the group. The other is 'silent' clustering, where participants do the exercise in silence. The latter method is quicker, so you might opt to use this method if you are relatively short on time, whereas the former method is better at deepening participants' understanding of how items reinforce each other.

1. Split the group into breakouts of around five to eight people, if necessary. E.g. if you have a large group, you might have two to three breakout groups doing independent clusterings of copies of the same material.
2. Lay out the post-it notes / cards in a large oval or rectangle around the edge of the whiteboard/wall (leaving lots of space in the middle).
3. Introduce the exercise by saying something like:

   We're now going to cluster these cards into groups using an approach called 'Reinforcement Clustering'. What we're interested in is things that reinforce each other, rather than things that are similar. An analogy for this is wardrobes and clothes. Rather than creating wardrobes filled with the same item of clothing, like all shirts or all skirts, we want wardrobes filled with suits, or different items of clothing that complement each other.
4. For conversational clustering, ask a participant to choose a post-it note or card and one other that reinforces or enhances it in some way, and explain/justify the connection to the rest of the group. Place the notes/cards next to each other somewhere in the middle of the notes/cards around the edge.
5. Ask another participant to choose another note/card that reinforces the existing pair, again explaining and justifying the connection, and placing the note/card next to the existing pair.

Tool 22: Reinforcement Clustering

Facilitator notes

Facilitation steps (continued):

6. Continue in this way until the cluster grows to about five notes/cards. Then ask someone to start a new cluster with some notes/cards that are as different as possible from the existing cluster.
7. Grow the new cluster, as above.
8. Continue in this way, trying not to let any one cluster grow too big. The process usually ends up with five to eight clusters, although it may result in fewer than this. These clusters represent 'action domains': collections of actors whose activities mutually reinforce each other in service of transformation.
9. For silent clustering, follow steps 4-8 but request that this be done silently, with no justification needed. This can be done more fluidly, letting any number of participants cluster simultaneously, and allowing participants to re-cluster notes/cards already clustered. Continue until a natural equilibrium and consensus is reached, with no-one disagreeing further with the clustering.
10. Ask the group to reflect on the clusters that are emerging, and to suggest titles for each of the clusters. A good title should be as fully descriptive of the material within the cluster as possible, and ideally around eight words maximum: for example, 'Facilitating circular food economies'. Write the titles on new post-it notes / cards, or directly on a whiteboard if using.
11. If multiple independent clusterings are taking place, ask the group to identify some key takeaway messages that the final 'master clustering' should take into account. Then take each group round to see the others' work, asking someone from each group to briefly take the audience through what emerged from their clustering.

Facilitation tips:

- If multiple independent clusterings are taking place, you will need a co-facilitator in each breakout group.
- Participants should have already engaged with the material on the post-it notes or cards prior to the exercise. For instance, you could do a preliminary exercise where participants have to choose the note/card that they feel most strongly drawn to, and explain why, before doing the Reinforcement Clustering, or participants may have already prioritised actors using H2+ Criteria.
- Try to ensure that everyone in the group gets to participate, rather than let a small number of dominant participants do most of the clustering.

Tool 22: Reinforcement Clustering

Facilitator notes

Facilitation tips (continued):

- As a facilitator of conversational clustering, you can either be in charge of moving all the notes/cards based on participants' instructions, or allow participants to come up to the wall/board to move them themselves in turn. We find that participants quickly get very engaged in this exercise, however, to the extent that multiple participants will be rushing to cluster things at the same time. You may need to rein participants in and ask for just one contributor at a time.
- It doesn't matter if some clusters have only one or two notes/cards in it, as long as participants agree that they deserve to be stand-alone.
- When facilitating, keep emphasising that you're grouping things based on reinforcement, not like with like. This can feel unfamiliar to participants initially. It helps to work with colour-coded cards (coloured according to some initial themes based on similarity) to make it easier to see if participants are resorting back to the more familiar thematic analysis technique of grouping things based on similarity.
- For further facilitation tips, see Anthony Hodgson's Hexagon Mapping facilitation guide in the H3Uni Resource Library. Much of the advice in that guide is also relevant to Reinforcement Clustering.

Adapting to online: the same facilitation steps can be applied in online settings, using an online whiteboard and post-it notes.

Other adaptations:

- Reinforcement Clustering can in principle be applied to any sort of material (not only H2 actors), such as the ideas comprising a Horizon 3 vision.
- The exercise could possibly work by laying the cards out in a large circle on the floor rather than on a wall, although we have not tested this.

Take it further: now explore the relationships and reinforcing dynamics between clusters using Regenerative Actor Mapping, Requests and Offers, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, or the World Mandala.

Tool 23: Regenerative Actor Mapping

An exploratory tool for identifying regenerative relationships between actors

This tool can be used in a relatively open-ended way to start exploring and identifying promising opportunities for regenerative relationships between actors in a system that could help a regenerative future to emerge.

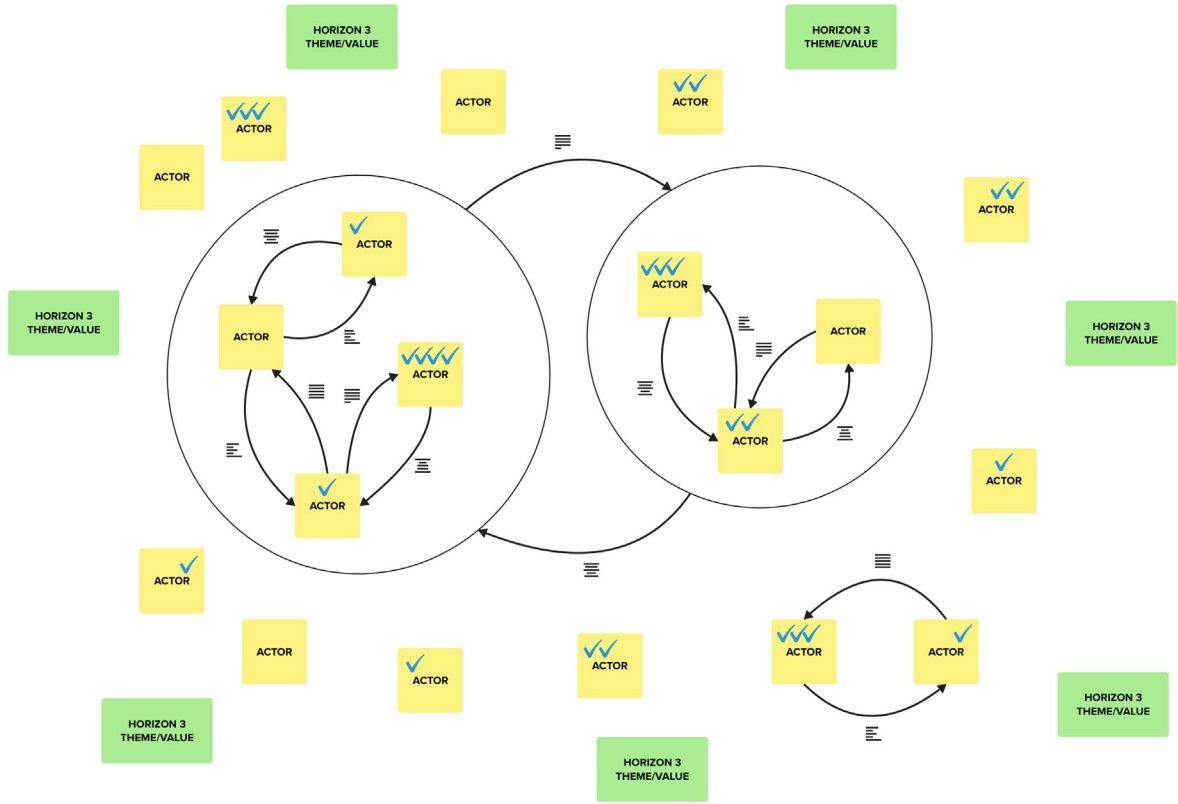


What is it? A facilitated method to build a picture of regenerative relationships amongst the actors who will bring about a transformation to embody and realise their vision of a regenerative future.

Facilitation difficulty: Intermediate

Time required: 45 minutes.

Group size: around 6-28 people; if you have more than seven people, consider using breakout groups, as long as each breakout group has a minimum of three and a maximum of about six or seven people. You may struggle to acquire enough whiteboards or whiteboard space if you have more than four breakout groups!



Purpose and usefulness: at the heart of regenerative practice is a view of the world as relationships amongst living actors who maintain the ecosystem of which they are part – summed up as *life is a regenerative community*[30]. This worldview is developed in the first two tool sets in our guide, and can be brought into the visioning steps of Three Horizons. Moving into action then requires supporting a group to explore the pattern of relationships that will embody their path to their envisioned regenerative future. Regenerative Actor Mapping provides an initial, relatively exploratory and open-ended way of identifying promising relationships that could be further clarified using other tools in this guide.

Tool 23: Regenerative Actor Mapping

Group stage: Advanced

Useful prior knowledge: strong familiarity with regenerative definitions/descriptions/dynamics (e.g. Future Stewards' Regenerative Video, the Regenerative Spiral, Regenerative Descriptions, Structures and Flows, Mutual Qualities of Life, Principles of Life, Unique Gifts of Life, Recognising Practices of Care, Nested Systems, Regen-Degen Quadrants, and the Regenerative Lens) is required; familiarity with Three Horizons, Three Stages of Change and Minimum Viable Pattern is assumed. Prior exposure to Requests and Offers is also useful.

Materials required: a large whiteboard (or multiple whiteboards if using breakout groups), post-it notes and pens. You could alternatively use A4 cards or pieces of paper with Blu Tack for the Horizon 3 themes/values (see below).

Origins and designers: designed by Bill Sharpe with input from Daniel Wahl, Oliver Broadbent, Sam Buckton, Ioan Fazey, and other members of FixOurFood's Regenerative Futures Workshop Group. The diagram in this guide was created by Sam Buckton in Mural (Tactivos, Inc. dba Mural).

When to use: for Horizon 2 action-planning, using Horizon 3 as the vision, in a Three Horizons process. The tool is also well-suited to place-based regenerative practice (see Tools for bioregioning). You might have already identified some important regenerative actors in your community or region in Recognising Practices of Care or the Regeneration Directory.

Facilitation steps:

1. Write up the themes from your Horizon 3 vision or Horizon 3 values from a value contrasts exercise (see Three Horizons) clearly on large post-it notes, cards or pieces of paper. You will need separate copies for each whiteboard being used (see below).
2. If you have a group larger than seven people, split participants into separate breakout groups, each standing or sitting around their own whiteboard. Each breakout group will need a facilitator.
3. Stick the Horizon 3 themes/values around the edge of the whiteboard, leaving plenty of space in the middle for building up the actor map. Depending on how close this is to the work that produced the themes/values, you may want to remind the group of each one of them to bring the vision to mind.
4. Collect proposals for important actors to enrol into a Minimum Viable Pattern of regenerative dynamics. These might be based on the results of previously applying Recognising Practices of Care and the Regeneration Directory. Write each one on a post-it note and place them on the whiteboard in a circle inside the Horizon 3 themes, still leaving plenty of space in the middle. Get 15-25 suggestions.
5. Give everyone three votes for actors that are the most important. Participants should come up and mark the corresponding post-it notes with a tick.
6. Pick an actor with the most marks and move it into the centre.
7. Ask who the central actor has the most important relationship with and put that post-it note near it. Draw two arrows connecting up these actors (one going in each direction, to create a reinforcing loop) and ask what each can offer the other. Label the arrows with the answers.

Tool 23: Regenerative Actor Mapping

Facilitator notes 

Facilitation steps (continued):

8. Repeat step 6 with several other important relationships.
9. You will have started to create a cluster of relationships. Before it gets too big, repeat step 5 for another actor with the most votes and place it on a blank area of the whiteboard.
10. Repeat steps 6 and 7.
11. When you have a few clusters, draw circles around them and explore relationships between them, again drawing two-way arrows and labelling the relationships in terms of what each cluster offers another.
12. Remain sensitive to the dynamics of your group and how the conversation is flowing. It doesn't matter if you don't include all the actors – the key thing is to identify some important prime movers and some of their relationships with other actors. When you feel like the exploration is naturally drawing to a close or running out of steam, take a pause and ask participants to identify several relationships that they find the most compelling and promising for further exploration and reinforcement, e.g. using Reinforcement Clustering, further Requests and Offers, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, or the World Mandala.
13. If using breakout groups, get each group to explain their findings to the rest of the participants.

Facilitation tips:

- This should feel like a relatively open-ended, exploratory, relaxed exercise without a strict end-point. Let the conversation flow as it needs to.
- Use the Horizon 3 themes around the edge of the whiteboard to assess the diversity or comprehensiveness of the actors being identified. Do they reflect the diversity of Horizon 3 themes?
- The relationships that people identify can be existing relationships or relationships that do not yet exist, although it may be helpful to distinguish these in some way, e.g. with different colours, to aid your group's next steps in action-planning.

Tool 23: Regenerative Actor Mapping

Facilitator notes

Adapting to online: the same facilitation steps can be applied in online settings, using an online whiteboard.

Other adaptations:

- You could alternatively use this exercise in the context of envisioning, i.e. exploring what relationships would look like in your envisioned regenerative future (Horizon 3), rather than Horizon 2.
- This method might also work for exploring relationships between action domains (see Reinforcement Clustering), not just individual actors.
- Consider having breakout groups carry out the method from the perspective of different actors in the system: prime movers, keystone species, etc.

Take it further:

- Go deeper into action-planning from promising relationships identified in this exercise, using the Regenerative Lens, H2+ criteria, further Requests and Offers, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, or the World Mandala.
- There are many approaches for more in-depth social network analysis[93,94], value-creating systems[51], and identifying leverage points[95].

Tool 24: Requests and Offers

A tool for identifying mutualistic cross-system relationships between domains of action

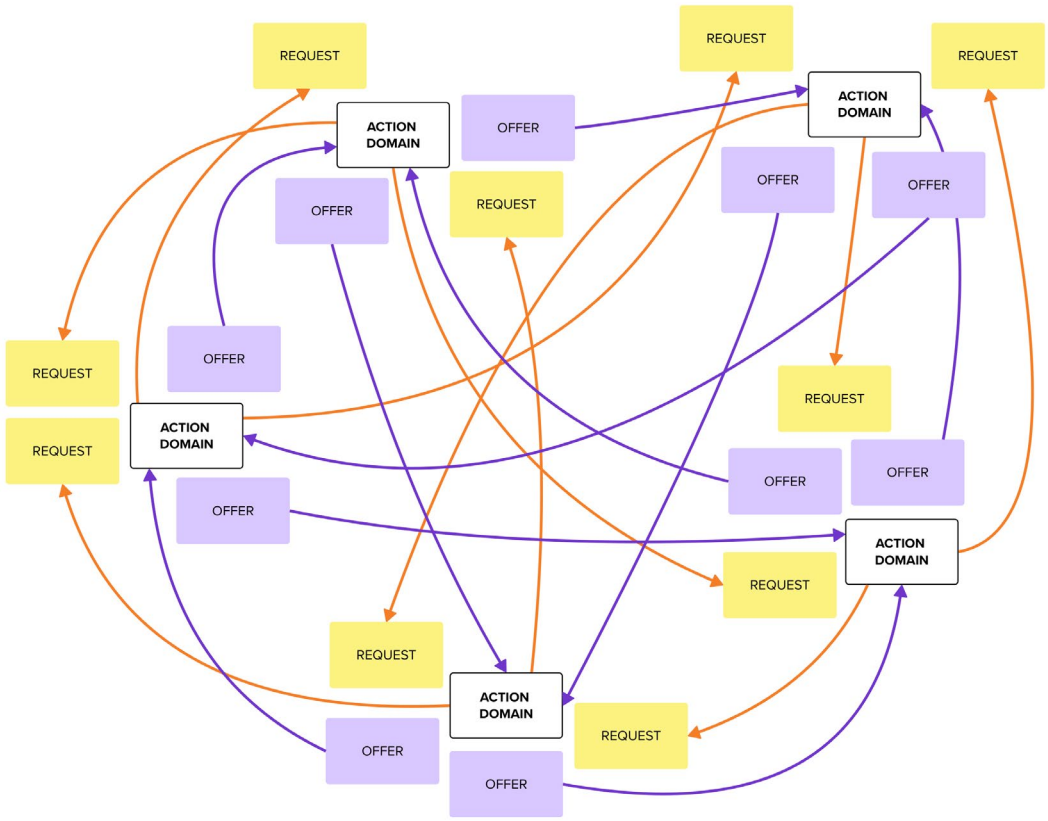
We love the positive energy that this dynamic exercise brings to a group. It gets people thinking about their relationships in mutualistic, reciprocal ways, embodying a key quality of regenerative systems. It can be used to help groups create a more systemic story or theory of change for their initiative.

framing exercise

What is it? A simple, interactive exercise based on actors or action domains 'requesting' something that they need from other actors/ domains, and 'offering' something back in return, in order to create a stronger reinforcing pattern of action.

Facilitation difficulty: Advanced

Time required: 2 hours, with a 10 to15-minute break in the middle.



Purpose and usefulness: like Reinforcement Clustering, Requests and Offers helps people to reperceive systems in terms of the mutualistic relationships that often characterise regenerative systems. This simple, easily grasped, interactive exercise generates a positive, hopeful energy, is helpful for trust-building within your group, and encourages commitment to action. The tool's usefulness for regenerative practice would be further enhanced if the actors or action domains themselves (whose relationships are being identified) are geared towards regeneration (e.g. see Tools for bioregioning).

Tool 24: Requests and Offers

Group size: works with typical workshop group sizes of around 15-30 people.

Group stage: Advanced

Useful prior knowledge: familiarity with the Three Horizons framework, Three Stages of Change, Minimum Viable Pattern, and H2+ Criteria is assumed if Requests and Offers is applied in a Three Horizons context.

It helps if participants have already familiarised themselves with the actors or action domains whose relationships are being explored. For instance, they may have already taken part in an exercise to characterise an action domain that they have an affinity to and how it is contributing to wider change. In this case, it is also assumed that participants will have taken part in a Reinforcement Clustering exercise to identify the action domains in the first place.

Materials required: post-it notes in two colours, pens in two colours, and a large whiteboard.

When to use: use this tool as part of the 'enrolment' stage of planning and organising for action (see Three Stages of Change), when you want to encourage more joined-up cross-system action. It can be used as part of the exploration of Horizon 2 and Minimum Viable Pattern in a Three Horizons process. You can use it to explore relationships between domains of action (see Reinforcement Clustering), or alternatively to drill down on some particularly important relationships between actors identified during the Recognising Practices of Care exercise or Regenerative Actor Mapping, or in the Regeneration Directory, that you want to focus on getting established.

Facilitation steps: the following steps assume that the relationships between action domains (rather than individual actors) are being explored.

1. Prepare a whiteboard with post-it notes or cards representing action domains identified in previous work (see Reinforcement Clustering). The name of each action domain should be clearly written. They should be well-spaced across the board; bear in mind that you will need to draw lots of arrows between them.
2. Introduce the exercise by emphasising the need to build an ecosystem of actors and action domains to stimulate transformation.
3. Ensure that the group is arranged according to the action domains. Each action domain should be represented by a group of around four to five people, based on their personal affinity to the action domain. In in-person settings, each group should be sat at its own table.
4. Explain roughly how the exercise is going to work (see below).
5. Ask each action domain group to identify two 'requests' that it would like to make to two other action domains (i.e. one request to one action domain, and a second request to a different action domain), that would enhance their own domain's effectiveness in stimulating transformation. Each request should be written on a post-it note, structured as follows: 'We would like … from domain …. This would enable ….' Only one colour of post-it note should be used; save the other colour for the offers (see below). Give groups 15 minutes to do this.

Tool 24: Requests and Offers

Origins and designers: designed by Bill Sharpe, Ioan Fazey and Sam Buckton, although ideas about reciprocity are prevalent in many cultures and philosophies. The Post Growth Institute has independently developed a similar process in their Offers and Needs Market[97]. The diagram in this guide was created by Sam Buckton in Mural (Tactivos, Inc. dba Mural).

Facilitation steps (continued):

6. For the next 20 minutes, ask groups in turn to share their requests. As they share each one, collect their post-it note, place it directly adjacent to the action domain making the request on the whiteboard, and draw an arrow representing the request, directed towards the post-it note and originating from the requestee. It helps if you have a co-facilitator who can help you with this, allowing you to focus more on engaging with the group.
7. Take a break for 10-15 minutes.
8. When participants have reconvened, ask each action domain group to identify two 'offers' that it would like to make to two other action domains (i.e. one offer to one action domain, and a second offer to a different action domain). These might directly respond to a request from the previous step, or be something new. In any case, they should aim to enhance the effectiveness of the recipient action domain in stimulating transformation. Each offer should be written on a post-it note, structured as follows: 'We would like to offer … to domain …. This would enable ….' A different post-it note colour should be used to distinguish from the requests. Give groups 10 minutes to do this.
9. Ask whether each action domain is being offered something from another domain. Name-check each action domain in turn and find out how many other domains are offering something to it. If an action domain hasn't received any offers, ask one of the other action domain groups to change one of their offers so that it goes to the neglected domain (ensuring not to create another neglected domain in the process). Give 5 minutes for the group to briefly do this.
10. Now ask each group to send 'envoys' with their offers to the other domains. They should negotiate with the recipient action domain group to refine the offer they are providing so that it is most useful for the recipient. At least one person per action domain group should stay back on their table to negotiate with incoming envoys. Give participants 15 minutes to do this.
11. Ask for the action domain groups to reconvene at their original tables to discuss and refine the offers they are making. Allow 10 minutes for this.

Tool 24: Requests and Offers

Facilitator notes 

Facilitation steps (continued):

12. Repeat step 6, but with the offers this time. Arrows should be drawn in a different colour and directed towards the recipient of the offer.
13. If possible, ask for the sponsor of the initiative, or someone with more leadership responsibility to take action forward, to summarise where the exercise has got them to and what they are inspired to take forward.

Facilitation tips:

- This is a relatively complex exercise, so make sure that you give clear instructions to the group.
- There is a risk that the exercise could encourage people to narrow down towards small project thinking and lose sight of the bigger picture and the need to support large-scale systemic change. It is therefore important to keep emphasising how actors are contributing to a wider system of action, and that this system needs to be cohered.

Adapting to online: this tool would be logistically challenging to apply online, but not impossible.

Other adaptations:

- The basic structure of Requests and Offers need not be restricted to action domains, and could be used for exchanges between specific actors/initiatives or actions/interventions.
- Some people prefer to use the term 'gifts' in place of 'offers'.
- If you're pushed for time, there are various ways in which you could make the exercise simpler. For instance, you could just focus on cross-domain requests, still getting each action domain to refine its requests with the corresponding domains based on what they can offer – or alternatively, focus on cross-domain offers and refining these. While focusing on requests grounds the exercise in genuine need, focusing on offers might encourage more of a spirit of generosity and cooperation.

Tool 24: Requests and Offers

Facilitator notes 

Other adaptations (continued):

- Alternatively you could just focus on 'cross-domain collaborations', without specifying whether they need to be requests or offers.
- You could also simply ask each action domain group to 1) characterise its role in supporting transformation of the wider system, and 2) identify a couple of key enabling conditions that the action domain would need in order to maximise its effectiveness. This gets participants thinking about what they are offering, and what they are requesting. However, it creates less of a sense of how the action domains interrelate, and is less fun!
- Another way you could adapt this tool for a shorter session is to cut out steps 10 and 11 that refine the offers, although this may result in less useful offers.
- An alternative version of this exercise uses a 'carousel' approach. Although this can quickly generate overwhelming numbers of requests and offers, it may be simpler to facilitate, particularly if you have a very large group. The general approach is as follows:

1. Prepare whiteboards, flipcharts or wall posters for each action domain 'station' around the room.
2. Split participants into groups corresponding to the action domains.
3. Starting with each group at its 'home station' (i.e. the action domain it represents), ask the groups to move clockwise to the next station and write their requests and offers on post-it notes of different colours (if using a whiteboard) or in different-coloured pens on the station's flipchart/ poster, including the name of the action domain making the request/offer.
4. After 5-10 minutes, ask the groups to all move round one place clockwise to the next station and repeat the exercise.
5. In the final iteration, let each group examine their 'home' station to see what other groups have requested and offered.
6. If you have time, you could allow the groups some networking time to discuss and refine the requests and offers made.

Tool 24: Requests and Offers

Facilitator notes 

Other adaptations (continued):

- You could also run the carousel version above with a representative of each action domain remaining at their home station throughout the exercise, so that requests and offers can be refined in real time.
- The 'offers' part of Requests and Offers is incorporated into Regenerative Actor Mapping.
- Another form of Requests and Offers is incorporated into Dilemma Navigation, where the opposing sides of the dilemma identify their offers and requests to each other.

Take it further:

- It is also important to explore how action domains could be *cohered* – in other words, what kind of cohering function or governance is needed. This could be the focus of an exercise prior to or after applying Requests and Offers.
- Develop some promising Requests and Offers further using the Regenerative Lens, H2+ Criteria, Ambition Loops, Regenerative Dynamics with the 4 Returns Framework, Adaptive Waves, or the World Mandala.

Tool 25: Ambition Loops

A tool for designing Minimum Viable Patterns of regeneration

Like Requests and Offers, Ambition Loops provides a way of exploring a reinforcing Minimum Viable Pattern of action in Horizon 2 of the Three Horizons framework.

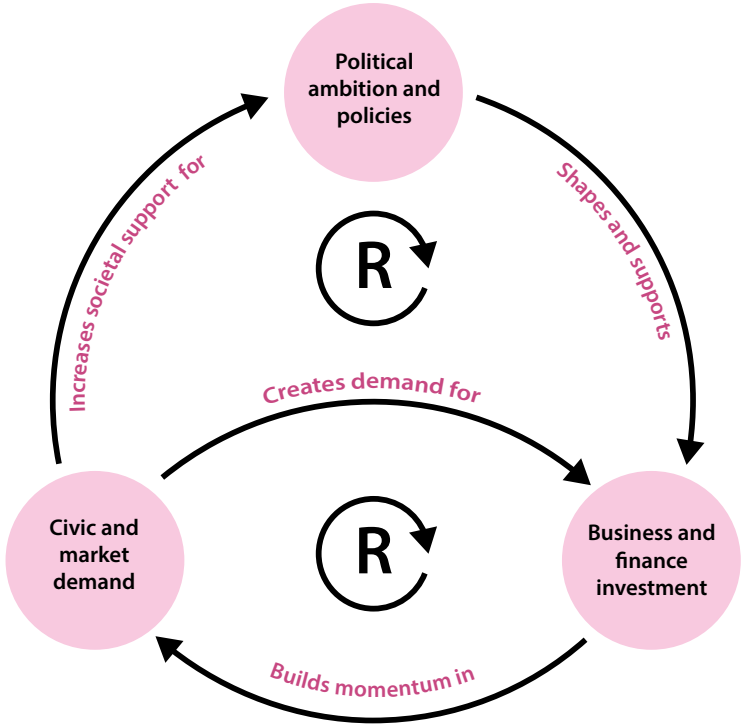


What is it? A simple, interactive exercise to build a reinforcing pattern of action amongst three important categories of actors needed to get a new pattern established.

Facilitation difficulty: Intermediate

Time required: about 1 hour, as part of a wider process that introduces Three Stages of Change and Minimum Viable Pattern.

Group size: breakout groups of up to six people can easily work on this model. The tool would work with typical workshop group sizes of around 15-30 people.



Purpose and usefulness: the Ambition Loop is an example of a Minimum Viable Pattern which – when it builds on existing agency, grows momentum and enrols further actors – can eventually transform systems. The three actor categories of the Ambition Loop are 1) political ambition and policies, 2) business and finance investment, and 3) civic and market demand. These can be summarised as three modes of action that together create and maintain a societal pattern: governing, producing, and using. Civic and market demand and social movements increase political mandate for change, and creates demand for new business and finance investment. Political leadership, in turn, shapes and supports business and finance investment, which builds momentum in civic and market demand. These relationships result in two positive self-reinforcing loops. An example of a successful Ambition Loop from Oliver Broadbent's *The Pattern Book for Regenerative Design*[41] is provided in the facilitation script below.

Tool 25: Ambition Loops

Group stage: Intermediate

Useful prior knowledge: Future Stewards' Regenerative Video; familiarity with the Three Horizons framework, Three Stages of Change, Minimum Viable Pattern and H2+ Criteria is also very helpful. Structures and Flows could provide a useful introduction to the dynamic way of thinking applied in Ambition Loops.

Materials required: flipchart paper, pens, and post-it notes for each breakout group; a projected slide showing the Ambition Loop diagram, or flipchart/whiteboard and pen for showing a pre-drawn version or for drawing from scratch.

Origins and designers: first used to foster ambition for climate action in COP24 meetings[98]. The Ambition Loop organisation was subsequently founded by UN High Level Climate Champions, Gonzalo Muñoz and Nigel Topping. The tool was further developed by Bill Sharpe to include citizens/consumers as co-producers[27]. The version of the framework used in this tool was designed by Bill and Suzanne Om[99], while Bill designed the exercise applying the framework. The diagram in this guide was rendered by Dave Gledhill of 1790 Creative.

Purpose and usefulness (continued): like Reinforcement Clustering and Requests and Offers, Ambition Loops help people to reperceive systems in terms of the mutualistic relationships that characterise regenerative systems. The Ambition Loop is, in effect, a virtuous cycle with the potential to spiral up human and ecological health. It provides a balance between systemic complexity and a subset of relationships that don't feel overwhelming, which many people find easy to work with. The tool's usefulness for regenerative practice would be further enhanced if the three categories of actors of the Ambition Loop are geared towards regeneration (e.g. see Tools for bioregioning).

When to use: as part of the 'enrolment' stage of planning and organising for action (see Three Stages of Change), in the context of Horizon 2 in a Three Horizons process. You might use it to drill down on some particularly important actors and relationships identified from Recognising Practices of Care, the Regeneration Directory, Regenerative Actor Mapping, Requests and Offers, Regenerative Dynamics with the 4 Returns Framework, or the World Mandala, that you want to focus on getting established.

Facilitation steps:

1. Introduce the Ambition Loop framework along with a slide or sketch. You could say something like:

   Every pattern of social life involves three types of actors: those who produce, use, and govern. For example, those who grow food, all of us buying and consuming it, and the system of laws, rights and resources that govern the whole food system. Each of these three types is a subsystem of the whole with many actors making it up. To get a Minimum Viable Pattern going we need these three types of actor to come together to create a reinforcing pattern.

   An example is Avon Friends of the Earth's pilot doorstep paper recycling scheme, established in 1976, that sold waste paper to environmentally minded local businesses, supported by the UK Government's Community Programme to pay its workforce. Similar initiatives sprang up across the country, and their success eventually persuaded the Government that they could confidently legislate for recycling. The Household Recycling Act was passed in 2003 and made doorstep recycling a legal requirement for local authorities in the UK. It can be seen how this initiative started with civic demand, supported by like-minded businesses, and drawing on Government aid, working together to create a Minimum Viable Pattern that spread and eventually reconfigured the whole national system of recycling.

Tool 25: Ambition Loops

Facilitator notes

Facilitation steps (continued):

In this exercise we'll explore several of these patterns where we can create a niche process of change that can drive the transformation we want. We're looking for places where you have the power to act, to enrol the first set of actors, and where that has a naturally reinforcing effect to enrol others over time.

2. Run a process for people to offer a focus for a loop they would like to work on where they have agency to drive the change. These candidates might be based on promising examples identified using other tools in this guide (see 'When to use' above). Select the most popular (e.g. through a voting process) and organise people into breakout groups corresponding to the priority candidates.
3. Ask the groups to draw the Ambition Loop diagram on flipchart paper (landscape works better than portrait). Let them work for about 30-40 mins to populate the Ambition Loop with post-it notes and labels corresponding to their chosen example.
4. In plenary, ask for each group to present their populated Ambition Loop. Whether this was initial exploratory work, or intended to establish clear project commitments, will depend on the context of the process.

Facilitation tips: as long as the groups understand their task, they can be left to self-facilitate.

Adapting to online: the same steps can be applied in online settings using breakout groups and an online whiteboard.

Other adaptations:

- See Oliver Broadbent's *The Pattern Book for Regenerative Design*[41] for a different 'user guide' to applying Ambition Loops.
- You could also use Ambition Loops as a way to interrogate and evaluate existing initiatives. You could analyse successful initiatives to pick apart the reasons for their success, or evaluate struggling initiatives to understand which part of their Ambition Loop might be missing or weak.
- The original Ambition Loop was based on an even simpler structure that considered only government policy and business action[98].

Tool 25: Ambition Loops

Facilitator notes

Take it further:

- You might further 'stress-test' your Ambition Loops using the Regenerative Lens, Regenerative Dynamics with 4 Returns Framework, Adaptive Waves, or the World Mandala.
- See Chapter 3 of Suzanne Om's PhD thesis for more detail about the Ambition Loops framework and how it can enable synergic action for system transformation[99].

Tool 26: Regenerative Dynamics with the 4 Returns Framework

A tool for designing and evaluating cross-system regenerative dynamics

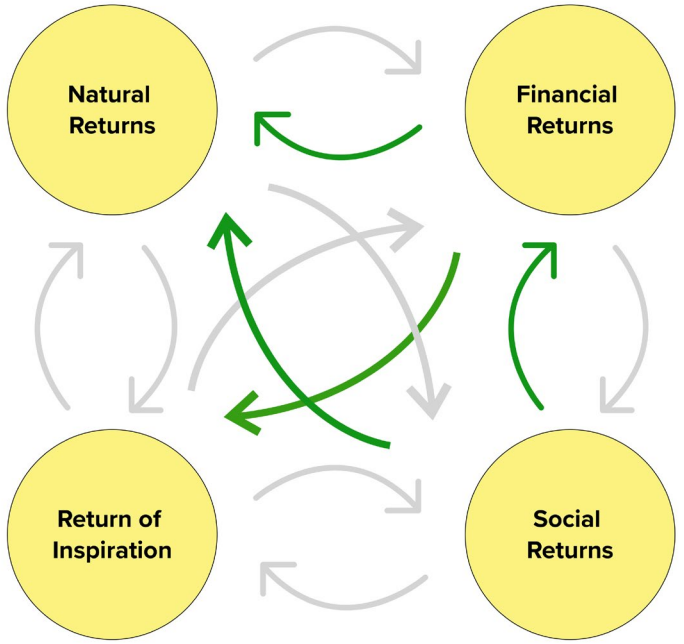
The 4 Returns Framework – based around four kinds of 'return' or benefit, including *the return of inspiration, social returns, natural returns, and financial returns* – is a simple but powerful framing for regenerative practice. It is particularly useful because it emphasises mutually reinforcing benefits between human systems and wider ecological systems, rather than only in human contexts, and therefore provides a foundation for designing and evaluating large-scale regenerative dynamics.



What is it? An hour-long evaluative exercise for groups or individuals based on the 4 Returns Framework.

Facilitation difficulty: Intermediate

Time required: 1 hour.



Purpose and usefulness: to create regenerative systems, mutualistic dynamics need to operate between as well as within human societies and wider nature. It is insufficient to focus only on human social and economic benefits, or focus only on environmental restoration. If regenerative dynamics are to be embedded and sustained, they have to be reinforcing across human and ecological domains. Otherwise, there remains a risk of perpetuating unsustainable exploitation and pollution of the wider environment, and mindsets of human-nature separation.

This tool works from Commonland's 4 Returns Framework and a set of simple steps to explore how such cross-cutting regenerative dynamics could be enhanced. The four 'returns' or benefits in the 4 Returns Framework are:

- *the return of inspiration and hope* – raising people's awareness of their region and its potential, and opening their eyes to the possibility of better futures;

Tool 26: Regenerative Dynamics with the 4 Returns Framework

Group size: would work with typical workshop group sizes of around 15-30 people. The tool could also be used by individuals for personal reflection.

Group stage: Intermediate

Useful prior knowledge: Future Stewards' Regenerative Video; Recognising Practices of Care; the Regeneration Directory

Materials required: as a personal reflection tool, some notepaper and a pen would be useful. In groups, use flipchart paper and pens. You would display a projected slide showing the diagrams in Figure 3 or draw them from scratch on a whiteboard. It may also be useful to print out large-format versions of the diagrams for the breakout groups to work from. If you have access to multiple whiteboards in the room where the session is being held, each breakout group could work from a whiteboard and draw large-scale versions of the diagrams, with post-it notes for arrow labels; these post-it notes would also be easy to transfer when you redraw your regenerative reinforcing loop.

Purpose and usefulness (continued):

- *social returns* – creating jobs, businesses and networks for thriving communities as they start to take action in landscape regeneration;
- *natural returns* – restoring the health and resilience and prosperity of natural landscapes and seascapes to create flourishing ecosystems; and
- *financial returns* – realising long-term, sustainable, local income as a result of the other returns.

If these returns were all interacting to reinforce each other, they could be powerful drivers of regenerative dynamics. The exercise in this tool uses the 4 Returns Framework to interrogate potential system interventions and identify those that show the most promise for stimulating regenerative dynamics. It can also be used to evaluate system interventions already taking place in relation to how they are encouraging such dynamics.

When to use: you might use this tool during exploration of Horizon 2 in a Three Horizons process, following identification of action domains (see Reinforcement Clustering, and Requests and Offers), when you are selecting priority actions for action domains to take forward. It might also be a next step following identification of key actors in Recognising Practices of Care, the Regeneration Directory, or Regenerative Actor Mapping. In this sense it could be used in a similar way to Ambition Loops or the World Mandala, although it could also be used to 'stress-test' Ambition Loops themselves.

You could also use this tool to evaluate and interrogate pre-existing system interventions. For instance, you might have found an example of a successful regenerative initiative and are interested to work out the reasons for its success, or you might be assessing an initiative's claims of being regenerative. In this sense you could use the tool in a similar way to the Regenerative Lens.

Tool 26: Regenerative Dynamics with the 4 Returns Framework

Origins and designers: designed by Sam Buckton and Daniel Wahl, based on Commonland's 4 Returns Framework[64] and causal loop diagrams. Recent research by Roman Isaac and colleagues has also been investigating evidence of regenerative dynamics across returns in Commonland-supported initiatives in Spain and Australia.

Facilitation steps:

1. If you're using this tool with a group, start off by explaining the 4 Returns Framework, either by showing a slide or pre-drawn diagram, or drawing it from scratch in real time as you explain it. You might say something like:

   Commonland's 4 Returns Framework is useful for helping us think about regenerative dynamics, where the health of human and ecological systems becomes mutually reinforcing. The framework focuses on four different kinds of 'returns': the return of inspiration, social returns, natural returns, and financial returns.

   A powerful entry point into landscape-scale regeneration is to encourage the return of inspiration and hope, raising people's awareness of their region and its potential, and opening their eyes to the possibility of better futures.

   Social returns are about creating jobs, businesses and networks for thriving communities as they start to take action in landscape regeneration.

   Natural returns are about restoring the health and resilience and prosperity of natural landscapes and seascapes to create flourishing ecosystems.

   And financial returns are about realising long-term, sustainable, local income as a result of the other returns.

   If these returns were all interacting to reinforce each other, they could be powerful drivers of regenerative dynamics. In this exercise we're going to use the 4 Returns Framework to interrogate system interventions and identify those that show the most promise for stimulating regenerative dynamics.

2. The following steps are written as if you are carrying out the exercise yourself; if you are facilitating a group, you would guide the group through the different steps, by showing the diagrams in Figure 3 or modelling the steps by drawing them in real time, before sending the group off into breakouts of around four to five people for around 25 minutes.

Tool 26: Regenerative Dynamics with the 4 Returns Framework

Facilitator notes 

Facilitation steps (continued):

3. Start by considering the return of inspiration. (You might be working from a printed diagram, or draw it from scratch, e.g. on flipchart paper.) Think of an intervention to encourage the return of inspiration and hope, raising people's awareness of their region and its potential, and opening their eyes to the possibility of better futures. This might be something that your initiative is planning, for instance, or something that another initiative has already implemented in your region.
4. When you've identified an intervention, ask yourself whether it supports any of the other three returns. If it does, draw an arrow to the appropriate returns from the return of inspiration and label it with a brief description of the supportive effect. For example, a Three Horizons or Theory U community participation process might result in a new community-led initiative for landscape restoration and more effective participatory landscape governance (social returns). Don't force it – if there isn't an obvious link, don't draw an arrow.
5. Next, focus on the link(s) that you've just identified. Ask yourself whether any of them go in the opposite direction as well – i.e. whether those returns, in turn, support further return of inspiration. For example, the new community initiative might enrol and inspire further actors. Draw and label new arrows as appropriate. You will have now potentially identified some small self-reinforcing loops between pairs of returns, always involving the return of inspiration. These are useful, but your intervention would be even more powerful if it brought more returns into play.
6. Next, identify if there are any reinforcing links between the social, natural and financial returns. As before, draw and label arrows to represent any links. For example, improving soil health (natural returns) might increase agricultural productivity and profitability (financial returns).
7. Again, ask yourself whether any of those links you've just identified go in the opposite direction as well, drawing and labelling new arrows if they do.
8. Now try to identify self-reinforcing loops that incorporate as many of the returns as possible (four at the maximum), based on the links you've drawn. To do this, follow arrows with your finger from the return of inspiration to the other returns, always following the direction of the arrows, trying to pass each of the returns, and finishing back at the return of inspiration. For example, you might notice a loop that goes inspiration **>** social **>** natural **>** financial **>** inspiration.

Tool 26: Regenerative Dynamics with the 4 Returns Framework

Facilitator notes 

Facilitation steps (continued):

9. If you have a choice between multiple reinforcing loops, select the loop that you find the most convincing or powerful, which also incorporates the most returns. This loop suggests the potential for regenerative dynamics. Redraw the returns and the arrows of this loop so that you can follow the main loop clockwise around the circle of returns. If you wish, you can also draw in the other arrows and smaller reinforcing loops that you identified previously.
10. If you're applying the exercise in a group, at this point you could bring the breakouts back into plenary and ask for the breakouts to share what regenerative reinforcing loop they identified. Then send the group back into breakouts again for another 20 minutes or so for the next part of the exercise.
11. Working from your chosen loop, now follow a similar process to steps 3-7, but considering risks of negative or degenerative effects between the returns.
12. Ask yourself whether these negative effects suggest any refinements to the descriptions of the positive links that you identified in the first part of the exercise. For instance, additional compensation might be needed for farmers to mitigate loss of agricultural land during landscape restoration. If necessary, add some extra text to your arrow labels.
13. Ask yourself whether your original choice of regenerative reinforcing loop still stands, or whether you would suggest seeking another kind of initial intervention for the return of inspiration.
14. If you're applying the exercise in a group, bring the breakouts back into plenary again and get the breakouts to share what conclusions they came to after the second part of the exercise.
15. If you're in a design- or planning-oriented session, the selected regenerative loops could be promising ones to try to initiate. These loops might form the basis of further action-planning and a theory of change for your initiative.

Tool 26: Regenerative Dynamics with the 4 Returns Framework

Facilitator notes

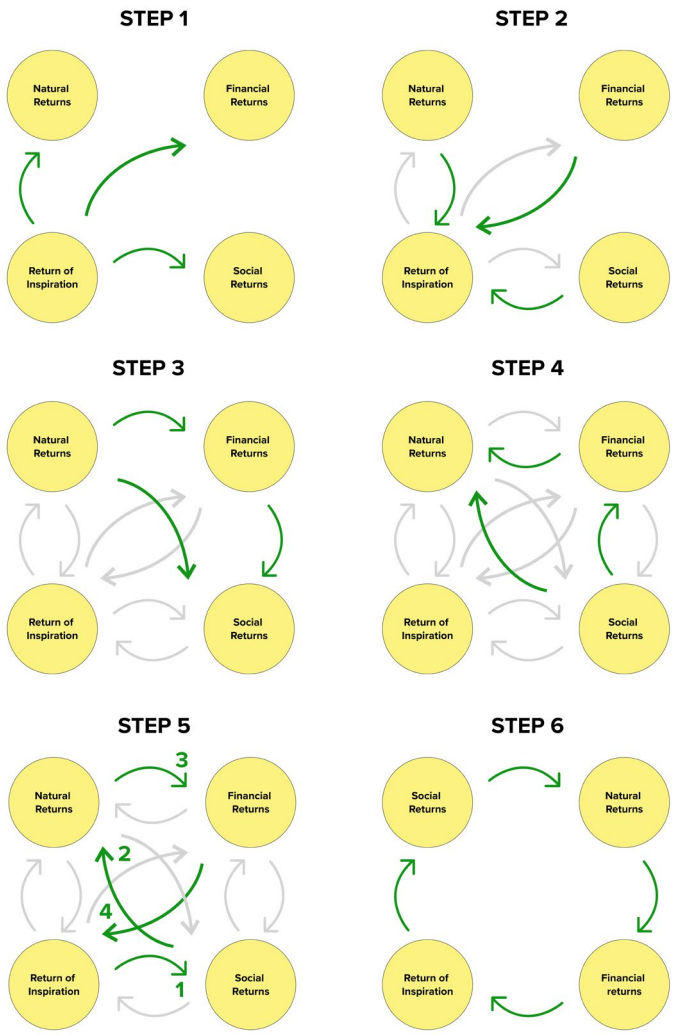


Figure 3. Diagrammatic illustration of the exercise in the Regenerative Dynamics with the 4 Returns Framework tool. Created by Sam Buckton in Mural (Tactivos, Inc. dba Mural).

Tool 26: Regenerative Dynamics with the 4 Returns Framework

Facilitator notes 

Facilitation tips:

- Don't identify links for the sake of them – make sure that you are confident about the existence of a link before drawing it. If you're not confident, then don't draw a link.

Adapting to online: the same steps can be applied in online settings, using an online whiteboard, and/or possibly a platform like Kumu.

Other adaptations:

- The order in which the returns are considered follows Commonland's recommended approach of using the 4 Returns, although this does not preclude alternative starting points to the return of inspiration (e.g. the natural returns). In the Commonland model, the entry point is facilitating diverse stakeholders representing mainly the landowners and farmers of a landscape to first build the return of inspiration, using a Theory U community participatory process that builds landscape-scale awareness. From those initial gatherings, the social returns are strengthened as community action begins to grow, with natural returns appearing as landscapes are restored. The various pilot regions in which Commonland has applied the 4 Returns Framework suggest that initial financial investment of c. €500,000 into the 'return of inspiration' leads to multiple social and natural returns, with a time delay of 5-6 years to financial returns as local cooperatives and regenerative start-ups revive the regional economy.
- You could alternatively use the tool to identify where degenerative dynamics are occurring in a system, in order to better understand how to disrupt those dynamics (effectively focusing on step 11 in the facilitation guide above). In this sense the tool might be used to deepen exploration of Horizon 1 in a Three Horizons process.

Tool 26: Regenerative Dynamics with the 4 Returns Framework

Facilitator notes 

Take it further:

- There is abundant further documentation available about deepening use of the 4 Returns Framework, particularly for landscape restoration and bioregionally focused initiatives[64]. The 4 Returns are typically developed in long-term initiatives (25+ years) in the context of three different 'zones' ('natural zones' in which non-human nature is dominant and provides resilience against climate change, disease, and other threats, 'combined zones' in which sustainable economic production and ecological regeneration are combined, and 'economic zones' that deliver sustainable economic production with dedicated areas for value-adding activities, such as processing), and by applying five 'elements' (establish a landscape partnership, reach a shared understanding, create a shared vision and build a landscape plan, ensure effective implementation, and develop impact monitoring and learning).
- You might further 'stress-test' promising reinforcing loops using the Regenerative Lens, H2+ Criteria, Ambition Loops, Adaptive Waves, or the World Mandala.
- You could ask your group to search the Regeneration Directory to find organisations and initiatives that they feel are most strongly demonstrating different returns and their interactions.
- To deepen understanding of the dilemmas and trade-offs in transformations, see Dilemma Navigation or the Wheel of Wisdom.

Tool 27: Adaptive Waves

A tool for sensing dynamics in systems, timing interventions towards regeneration, and enhancing resilience

The Adaptive Waves framework draws on the cyclical dynamics of life to aid strategic planning in system change. It both embodies ideas about regenerative dynamics and helps people to plan interventions that support regenerative dynamics more widely.

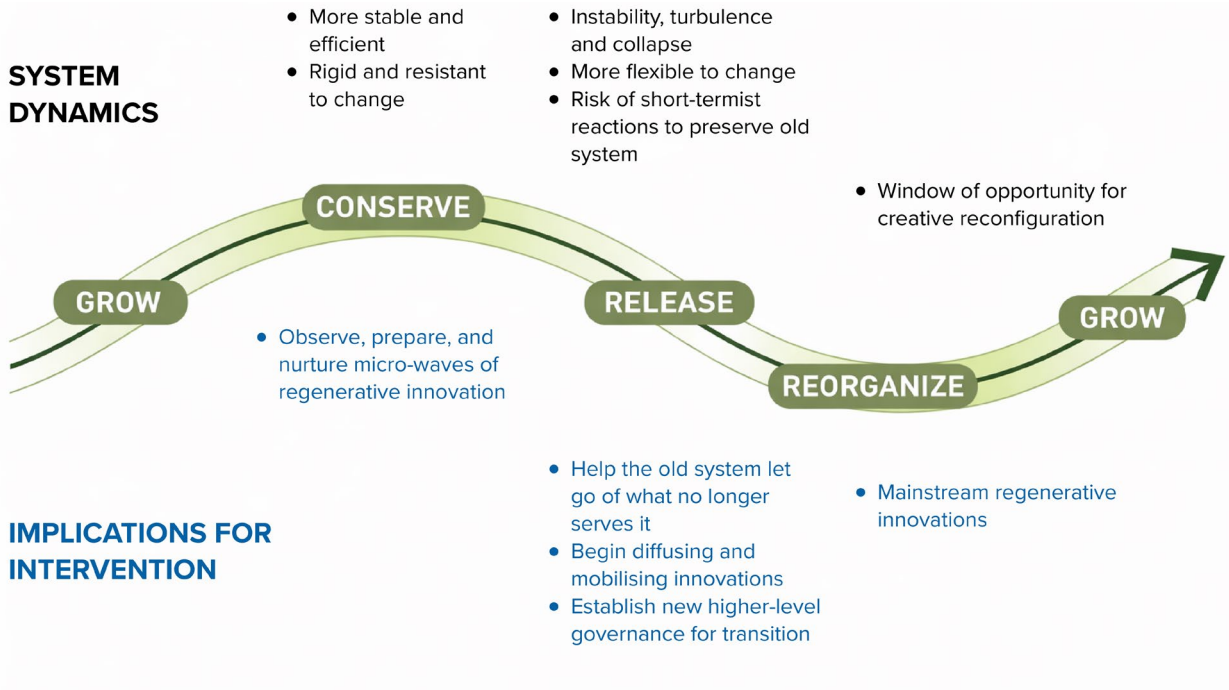


What is it? A framework conceptualising adaptive cycles as waves, which can be applied in various evaluative and strategy-focused exercises to support regenerative practice.

Facilitation difficulty: Intermediate

(facilitators should ideally have some familiarity with resilience thinking and dynamics in living systems).

Time required: 25-30 minutes to introduce the framework and for participants to familiarise themselves with it; 1-2 hours or longer when combined with participatory system or network mapping (depending on depth of process).



Purpose and usefulness: at its core, regeneration follows life's evolutionary impulse: life creates conditions conducive to life[15]. Life does this through cycles. The theory of *panarchy* and *adaptive cycles* suggests that many human social systems (organisations, countries, societies, etc.) and ecological systems (forests, landscapes, etc.) go through repeated cycles of change[100]. These cycles are described as having four main phases: growth, conservation, release, and reorganisation. In other words, the system grows, consolidates and stabilises, before a period of release, collapse and disintegration (potentially from a disruptive event), from which renewal and reorganisation emerges. For example, there are forests in some areas of the world where natural, periodic wildfires are essential for maintaining the forest's health and triggering trees' seed germination. We also see these dynamics through the seasons of spring, summer, autumn and winter in temperate latitudes. It is through these dynamic cycles that nature expresses its *resilience*: its capacity to maintain functioning and adaptability in a changing environment.

Tool 27: Adaptive Waves

Group size: would work with typical workshop group sizes of around 15-30 people, although it can also work with smaller groups.

Group stage: Intermediate

Useful prior knowledge: basic knowledge of regenerative ideas and practice is assumed. Familiarity with Nested Systems would be useful. The group may have already applied some other futures methods, such as Three Horizons.

Materials required: a diagram of the Adaptive Waves framework (e.g. on a projected slide, print-outs, or drawn from scratch on a whiteboard or flipchart paper); social network maps or system maps from participants' context (if combining with system/network mapping).

Purpose and usefulness (continued): many human systems display similar cycles. For example, an autocratic political regime might emerge and establish itself in power, before a revolution that dismantles the regime and gives rise to a new form of democratic government. You as an individual can probably relate to these cycles in your own life too: times of personal growth and development, but also times when you had to let go of something important and reorganise your life in response to a disruptive event.

When we intervene in systems to encourage regenerative dynamics – a bioregion, political regime, business, economy, farm, food system, and so on – we can make better decisions when we are sensitive to their cyclical dynamics: when to seed innovation, hold back, let go, or deliberately shape transformation. We might also make better life choices when sensitive to our own cycles.

The Adaptive Waves metaphor and tool helps people to sense and align with these cyclical impulses of life that operate continuously and in an overlapping way at multiple scales. The tool highlights that radical interventions are often most effective when systems are 'open' – during phases of release, reorganisation and early growth – and may be resisted or wasted during phases of rigidity. In this way, the tool provides a guide for the design and strategic timing of regenerative initiatives, enabling practitioners to read the dynamics of complex systems and cultivating the agency to act at the right time.

When to use: the Adaptive Waves framework can be applied in various ways to regenerative practice. For example:

- The framing can be introduced at the beginning of a session to introduce resilience as a dynamic, regenerative process.
- The tool can be used to identify leverage points for deliberate intervention during the design of regenerative initiatives, particularly as part of participatory system or network mapping.
- It can support a group's sense-making of its own identity, niche and dynamics in a system.

Use of the framework in groups broadly assumes that the group is representative of a regenerative initiative and is contributing to the initiative's design and strategy.

Tool 27: Adaptive Waves

Origins and designers: the Adaptive Waves framework was introduced in 2015 by Tobias Luthe and Romano Wyss[101], based on the theory and framework of panarchy and adaptive cycles created by Crawford Stanley Holling and colleagues[100]. 'Panarchy' derives from the unpredictable behaviour of the Greek god of nature, Pan. The Adaptive Waves have been applied and further developed in research, teaching, and practice, especially in mountain communities, Arctic regions, and regenerative design initiatives. The diagram in this guide was created by Haley Fitzpatrick and colleagues, with modifications by Google Gemini and Sam Buckton in Mural (Tactivos, Inc. dba Mural).

When to use (continued): in bioregional regeneration (see Tools for bioregioning), such as the work of the MonViso Institute in the alpine village of Ostana and the surrounding Upper Po valley bioregion, the Adaptive Waves framework has been used to help people recognise where their community or organisation stands, where innovation clusters might connect into larger systems, and how personal or collective agency can have the most effect. Used in this way, the framework deepens understanding of regeneration as a personal, collective, and regional process, while helping participants to interact with systems at the right moment, in the right way, to amplify life's regenerative momentum.

Facilitation steps: the beginning of any session using the Adaptive Waves framework involves introducing participants to the key features of the framework. The steps below suggest how you might do this.

1. Start by introducing the rationale and broad features of the framework. You could say something like the following (whilst displaying an image of the framework):

   Regeneration is about realigning our activities with the innately regenerative processes of life. A key aspect of this is becoming sensitive to the dynamic cycles and waves of change that we see in human societies and natural ecosystems more broadly. By doing this, we can make wiser strategic decisions about when and how to intervene in a system to build on its regenerative potential.

   The Adaptive Waves framework, based on the theory of panarchy and adaptive cycles, helps us to sense these dynamics and align with life's regenerative impulse. The framework illustrates how systems tend to follow continuous waves of change with four main phases: grow, conserve, release, and reorganise. In other words, the system grows, consolidates and stabilises, before a period of release, collapse and disintegration – potentially from a disruptive event – from which renewal and reorganisation emerges.

   An example is a forest ecosystem where periodic wildfires are essential for maintaining the forest's health; some trees have seeds that only germinate after a fire. We can see examples at many other scales too. For instance, an autocratic political regime might emerge and establish itself in power, before a revolution that dismantles the regime and gives rise to a new form of democratic government. You as an individual can probably relate to these waves in your own life too: times of personal growth and development, but also times when you had to let go of something important and reorganise your life in response to a disruptive event.

Tool 27: Adaptive Waves

Facilitator notes

Facilitation steps (continued):

It is through these dynamic cycles that nature maintains its resilience: its capacity to maintain functioning and adaptability in a changing environment.

2. Next, explain how these waves are taking place simultaneously, continuously, and at different overlapping phases at different scales. You could illustrate this by drawing some smaller waves along the line of the main wave in your diagram, or drawing a 'magnification' of the waves at these smaller scales.

   If you zoomed in at any point of the adaptive wave, you'd find micro-waves also happening at smaller scales. For instance, even within a rigid national government regime in its conservation phase, there are always lots of little waves of innovation and experimentation going on at local scales. Equally, the adaptive wave of that political regime might be a micro-wave compared to the wider dynamics of the whole Earth system that it's embedded within. So these waves are taking place simultaneously, continuously, and at different overlapping phases at different scales.

   What you tend to see at smaller scales is a trade-off between more rapid adaptation but more intensely felt shocks, whereas at larger scales you see slower adaptation but greater buffering against shocks.

3. At this point you might include a brief exercise to familiarise participants with the framework. For example, you could give participants 10 minutes in breakout groups to discuss where they've seen examples of these waves in their own context, before inviting groups to feed back briefly in plenary.

If the focus of your session is identifying leverage points for intervention in a system, there are some additional steps that you might take, outlined below.

4. Introduce the framework's implications for system intervention, again speaking to a displayed diagram:

   The Adaptive Waves framework has important implications for when and how we should intervene in a system.

   In general, we need to recognise periods of crisis and collapse as inevitable, but also as opportunities for transformation and regeneration. This means that we need to prepare for phases of collapse and be ready to respond rapidly.

Facilitator notes

Facilitation steps (continued):

To do this we need to maintain sufficient social diversity, flexibility and connectivity, so that there are enough decentralised pockets of innovation that can be drawn upon when conditions are right, and capacity to mobilise and coordinate this innovation to steer more collective action.

Consider the responses to the COVID-19 pandemic, for instance, where local community groups mobilised to provide food, medicine and other essentials to people in need, and there were larger-scale coordinated campaign efforts to encourage governments to 'build back better' and use the pandemic as a chance to transform our societies. As we've seen, governments largely built back with the same models or even reinforced them. This illustrates how resistant dominant regimes can be to fundamental change, but it also makes you wonder what might have been achieved if campaign groups had been even more prepared to use a big crisis like a pandemic as an opportunity for transformation.

The different phases of the adaptive wave then suggest different strategic approaches for our initiative.

The later phases of growth and conservation feature more stability and efficiency, but tend to be more rigid and resistant to change. During this phase it's usually best to observe, prepare, and nurture micro-waves of innovation.

The release phase is associated with collapse and turbulence. This is a time to help systems let go of what no longer serves them, and begin diffusing and mobilising innovations that can support reorganisation towards a radically different kind of system. An important intervention here is to establish a new higher-level governance structure that can help to dampen the more destructive aspects of the collapse, whilst supporting, growing and connecting smaller-scale pockets of regenerative practice (Figure 4). There are many examples around the world of these new kinds of alliances forming in response to collapse. Be wary though of regimes going into emergency, short-term survival mode, and doubling down on efforts to preserve the old system.

The creative phases of reorganisation and early growth are prime windows for deliberate interventions to mainstream regenerative practice and the innovations that have been waiting prepared in the background.

Tool 27: Adaptive Waves

Facilitator notes

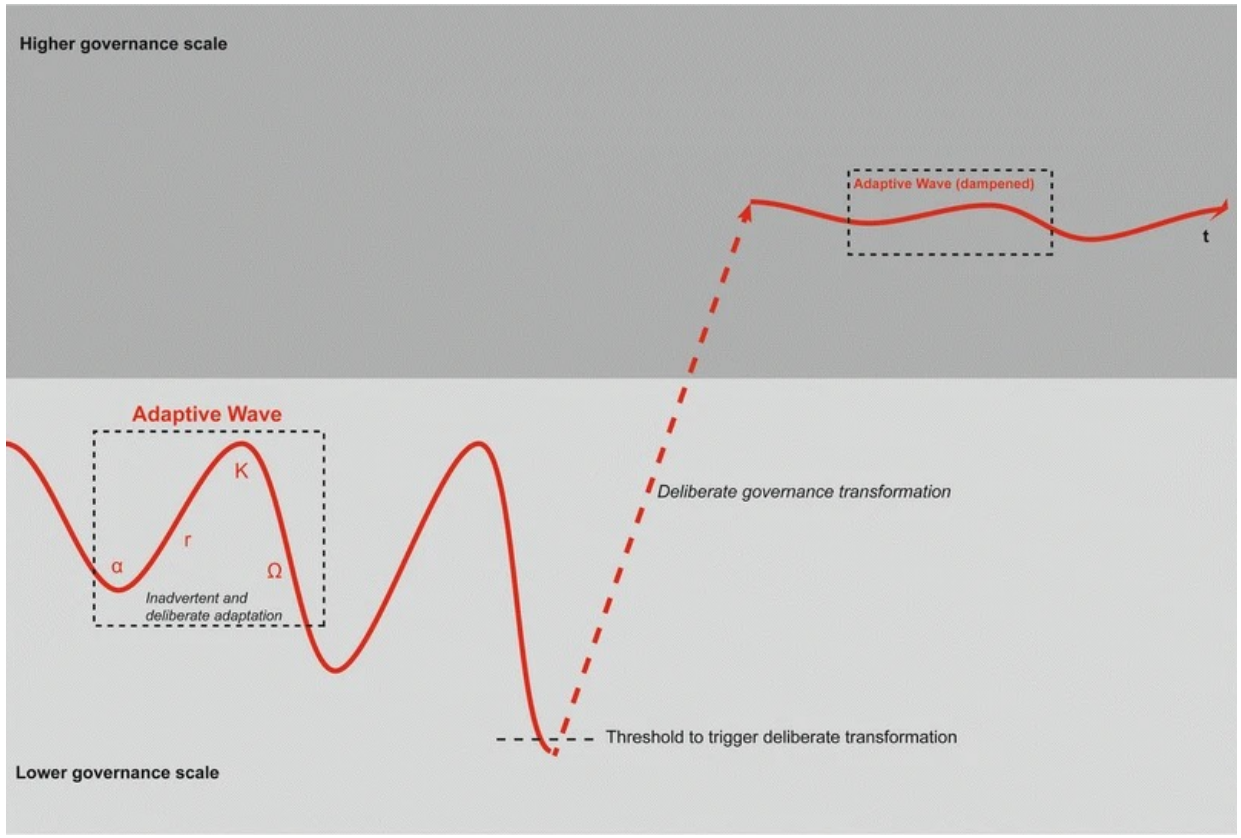


Figure 4. Illustration of how establishing a new higher-level governance structure during the release phase of a system's adaptive wave might dampen the more destructive aspects of collapse. Following conventions from panarchy theory, the following abbreviations are used for the different phases of the wave: α = reorganisation; r = growth; K = conservation; Ω = release. Figure by Tobias Luthe and Romano Wyss[101].

Tool 27: Adaptive Waves

Facilitator notes

Facilitation steps (continued):

5. You would then run an exercise applying the framework to the group's system(s) of interest, asking participants to identify the system's current phase, how its wave overlaps with other important waves at different scales, and the implications for how the initiative represented by the group should strategically respond and intervene. You might give participants 30 minutes in breakout groups before feeding back in plenary.
6. You could also run a more in-depth session combining the Adaptive Waves with social network analysis, identifying key types of actor that your group's initiative should draw upon (e.g. innovation clusters, 'brokers' who connect innovation to larger systems, and more peripheral actors to bring in diversity), and asking participants to identify where they see themselves and their role in the network.

Facilitation tips: enabling participants to place themselves in real-world adaptive waves taking place around them is key for enhancing their agency to intervene.

Adapting to online: the same steps can be applied in online settings, using an appropriate online whiteboard platform. A network mapping tool such as Kumu might be useful if combining Adaptive Waves with social network analysis.

Other adaptations:

- The framework could be used in a more retrospective way to reflect on past dynamics in the system of interest, and in a more future-oriented way to anticipate future dynamics.
- The framework could also be used for individual reflection. Consider how your own life reflects these phases. What phase are you in now? What would your ideal adaptive wave look like in the future? How are you aligning with the adaptive waves occurring around you? What phase is your body calling you to be in?
- An Adaptive Waves framing could be powerfully brought into a meditation, grounding exercise or check-in at the beginning of a session, particularly as a way to reconnect people with seasonal cycles that are taking place around them. See Come To Your Senses.

Tool 27: Adaptive Waves

Facilitator notes

Other adaptations (continued):

- Adaptive Waves might complement exploration of Horizon 2 in a Three Horizons process. Three Horizons could be interpreted as interventions in an adaptive cycle to respond to and facilitate the decline of an unsustainable current system (Horizon 1), by establishing new forms of governance that connect and reinforce innovations (Horizon 2), which in turn enable a desirable reorganisation of the system from which a radically different, regenerative future can emerge (Horizon 3). H2+ actions (see H2+ Criteria) can then be seen as managing different aspects of this phase transition, such as helping to retire Horizon 1 and repurpose its resources, and protecting, growing and connecting pockets of Horizon 3 in the present.

Take it further:

- For more detail about the Adaptive Waves framework, including the theory behind it and case study examples, see the journal article by Tobias Luthe and Romano Wyss[101].
- See Daniel Wahl's book *Designing Regenerative Cultures* for more detail about adaptive cycles and panarchy in the context of regenerative cultures[30].
- Otto Scharmer's Theory U framework[83] has many similarities to Adaptive Waves, and is a powerful way for individuals and groups to navigate their own adaptive waves.
- Work by Ioan Fazey and Graham Leicester on different archetypes of Three Horizons system transition[81] provides an alternative or complementary approach to conceptualising adaptive waves and their implications for governance.
- See Nested Systems and Regen-Degen Quadrants for further exploration of cross-scale dynamics and linkages.
- Integrate the Adaptive Waves perspective into evaluation with Twelve Principles for Transformation-focused Evaluation, especially as a way of making sense of large-scale system dynamics.
- You might further evaluate planned system interventions using the Regenerative Lens, H2+ Criteria, Ambition Loops, Regenerative Dynamics with 4 Returns Framework, or the World Mandala.

Tool 28: The World Mandala

A tool for identifying synergies for whole-system regeneration

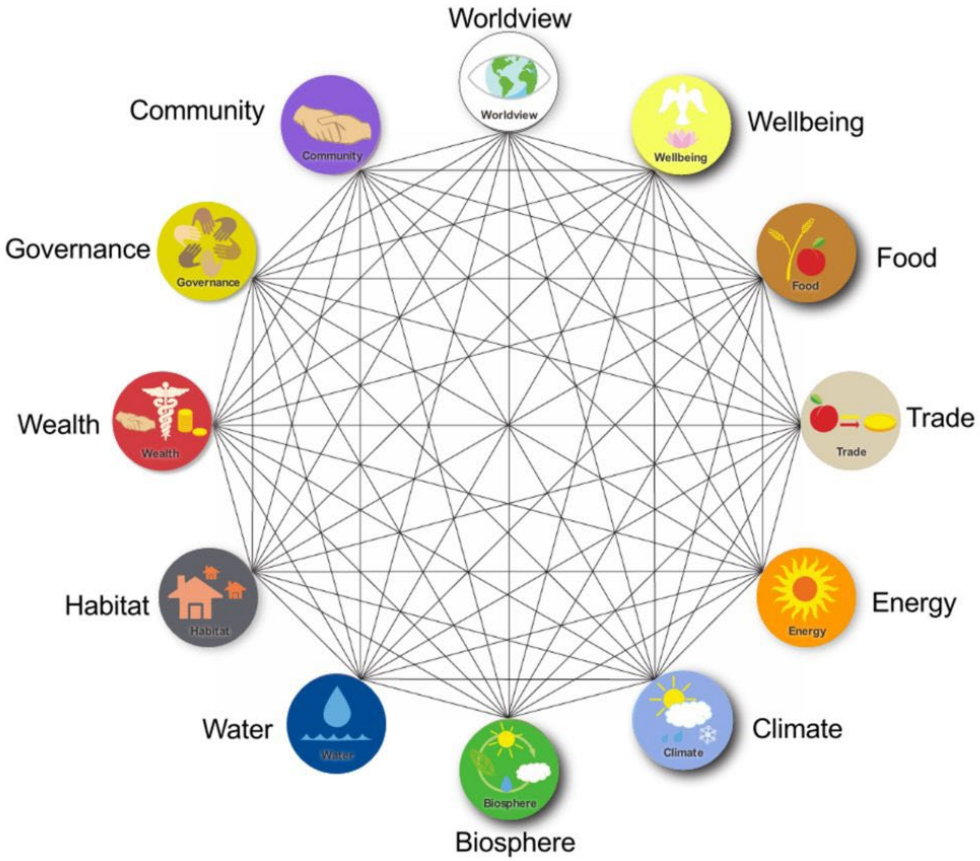
The World Mandala is a widely used and highly flexible tool for holistic systems thinking that can be applied in many different ways, from a fun game to strategic evaluation.



What is it? A diagram of a 'world model', consisting of twelve nodes and their interconnections, that can be used in various games, exercises and evaluations.

Facilitation difficulty: Intermediate to Advanced – depending on depth of process. Version 1 would be intermediate; version 2 would be advanced.

Time required: version 1 might take an hour or so; version 2 might take considerably longer, from a half-day to a full day.



Purpose and usefulness: successful transformations to regenerative futures require actors to develop an appreciation of system complexity. Our businesses, communities, economies, cities, food systems and regions are all complex systems, inextricably linking social, ecological, cultural, political and economic dimensions. If we approach transformations with an overly reductionist worldview, there is a much greater risk of unintended and undesirable consequences of our actions because of complex dynamics (e.g. feedbacks, spillover effects, rebound effects, lock-ins, and tipping points). We may also miss many opportunities for cross-system synergies that accelerate regenerative dynamics.

Tool 28: The World Mandala

Group size:

- For version 1, group size is relatively flexible, although it may be easier for all participants to feel as if they are contributing if they are in smaller groups, e.g. 5-20 people. It could even be applied by a solo evaluator.
- For version 2, an ideal group size would be 24-36 people, as this would allow two to three people to represent each node of the Mandala. However, if necessary it could also work with a group of 12, with a single person representing each node.

Group stage: Beginner

Useful prior knowledge: Future Stewards' Regenerative Video.

Materials required:

- Version 1 requires at least three print-outs of the World Mandala diagram, print-outs of the detailed descriptions of each node, and pens in two colours. Post-it notes in two colours may also be useful.
- Version 2 is likely to require large-scale (e.g. A0) print-outs of the World Mandala diagram, print-outs of the detailed descriptions of each node, pens and post-it notes in different colours, flipchart paper, and whiteboards. Blank A5 cards could also be helpful for the final part of the game.

Purpose and usefulness (continued): the World Mandala offers a route into reperceiving systems in a more complexity-informed way, striking a balance between what the human brain can comprehend, and the true complexity of the systems that we seek to transform and regenerate. It does so in a way that encourages us to notice synergies between different areas of the system that support the mutualistic reinforcement of human and planetary health. It reminds us that a healthy and regenerative system must be healthy in all of the twelve nodes of the Mandala: worldview, wellbeing, food, trade, energy climate, biosphere, water, habitat, wealth, governance, and community. The design of the Mandala deliberately echoes the twelve numbers of a clock face, making it more memorable. Overall, the Mandala allows any group to make rapid progress in appreciating a whole system view of their circumstance or operating environment, avoiding the narrowness of many conventional approaches.

When to use: the World Mandala (also called the World Game) works best when a group has a specific challenge, question or plan of action that will benefit from being exposed to the myriad trends and linkages of an interconnected world. However, the Mandala is a highly adaptable tool that can be used in many different ways, by many different groups (from governments to primary school pupils), and applied to a wide range of scales, from local communities up to the whole Earth. For example:

- It can be applied at different stages of a transformation- or regeneration-focused initiative. It could be used: before starting an initiative and in strategy design processes, for 'environment-scanning' and to better understand the aim, niche, and implications of the initiative in a holistic way; during the initiative to track trends in each of the nodes, identify opportunities for leverage and synergy (including between separate initiatives), identify risks, and avoid unintended consequences; and at the conclusion of an initiative to evaluate its impacts and how they have rippled across a system.
- It can be used as an educational experience, including with young people, to develop the capacity to deal with complexity in problem-solving or policymaking.
- It can be used as a means of engaging a diverse community in a structured but fun conversation about big issues, generating a sense of public aspirations and concerns on a wide canvas.
- It could be used to evaluate and choose priority actions during exploration of Horizon 2 in a Three Horizons process, or place-based regenerative practice (see Tools for bioregioning).

Tool 28: The World Mandala

Materials required (continued):

- Other versions of the World Game require a more diverse set of materials (see 'Other adaptations' below).

Origins and designers: based on the work of Anthony Hodgson[102,103], who designed the World Mandala inspired in part by the mandalas and yantras of Eastern cultures.

When to use (continued):

- It could be used to deepen exploration of Horizon 3 in a Three Horizons process.
- It could be used to evaluate a whole large-scale system in itself (e.g. a bioregion) to establish its level of health, and identify where there are problems or degeneration that need to be addressed.
- The Mandala is particularly helpful in exploring the resilience of a particular place (e.g. a city, or even a whole country) and how it could be enhanced. For example: it has been applied in the UK cities of Doncaster, Dundee, and Glasgow (the latter as part of The Rockefeller Foundation's 100 Resilience Cities programme), to explore opportunities for city-scale resilience and regeneration; it has been also used to explore the future viability of the whole of the USA, and Scotland.
- It can be usefully applied to more deeply and creatively understand a particular topic of concern, and its linkages with wider systems. For example, it has been used by the Scottish Public Health Network to better understand the complex challenge of tackling obesity in Scotland.

Facilitation steps for version 1: a tutorial and facilitation guide for this version of applying the World Mandala are available in the H3Uni Resource Library. This version involves identifying synergies between two separate initiatives (which, for instance, might both be taking place in your local region). It involves the following broad steps:

1. Introduce the World Mandala model and explain its twelve nodes. (5 minutes)
2. Characterise the first initiative by identifying its main node of focus (e.g. it might be a food system transformation initiative, so you would choose the node of 'food') and identifying the three most important 'support nodes' that need to be in alignment with the main node for it to be effective (e.g. trade, climate, and biosphere). Colour in the corresponding linkages on one printed-out copy of the Mandala diagram. Describe how they support the main node; you might write the descriptions on post-it notes and stick them on the corresponding linkages. (E.g. 10 minutes)
3. Repeat step 1 for the second initiative on a separate copy of the Mandala. For example, this might be a social care programme centred on the node of wellbeing, with support nodes of community, wealth and habitat. Colour in the linkages with a different colour to the first initiative. (E.g. 10 minutes)

Tool 28: The World Mandala

Facilitator notes

Facilitation steps for version 1 (continued):

4. Create a 'synergy map' on a third copy of the Mandala, copying over the linkages from both projects in their respective colours. (5 minutes)
5. Discuss the synergy map (e.g. for 20 minutes) by considering questions such as:

   Where do the linkages of the two initiatives join up?

   Which nodes might offer opportunities to help both projects simultaneously?

   Are there any areas where the two initiatives could be in conflict, such as competing for resources?

   Are there any nodes not initially involved that turn out to be critical for either or both projects and need additional consideration?
6. Finish by reviewing the main lessons for what next steps now need to be taken. This might include identifying the need for a new initiative that purposefully tries to link up and reinforce the two initiatives examined. (10 minutes)

Facilitation steps for version 2 (the 'World Game'): turning the World Mandala into a game is a powerful way to engage groups. In the words of Margaret Hannah: 'It is easier to play our way into complexity than to analyse it'. A facilitation guide for the 'World Game' version of the Mandala is available in the International Futures Forum Practice Centre. Applying the Mandala in this way involves the following broad steps, imagining the game like a 'drama' in three acts:

Act 1: The world of concerns

1. Introduce the Mandala, game, and topic of enquiry.
2. Split the group into smaller teams (ideally pairs or threes), with each team focusing on a particular node of the Mandala. Every node of the Mandala should ideally be covered by a team. If you have a large group then multiple pairs could explore the same node. You could allocate the nodes randomly or by asking for willing volunteers.
3. Ask each team to identify the most relevant and significant trends and risks of discontinuities (abrupt, major changes, such as tipping points) for their node, and the impact these would have on the broader issue at hand. These can be recorded as 'concerns' or 'trends' on one colour of post-it note, 'discontinuities' on another colour, and 'impacts' on a third colour.

Tool 28: The World Mandala

Facilitator notes

Facilitation steps for version 2 (continued):

4. In plenary, ask each team to feed back their findings, and stick their post-it notes on a large print-out of the World Mandala at the front of the room.

Act 2: Possible futures

5. Split participants into new mixed teams such that each team contains representatives of three or four different nodes from Act 1. These might be teams of three people, for instance.
6. Ask these new teams to explore connections between the portfolios of the individual teams in Act 1, and what scenarios the wider initiative might have to prepare for in consequence. Left to their own devices, teams may be drawn to identifying relatively depressing scenarios. So you could ask each team to identify one degenerative scenario, and one regenerative scenario, involving the three or four nodes in their team.
7. The team could format their scenarios in creative ways, e.g. by imagining the narrative of a TV documentary or news story, a keynote speech at a conference, a future newspaper headline, a social media post, a question asked in a council chamber, etc.
8. If you have more time, each team could also be asked to start identifying what wise action might look like given the scenarios explored.
9. In plenary, ask each team to present their scenarios and/or ideas for action to the wider group.

Act 3: The Wisdom Council speaks

10. Ask participants to return to their original pairs or threes from Act 1, to reflect on the experience of the game as a whole and, based on this, decide on a declaration of advice to the wider initiative, in a format along the lines of the following:

    From the perspective of responsibility for [our node], and taking into account all the learning from the other nodes and possible futures, it is our considered view that, in order to [do something related to the initiative – e.g. design an initiative, strategy or policy that would have a genuinely regenerative impact], it is essential to [advice for action].

11. Declarations could be written on A5 cards or post-it notes.
12. Invite all participants to sit in a circle, with the pairs or threes from Act 1 sitting next to each other.

Tool 28: The World Mandala

Facilitator notes 

Facilitation steps for version 2 (continued):

13. Ask each node-representing pair/threesome to present their declaration. Their card or post-it note could be placed inside the circle (e.g. on a World Mandala diagram on the floor at the centre of the circle).
14. Finish the game with a round of general reflections from each participant about the process and how they found it.
15. Those with leadership responsibility for the initiative should record the advice given and use it to develop their initiative.

Facilitation tips:

- In version 1, although it can be tempting to draw more than three linkages for each initiative, it is more helpful to identify three carefully considered linkages rather than lots of linkages whose significance is unclear. Other linkages can always be brought in later: the point is to identify some salient starting points. See the H3Uni facilitation guide for further tips.
- In version 2, if absolutely necessary you could have each team represent more than one node; however, it is much easier if each team represents just one node. You could also have just a single person representing each node, although this would result in a much less dialogic process.
- In version 2, you could deepen the role-playing element by having each person represent a particular figure, such as government ministers who are each supported by a civil servant, and 'special advisors' who are more free-floating across the group. In this set-up, only the ministers might present their declarations in the final wisdom council.
- In version 2, consider an appropriate timescale into the future for participants to consider (e.g. 20, 30, or 50 years). Longer timescales might encourage more visionary thinking, but shorter timescales would feel more tangible.
- In version 2, Act 3 effectively takes the form of a 'wisdom council' similar to the Wheel of Wisdom: an exercise to see how far the group can tune into a collective intelligence. This can only be done if each individual tunes in to their deepest intuitions, and is intended to be more declarative and intuitive than analytical.

Tool 28: The World Mandala

Facilitator notes

Facilitation tips (continued):

- If necessary, rather than printing out the World Mandala diagram you could just draw the twelve nodes from scratch in a circle (but don't bother drawing in all of the 66 individual linkages between the nodes!).

Adapting to online: this tool can be applied easily in online settings using an online whiteboard, which also saves on printing.

Other adaptations:

- Treat version 1 of the facilitation guide above as just one possible way you could apply the Mandala for analytical purposes; there are likely to be many other ways you could use it.
- In version 2, an alternative version of Act 2 would be to spin a roulette wheel in the centre of the Mandala on a flat surface to select three nodes. If the roulette ball lands on black, introduce a negative future change related to the corresponding node; if the ball lands on red, introduce a positive future change. Each team discusses their portfolios of concerns in light of the scenario introduced by the three nodes from the roulette wheel.
- To use the Mandala for 'world scanning', see the International Futures Forum website.
- A reusable 'World Game' kit based on the Mandala is available from the International Futures Forum, as well as an associated board game. Ali Hodgson has also developed the Mandala into a customisable board game for bioregioning, 'REIMAGINING our Biosphere', which can be integrated into a Three Horizons process for envisioning a regenerative future that is healthy in all twelve nodes, typically using materials to encourage artistic expression and play such as paper for drawing, string, plasticine, clay, or LEGO®.
- The city of Glasgow developed its own version of the World Game, the Glasgow Game, along with associated instructions and materials.

Tool 28: The World Mandala

Facilitator notes



Take it further:

- To explore how you might situate tools like the World Mandala into your wider evaluation practice, see Twelve Principles for Transformation-focused Evaluation.
- You might further evaluate promising system interventions using the Regenerative Lens, H2+ Criteria, Ambition Loops, Regenerative Dynamics with 4 Returns Framework, or Adaptive Waves.
- You could ask your group to search the Regeneration Directory to find which organisations and initiatives are active at each node of the World Mandala.
- Use Dilemma Navigation or the Wheel of Wisdom to interrogate conflicts that you might notice between different initiatives whilst applying the World Mandala.

Tool 29: Dilemma Navigation

A tool for using tensions and conflicts as creative opportunities for transformation and regeneration

It can feel like our world is becoming increasingly polarised: right versus left, short-term versus long-term, good versus evil. This tool asks: What if we could find a third way that creatively enrols both sides into a regenerative resolution?

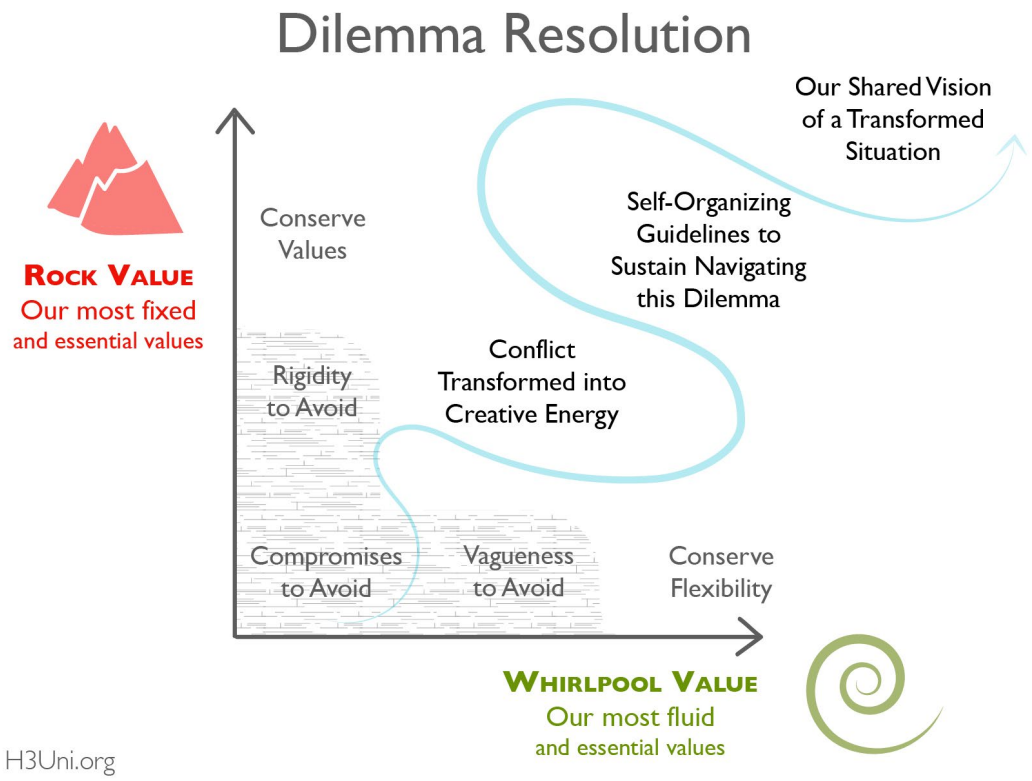


What is it? A method for creatively reconciling competing values and voices into practical action.

Facilitation difficulty: Advanced

Time required: there are many variations of use but a minimum to introduce the approach and use it would be around 1 hour.

Group size: easiest if applied in a group small enough where everyone can participate fully, perhaps 15-25 people.



Purpose and usefulness: dilemmas, tensions, polarities and conflicts inevitably arise in transformations and regenerative practice. For example:

- In landscape restoration, there are often many competing demands for land use (e.g. agriculture, house-building, nature conservation, and recreation).
- To respond effectively to climate change, we must simultaneously mitigate (halt further exacerbation of climate change and find ways to draw down atmospheric carbon), adapt (ensure our societies and ecosystems are prepared for a warming world and extreme weather), and deal with immediate climate-related crises (e.g. putting out dangerous wildfires, or cleaning up after storms).

Tool 29: Dilemma Navigation

Group stage: Beginner

Useful prior knowledge: no specific requirements – people can usually relate to the experience of competing/polarised values. Experience with Three Horizons would be useful.

Materials required: wall space or whiteboard, two flip charts, and post-it notes in three colours.

Origins and designers: based on the 'dilemma thinking' approach of Charles Hampden-Turner[104]. Dilemma Navigation was developed into the H3Uni method by Anthony Hodgson.

Purpose and usefulness (continued):

- In a Three Horizons context, transformations involve moving from the dominant values of Horizon 1 to contrasting values in Horizon 3. This will often present itself as a negative, polarised conversation between the voice of the Horizon 1 'manager' trying to 'keep the lights on' and stop the system from collapsing, and the voice of the Horizon 3 'visionary' pushing for radical change.
- Life is a regenerative community, and each living member of the community must constantly resolve the tension between being as self and being as part of the whole. Similar tensions often arise when applying the Regen-Degen Quadrants exercise. Regenerative systems can be seen as the continuous dynamic resolution of this tension amongst all the members of the community.

Humans are adept at strengthening these tensions and their polarities, which in many cases leads to arguments, discrimination, xenophobia, scapegoating, violence, and even war for supremacy. We are much less proficient in moving from 'either/or' thinking to 'both/and' thinking, and finding more creative resolutions to dilemmas that allow both sides to play important roles. For example:

- In the first example of landscape restoration, creative resolutions might involve examining and addressing the underlying drivers of land use pressures, such as inequalities in living space and population growth, and developing integrated land use strategies that provides space for many forms of use while also creating new spaces that cater simultaneously for multiple needs (e.g. urban mixed wildlife gardens and allotments, or green walls and roofs).
- In the Three Horizons example, moving to a more constructive conversation requires us to recognise how if one of the values is held to the exclusion of the other the system will eventually fail, and to find the creative contribution from each side to the transformation. See Future Stewards' video on the 'three voices' of change for more information about resolving dilemmas between horizons.
- In the example of regenerative communities, the resolution involves parts supporting the health of the whole such that the whole supports the health of the parts – and how, by being part of the wider community of life, we are each most fully ourselves. This dynamic is illustrated by Mutual Qualities of Life, Unique Gifts of Life, Recognising Practices of Care, Regen-Degen Quadrants, the Regenerative Lens, and the Wheel of Wisdom.

Dilemma Navigation is a powerful tool for working productively with such tensions, treating them as opportunities for creativity, learning, and regeneration. See the short introductory Future Stewards TED video on how dilemma thinking transforms argument into action.

Tool 29: Dilemma Navigation

Facilitator notes

When to use: as part of a Three Horizons process or place-based regenerative practice (see Tools for bioregioning), although it can be used in many other situations where dilemmas arise. A dilemma is different from a simple choice; whereas in many choices you can simply weigh up the pros and cons of each option and then make a decision, a dilemma involves two or more equally important options which at face value seem irreconcilable.

Facilitation steps: a tutorial and detailed facilitation guide for Dilemma Navigation are available in the H3Uni Resource Library. There is also a guide in the International Futures Forum (IFF) Praxis Three Horizons kit for the specific use case of developing innovation pathways in Three Horizons using the tensions between H1 and H3.

Dilemma Navigation works from a diagram (see the main tool figure and Figure 5) showing two conflicting options on the axes. It is often the case in dilemmas that one option is about maintaining stability (the 'rock') while the other is about more radical and dynamic change (the 'whirlpool' or 'river'), such as a business needing to maintain profits whilst also adapting to changing markets. The different possibilities for addressing the dilemma are shown as different zones between the axes (Figure 5).

Most of these zones are 'traps' to avoid, as they will fail to fundamentally resolve the dilemma and system failure is simply postponed.

- The 'Ostrich Trap' is the zone of weak compromise, where there is avoidance altogether of trying to resolve the dilemma (like an ostrich sticking its head in the sand). This is also called the 'Compromise Zone'.
- The 'Push-me-pull-you Trap' is the zone of perpetual argument. This is also called the 'Conflict Zone'.
- The 'Dinosaur Trap' is where the rock wins and manages the situation, which may be successful for a while, but eventually fails to adapt to changing circumstances (dinosaurs become extinct). This is also called the 'Top-heavy Zone'.
- The 'Unicorn Trap' is where the whirlpool wins but fails to manage transition sufficiently to avoid system collapse (unicorns are too fanciful and impractical). This is also called the 'Lopsided Zone'.
- The most productive resolution is the 'Flight of the Eagle' via creative, transformative innovation. This is also called the Resolution Zone.

Tool 29: Dilemma Navigation

Facilitator notes

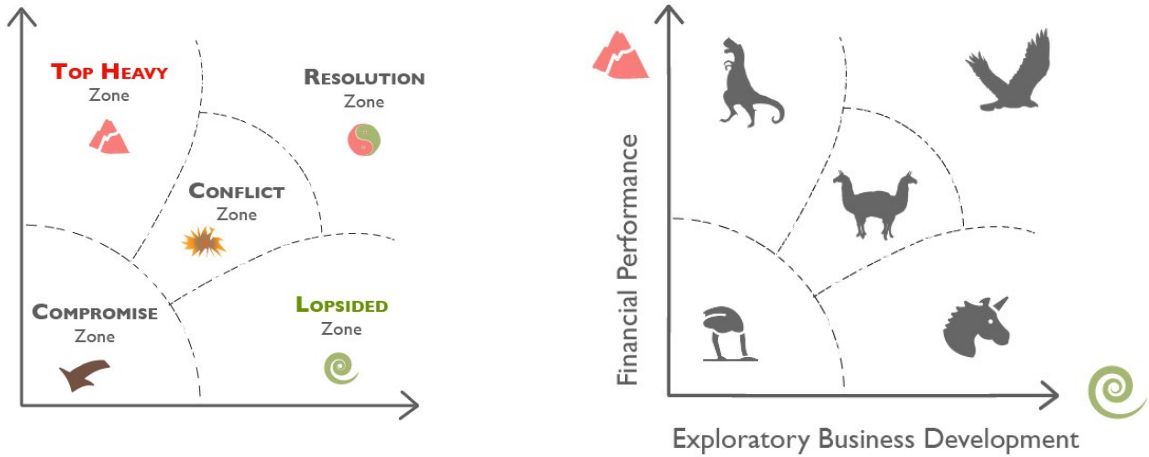


Figure 5. Different possibilities for addressing dilemmas, most of which are traps to avoid: the 'Ostrich Trap' (aka 'Compromise Zone'), 'Push-me-pull-you Trap' (aka 'Conflict Zone'), 'Dinosaur Trap' (aka 'Top-heavy Zone'), and 'Unicorn Trap' (aka 'Lopsided Zone'). The aim is to achieve the 'Flight of the Eagle' (aka 'Resolution Zone') where the dilemma is resolved via creative, transformative innovation. Figures by H3Uni.

Facilitating dilemma resolution involves the following broad steps:

1. Surface and characterise the important features of the dilemma, including the underlying values, beliefs, worldviews or assumptions of the rock and the whirlpool.
2. Explore the different trap zones, how they are currently showing up, and the consequences of pursuing them.
3. Identify requests and offers between the rock and whirlpool (see also Requests and Offers).
4. Place rock offers and whirlpool offers next to each other to identify resolutions that make creative use of both offers.
5. Prioritise the list of resolutions identified (e.g. with a voting process) to identify the most promising candidate or candidates for the dilemma resolution.
6. Stress-test the resolution candidates to check if they risk falling into any of the trap zones or if they genuinely represent the 'Flight of the Eagle'.

Tool 29: Dilemma Navigation

Facilitator notes

Facilitation tips: see the H3Uni and IFF guides. H3Uni's facilitation guide to Generative Thinking is also useful for Dilemma Navigation.

Adapting to online: Dilemma Navigation can be applied easily in online settings.

Other adaptations: situations of deep conflict (e.g. in war zones or other situations of violence) will require other methods to create the conditions where this tool can be used.

Take it further:

- See Mutual Qualities of Life and the Window of Vitality for more about resolving the fundamental dilemmas of life.
- The Wheel of Wisdom provides another method of discussing complex problems and dilemmas.
- To explore how you might situate tools like Dilemma Navigation into your wider evaluation practice, see Twelve Principles for Transformation-focused Evaluation.
- H3Uni's Evaluative Thinking exercise also helps to reduce polarisation (e.g. good/bad, right/wrong, true/false) when evaluating complex situations.

Tool 30: The Wheel of Wisdom

A tool for deep listening and collective wisdom in decision-making

Of all the tools in our guide, experience with the Wheel of Wisdom may feel the most different or challenging compared to how many of us are used to working. But it is also one of the most powerful tools for regenerative practice, building capacity for radically different ways of thinking, questioning, relating, and decision-making, and helping to weave us back into the wider community of life.



What is it? A form of Council (Box 5) in which people role-play eight different archetypes of guiding voice.

Facilitation difficulty: Intermediate to Advanced – depending on depth of process.



Purpose and usefulness: achieving large-scale system regeneration inevitably involves collective action. Whether you're taking part in process to identify, reinforce and cohere domains of action for system transformation, or looking to identify opportunities for new regenerative relationships within your region, or working in diverse partnerships for landscape restoration – the path is always complex, and relies on maintaining collective action with a common purpose of finding more regenerative ways of living on and with our planet. Along the way there will always be tensions and difficult decisions to make, knotty questions to answer, diverse stakeholders to bring on board and keep happy, and opportunities for further learning.

Tool 30: The Wheel of Wisdom

Time required: 1-2 hours is probably the minimum time required for a taster session with a group, although this method should ideally be expansive, relaxed, and not time-pressured. A half-day would be possible for an introductory session; more useful insights might arise from a full day's work, or even multiple days. The Indigenous wisdom councils upon which the tool is based sometimes take weeks. The Wheel can also be applied as a more continual personal reflexive practice.

Group size: as a group exercise, probably a minimum of four people; beyond about 30 people, and it might become harder to maintain the balance between everyone participating and hearing everyone's views, and avoiding an overwhelming amount of advice from participants or a process that drags. (See 'Facilitation tips' below for adapting to large group sizes.)

Group stage: Intermediate

Useful prior knowledge: basic understanding of regenerative practice and transformation is assumed. Prior exposure to the Mutual Qualities of Life exercise is also helpful.

Materials required: a print-out of the Wheel diagram, ideally large-scale; flipcharts and pens, and/or wall space or a whiteboard; an audio recording device (if desired).

Purpose and usefulness (continued): the Wheel of Wisdom offers a Council-inspired approach (see Box 5) of tapping into people's collective wisdom and diversity of perspectives to make wiser decisions – to meet complexity with variety. It does this by evoking eight innate guiding voices that are present to different degrees in each of us. It encourages deep listening, trust, inclusivity, openness and empathy, recognising that every voice needs to be heard. It is inherently non-hierarchical and useful for reconciling differences. It brings in a ritualistic element to help create these conditions.

The Wheel effectively convenes a microcosm of the community of life. In this way it powerfully embodies the fundamental regenerative dynamic of supporting the integrity of a wider whole (collective wisdom, and common purpose) that in turn supports the integrity of its parts (the people taking part). The Wheel reminds people of their uniquely endowed diversity of intelligences and abilities, and the value that they bring to the good of the whole. By allowing people to experience the diversity of their own inner voices, the Wheel of Wisdom also supports individuals' own journey in searching for their inner coherence and authenticity, which in turn enables them to more fully participate in the wider community of life around them. Finally, the Wheel is useful for regenerative practice because it gently builds people's capacity for more 'transpersonal' or 'ecocentric' wisdom and ways of being in the world (see Box 2).

When to use:

- Use this tool when a community of people needs to deliberate challenging issues, questions, and decisions, reconcile differences, and find common ethos, interests and understanding. In strategic decision-making, the Wheel can help to test the robustness and viability of different options for action.
- The Wheel is best applied to open, multi-layered questions (e.g. 'How can we do …?' or 'How can … come about?'), questions of identity beyond conventional labels (e.g. 'Who am I?', 'Who are we?', or 'Who do we want to become, and how will we do so?'), and questions regarding complex organisation (e.g. 'How can we organise to do …, and who should undertake what roles?'). For example, the Wheel has been used by a team to ask how it should develop its role to improve the future of a mixed estate (including farming, historic buildings, forestry and tourism), and by a group of professionals to ask 'What is needed to bring greater wisdom into our professional work?'.

Tool 30: The Wheel of Wisdom

Origins and designers: the contemporary Wheel of Wisdom design takes inspiration from the Indigenous American Earth Wisdom Council and Medicine Wheel. (It is not intended to be a copy.) The pattern that informs the new Wheel originated many centuries ago among the Mayan people of Central America. The H3Uni version of the Wheel and the associated practice was designed by David Adams, based particularly on his training in native wisdom teachings in North America, along with Anthony Hodgson. The artwork for the latest design of the Wheel was created by Elspeth Maxwell in collaboration with David Adams.

When to use (continued):

- The Wheel can also be used in one-to-one conversations, where the issue-holder forms and holds their personal questions within themselves, and makes private notes as they work with the facilitator.
- The Wheel of Wisdom could be powerfully woven into bioregioning and other place-based regenerative practice (see Tools for bioregioning).

Facilitation steps: a detailed facilitation guide to the Wheel of Wisdom is available in the H3Uni Resource Library (see alo H3Uni's tutorial with more background about the Wheel). Broadly speaking, the method involves the following steps:

1. Appoint a facilitator as 'Servant Listener'.
2. All participants metaphorically 'bury their weapons', or whatever distractions and resistances they might be carrying that will not be helpful to bring into the council.
3. Choose a common question for deliberation through a voting process; unanimous agreement is required. The questions should ideally emerge in real time with the concerns that people are carrying with them as they meet. The ten stones voting method is one possible method of prioritising the questions: each person has ten virtual stones, casting four on the question they most want to consider now, three on the next most important question, two on the next most important, and one on the next most important. When all stones are cast, they are counted for each question. The question with the most stones is the one that goes forward for group consideration, with further deliberation on the focus of the question if necessary for unanimous agreement.
4. Each of eight archetypal voices associated with a compass direction (Disruptive Genius, east; Peacemaker, south-east; Pioneer, south; Pathfinder-Narrator, south-west; Steward/Chatelaine, west; Oracle, north-west; Strategist, north; and Guardian of Transformation, north-east) is then introduced in turn by the Servant Listener.
5. After each role introduction, participants are invited to suggest their guidance in answering the central question, from the perspective of that role, and the Servant Listener records the advice (e.g. by writing on post-it notes and placing these on a flipchart, wall or whiteboard, or audio-recording the conversation).

Tool 30: The Wheel of Wisdom

Facilitator notes 

Facilitation steps (continued):

6. Round off the process with collective reflection on what has arisen, what has been learnt, and what action needs to be taken forward, with further voting processes if necessary.

An example of a taster session could involve the following steps:

1. Have everyone seated in a circle with the Wheel diagram in the centre.
2. Introduce the Wheel, and remind participants of the kind of ethos and mindset needed (e.g. openness and respect for everyone's views).
3. Volunteers or co-facilitators take it in turns to role-play the eight voices to introduce them and their character (or you as the facilitator could do this). See H3Uni's tutorial and facilitation guide for information about each voice.
4. Ask participants to identify which of the roles resonates with them the most, and share this with the group (just naming the role rather than giving a detailed explanation), going around the circle of participants in turn.
5. Propose a prepared question to discuss (e.g. 'What is needed to enable personal transformation to come about?').
6. Ask participants to pair up with a person who shared the same favourite role as them. Give them 10 minutes to try and answer the central question from the perspective of their chosen role(s).
7. In plenary, ask each pair to share their insights around the central question (15 minutes).
8. For the last 10 minutes, ask for any reflections from participants about how they found the process and what they learnt.

Tool 30: The Wheel of Wisdom

Facilitator notes

Facilitation tips: see H3Uni's tutorial and facilitation guide.

- Particularly if you have a large group, or are pushed for time, you can simply harvest up to three people's advice per role before moving on to the next role.
- The deeply reflective nature of this method might make some people feel uncomfortable; facilitators should make it clear that participants are welcome to drop out at any point if they are feeling this way. It may be helpful for facilitators to be trauma- or counselling-informed, or at least have appropriate protocols and preparation in place, as there is a possibility that the openness encouraged in this method could allow sensitive or traumatic issues to surface.
- Although the Wheel encourages unanimous agreement on decisions for the group to take forward, this depends on what is at stake at the time, and how important agreement is (how much it matters, or how urgent it is) to the participants. Groups should consider: Why is agreement needed? Who is most in need of it? What benefits are sought? Reaching agreement, given the richness and diversity of perspectives sought by the Wheel, whilst avoiding the imposition of ideas or the weak compromise of groupthink (see Dilemma Navigation), is no small feat. In situations of strong challenge and emotional intensity, it might take several rounds with the Wheel for a group to come to a sufficient state of convergence to reach agreement. In such cases the quality of trust in the eventual agreement would be high, with good prospects for its durability.
- Assuming that a group has taken the trouble to use the Wheel for a necessary outcome, they could use the ten stones voting method again to test variations in the agreement that is being sought. An alternative process is to invite those who disagree with the majority to indicate what change to the agreement would allow them to join the majority, without having to move the majority view significantly. This becomes a matter to deal with sensitively and skilfully at the time and in the moment, especially if time is short, as is so often the case – which is where the quality of holding, procedure and dialogue facilitated by the Servant Listener can be very significant. An awareness of Dilemma Navigation techniques would be useful here.

Tool 30: The Wheel of Wisdom

Facilitator notes

Adapting to online: the Wheel can be applied in online settings, ensuring it is interspersed with regular breaks.

Other adaptations:

- A fun warm-up to using the Wheel is to go around the room letting participants choose a card, at random, from the pack of Medicine Cards of Jamie Sams, David Carson and Angela Werneke[105]. Then go around the circle of participants letting them introduce themselves to the group as their chosen animal, and what feeling or attitude they are bringing into the process. For example: 'I am the fox, and I come with curiosity'. This already gets participants into the spirit of role-play.
- There are many other forms and lineages of Council practice (see Box 5).

Take it further:

- To explore how you might bring inclusive and diverse perspectives into your wider evaluation practice, see Twelve Principles for Transformation-focused Evaluation.
- See Dilemma Navigation for an alternative method of discussing complex problems and dilemmas.

Tool 30: The Wheel of Wisdom

Box 5: The way of Council as regenerative practice



'Council' is possibly the most tested and powerful tool in all regenerative practice. Indeed, it is one of the core practices that makes us human: hominids have probably sat in a circle around a fire telling stories and sharing experiences into a cultural web of meaning for hundreds of thousands of years.

The way of Council is more than just entertainment, however. Many cultures have used Councils as a way to deeply explore how to come to important decisions, navigate challenges, resolve conflicts, and make sense of experiences. Council has the capacity to process trauma and grief as well as love and appreciation, making it an important form of individual and collective healing.

For example, the work of the Ojai Foundation with schools in Los Angeles showed that bullying dropped drastically in classes that had been facilitated in the Way of Council, even after a small number of sessions. Council is also critically important in 'rites of passage', youth work, intergenerational exchange, peace work, community-building, and reconnection with the wider community of life (see also Box 2), as well as a respectful way to invite shared meaning-making with Indigenous peoples and in the context of decolonisation (see Protocols for Non-Indigenous People Working with Indigenous Knowledge developed by Indigenous Knowledge Systems Lab and colleagues).

Box 5: The way of Council as regenerative practice (continued)

Council requires skilled facilitators that enable participation and emergence, and create the conditions through which collective wisdom can be manifested. There are many different forms and lineages of Council practice; see for instance the work and resources of Rob Dreaming and Ojai Foundation in the USA on their website Ways of Council, Jack Zimmerman and Virginia Coyle's book *The Way of Council*[106], the European Council Network, the Council of All Beings facilitation guide by Joanna Macy and John Seed, and the Wheel of Wisdom in our tool guide.

Council is an entry point into the wisdom of the circle, a collective intelligence that is held not just in us but between us, and in the natural relationship that we have with all life. In Council, participants have an embodied, lived experience of 'mind' not being in their heads, but a shared field that they inhabit together. In inviting people to speak and listen 'from the heart', Council helps us to access and make explicit qualitative ways of knowing, sensing, feeling and intuiting beyond the usual dominance of rational thinking and quantification in westernised cultures. Such experiences can be profoundly transformative.

At its simplest, bringing Council principles into your deliberation and decision-making processes might feature:

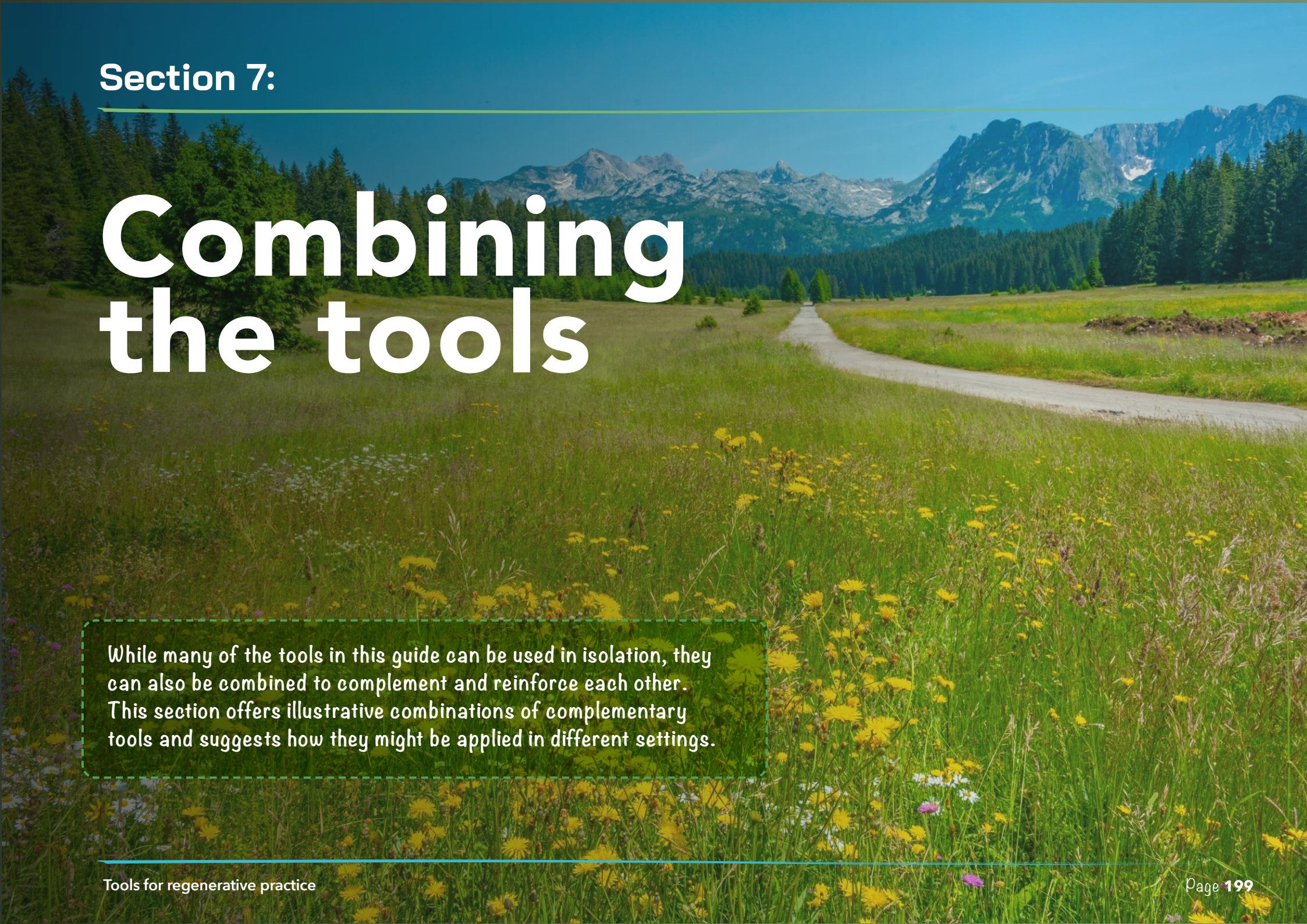
- a circle structure, which creates a sense of equality;
- ensuring every person gets a chance to speak (you could use a physical object as a 'talking piece');
- inviting participants to speak from their full authentic self (see Come To Your Senses), speak from their personal experience and perspective rather than trying to speak on behalf of the group, be succinct, and trust their spontaneity;
- and 'active listening' without judgement (see Come To Your Senses).

More advanced Council practice might additionally include:

- an opening prayer, blessing, dedication, or acknowledgement (e.g. of the lineage of Council practice that is being continued, and the ancestral stewards of the land where the Council is taking place);
- participants 'burying their weapons' (see the Wheel of Wisdom);
- reaching collective decisions unanimously, which encourages creative resolution of dilemmas rather than settling for weak compromise, dictatorship, or leaving issues unresolved (see Dilemma Navigation);
- and being prepared to 'live the questions' and work within uncertainty and ambiguity, rather than trying to quickly reach definitive answers.

Section 7:

Combining the tools



While many of the tools in this guide can be used in isolation, they can also be combined to complement and reinforce each other. This section offers illustrative combinations of complementary tools and suggests how they might be applied in different settings.

Section 7: Combining the tools

The basic recommended sequence of applying the tools

We would generally suggest applying at least one tool from each set, in sequence:

- Tool set 1 to give participants a warm-up;
- Tool set 2 to stretch their conceptual boundaries;
- Tool set 3 to move into action-planning.

If you applied one tool from each set in that order, you might need a half-day to a full-day. There will be many exceptions, however: an introductory session might skip set 3 entirely, for example.

An introduction to regenerative systems and dynamics

For a half-day session that introduces regenerative systems and their key dynamics (e.g., cross-scale reciprocity), consider the following sequence of tools (after sharing Future Stewards' Regenerative Video in advance):

- Mutual Qualities of Life
- The Great (Re)Turning
- Regenerative Descriptions
- Regen-Degen Quadrants **OR** the Window of Vitality

An introduction to regenerative organisations and initiatives

For a half-day session that uses an actor-based approach to introduce key elements of regenerative systems, consider the following sequence of tools (after sharing Future Stewards' Regenerative Video in advance):

- The Regeneration Directory
- Recognising Practices of Care

An introduction to bioregioning

For a full-day workshop on starting a bioregional learning journey (see Tools for bioregioning), consider the following sequence of tools (after sharing Future Stewards' Regenerative Video in advance):

- The Great (Re)Turning
- Mutual Qualities of Life
- Recognising Practices of Care
- Compass Directions for Bioregional Mapping **OR** the Bioregional Quiz

Bioregional action-planning

For a full-day workshop exploring regenerative relationships and opportunities for regeneration in a bioregional context (assuming prior familiarity with bioregioning and regenerative practice), consider the following sequence of tools:

- Recognising Practices of Care
- Regenerative Actor Mapping
- Requests and Offers **OR** Ambition Loops **OR** Regenerative Dynamics with the 4 Returns Framework **OR** Adaptive Waves **OR** the World Mandala



Section 7: Combining the tools

Sensitivity to cycles

For a full-day exploratory workshop focused on attuning participants to the cycles of life, consider the following sequence of tools:

- Come To Your Senses (choosing poems that emphasise cycles of life)
- Principles of Life
- Adaptive Waves (this could be either be applied in an open-ended way, or applied to a particular initiative represented by the participants)

Regeneration-focused evaluation

For a half-day workshop focused on designing a transformation- and regeneration-focused evaluation approach for an initiative, consider the following sequence of tools:

- Twelve Principles for Transformation-focused Evaluation
- The Regenerative Spiral **OR** the Window of Vitality **OR** Principles of Life **OR** Nested Systems **OR** Regen-Degen Quadrants **OR** the Regenerative Lens **OR** H2+ Criteria **OR** Regenerative Dynamics with the 4 Returns Framework **OR** the World Mandala (each explored in an experiential way as a potential framework for evaluation)

For a full-day workshop focused on evaluating the regenerative dynamics in a system of interest (e.g. a bioregion), and how a regeneration-focused initiative has contributed to those system dynamics, consider the following sequence of tools:

- The Regenerative Spiral
- The Regenerative Lens **OR** Regenerative Dynamics with the 4 Returns Framework **OR** the World Mandala
- Other evaluation tools such as outcome mapping, ripple effects mapping, and contribution analysis

An outdoor, exploratory weekend retreat inspired by nature

The following is a suggestive outline for a two-day weekend retreat, held primarily outdoors, to help reconnect participants to nature and gain inspiration from it in designing regenerative systems. It has an exploratory and contemplative feel rather than aiming towards a concrete end-point. The first day develops a grounding in a complexity-informed view of the world, while the second day focuses more on regenerative dynamics. Send out Future Stewards' Regenerative Video in advance.

Day 1

- Come To Your Senses
- The Great (Re)Turning
- Structures and Flows
- Principles of Life
- The World Mandala **OR** Dilemma Navigation (you might apply this during an evening session)

Day 2

- Mutual Qualities of Life
- Unique Gifts of Life
- The Wheel of Wisdom



Section 7: Combining the tools

Three Horizons with regenerative framing, action domains, and action evaluation/prioritisation

The following is a possible structure for an in-depth Three Horizons process with a regenerative framing woven through, and a detailed action-oriented exploration of Horizon 2 leading to identification of a framework of priority transformative actions. It would likely require at least four full-day workshops, with an additional on-boarding workshop (2-3 hours) and surveys and consultations between workshops. Send out Future Stewards' Regenerative Video in advance.

Workshop 1

- Come To Your Senses **OR** Mutual Qualities of Life
- The Great (Re)Turning
- Three Horizons: Horizon 1
- The Regenerative Spiral **OR** Regenerative Descriptions
- Three Horizons: Horizon 3

Workshop 2

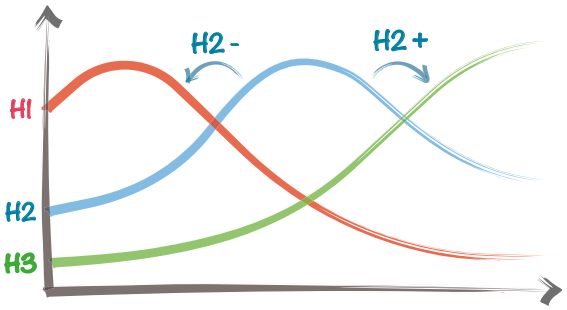
- Nested Systems **OR** Regen-Degen Quadrants **OR** the Regenerative Lens, to push the ambition and imagination of the Horizon 3 vision identified in Workshop 1
- Three Horizons: value contrasts between Horizon 1 and Horizon 3
- Three Horizons: Horizon 2 **+** Three Stages of Change **+** H2+ Criteria, to start prioritising Horizon 2 actors (ideally identified before the workshop through consultation work and surveys)

Workshop 3

- Reinforcement Clustering of prioritised Horizon 2 actors into action domains
- Requests and Offers between the action domains

Workshop 4

- The Regenerative Lens **OR** H2+ Criteria **OR** Ambition Loops **OR** Regenerative Dynamics with the 4 Returns Framework **OR** the World Mandala, to scrutinise priority transformative actions



Section 8:

Other useful tool guides, resource libraries and reading

There are many other tools, tool guides and resource libraries that are useful for regenerative practice. Rather than describing them in detail in this guide, we provide links and encourage you to explore them yourself to extend and deepen your practice. Table 3 lists a selection of other useful tool guides and resource libraries that we are aware of. We also include a selection of books that we have found inspiring and foundational for our understanding of regenerative practice, dynamics and systems.

Section 8: Other useful tool guides, resource libraries and reading

Table 3. Other tool guides and resource libraries that are valuable for regenerative practice.

Tool guide	Author(s)	Value for regenerative practice	Bear in mind…
H3Uni Resource Library	Anthony Hodgson, Bill Sharpe and David Adams of H3Uni	Contains detailed facilitation guidance and background information for some of the tools in our guide, including Structures and Flows, Three Horizons, the World Mandala, Dilemma Navigation, and the Wheel of Wisdom. It also includes guidance on other facilitative techniques such as visual facilitation, scoping, reflection, ecosystem thinking, generative thinking, lateral thinking, evaluative thinking, concept mapping, causal loops, and value constellations.	Some of the facilitation guides lack concrete examples of the contexts in which the tool might be used, and key mechanical aspects of facilitating the tool (e.g. what group sizes they work with or how long exercises take). Some of the guides (e.g. for the World Mandala) are also out of date.
International Futures Forum Practice Centre	Graham Leicester of International Futures Forum	A relatively small and focused resource library that includes sections on Three Horizons, transformative innovation (based on Three Horizons) along with specific applications in education and healthcare, and the World Game (based on the World Mandala), amongst others.	Some users of the library might find it confusing that it mixes up tools with other kinds of resources, such as links to networks.
10 tools for systems change to a zero carbon world[27]	Bill Sharpe and Yasu Mali of Future Stewards	This toolkit, created in partnership with Leaders' Quest and the High-Level Climate Action Champions for United Nations COP26, includes some of the tools in our guide in the handy format of two-sided cards (the Regenerative Spiral, Three Horizons, Three Stages of Change, and Ambition Loops), as well as various other foundational tools such as system maps, causal loops, and tipping points and cascades. Many of these are accompanied by short animated videos in Future Stewards' resource library.	Because of its pocket-sized format, this toolkit contains limited facilitation guidance.
The Patterning of Hope Podcast	Bill Sharpe and Yasu Mali of Future Stewards	This eight-part series of conversations between Bill Sharpe and Yasu Mali (with an accompanying handbook) aims to 'help you to become your own futures practitioner'. It provides insights into many of the tools in our guide and the ideas behind them, including Structures and Flows, Mutual Qualities of Life, Three Horizons, and Dilemma Navigation. Each podcast episode is paired with a short bonus episode offering a simple practice that you can try in your own life.	The series is geared towards supporting personal reflective practice rather than providing guidance for facilitators of groups.

Section 8: Other useful tool guides, resource libraries and reading

Tool guide	Author(s)	Value for regenerative practice	Bear in mind…
Arts-Based Methods for Transformative Engagement[1]	Kelli Rose Pearson, Malin Bäckman, Sara Grenni, Angela Moriggi, Siri Pisters and Anke de Vrieze of Susplace	Many of the tools in this open-access guide are valuable for regenerative practice, and complement the tools in our guide. As well as helpful guidance on general facilitation techniques, the guide – which is structured around the Theory U framework – includes simple tools for evoking our wider suite of senses and 'full-body knowing' as opposed to only intellectual knowing, storytelling, close observation of nature, expanding concepts of time, and inviting contribution from non-human stakeholders and future/past generations. It also includes four rich case studies of applying these kinds of tools to support place-based regenerative systems. Some of the tools are explicitly geared towards bioregioning. The book can be freely downloaded from the Susplace website, and all the tools are additionally available in Re-imaginary's Methods & Resources, which features helpful search filters.	The tools may be challenging for less artistically minded audiences.
Imagining, Designing and Teaching Regenerative Futures: Art-Science Approaches and Inspirations From Around the World[107]	Edited by Julia Bentz and Jelena Ristić Trajković	This open-access online book provides facilitation guides for 65 creative, transdisciplinary art-science methods developed by 120 authors from around the world, for imagining and co-creating regenerative futures. It is aimed particularly at educators, researchers, practitioners and designers, and includes a diverse range of innovative methods for engagement, design, future visioning, and experiential, embodied, and playful learning. The tools are grouped into seven sections: 1) Building communities: collaborative decisionmaking and participatory learning; 2) Artistic expression and experimentation for environmental change; 3) Envisioning tomorrow: scenarios and possibilities; 4) Enhancing well-being: experiential learning and nature connection; 5) Playful learning and interactive digital tools; 6) Complexity and integrative thinking; and 7) Innovative pedagogies for regeneration and societal transformation. The book is an output of the EU project SHiFT (Social Sciences and Humanities for Transformation and Climate Resilience).	Because of its pocket-sized format, this toolkit contains limited facilitation guidance.

Tool guide	Author(s)	Value for regenerative practice	Bear in mind…
The Pattern Book for Regenerative Design: A practice guide for engineers (and other humans)[41]	Oliver Broadbent of Constructivist Ltd	As one might expect for a book about regenerative design, this practice guide is beautifully and creatively designed, containing an A-Z directory of tools and practices ('motifs') used by Oli since 2022 for his regenerative design work, along with twelve 'patterns' that combine the motifs in different ways. It includes some of the tools and ideas in our guide, namely Three Horizons, Minimum Viable Pattern, and Ambition Loops. Its Living Systems Blueprint motif is similar to, and helped to inspire, the Principles of Life exercise in our guide. This book is full of little nuggets of wisdom, advice, case studies, and inspiration, and is fun to dip in and out of. It is particularly helpful for explaining the different contexts and purposes of using the tools, and how the tools could be used in complementary combination. Although geared towards contexts of engineering and architecture, many of its tools are applicable to regenerative practice more generally.	The book does not contain detailed facilitation guides, although many of the tools are simple enough that the reader could easily apply them after reading their description in the book.
Collective Imagination Practices Toolkit	Joseph Rowntree Foundation	A diverse range of tools for deepening regenerative practice are available in this toolkit. Tools include introductory talks, frameworks, somatic/embodied practices, spatial practices for civic imaginations, practices for ecological imagination and evoking the more-than-human, and practices for temporal imagination and evoking ancestors or future generations. Some tools are explicitly geared towards bioregioning. We like the diverse kinds of knowledge and wisdom that are drawn upon in this toolkit, particularly because they elevate Indigenous wisdom and more ecocentric or transpersonal practices.	We would suggest that most of the tools in this toolkit are for people who are already relatively advanced in regenerative practice and futures methods. Some of the tools might be challenging for audiences who are less artistically minded, and use language that may feel unfamiliar to many audiences.

Section 8: Other useful tool guides, resource libraries and reading

Tool guide	Author(s)	Value for regenerative practice	Bear in mind…
Work That Reconnects Network Resource Library	Work That Reconnects Network	This resource library contains a richness of tools that support regenerative practice, many of them based on the work of Joanna Macy and Molly Brown, and drawing on Buddhist practice and other Indigenous and non-Western cultures. Categories of tool include analysis frameworks, transforming power relationships, undoing oppression, grounding in gratitude, honouring pain, seeing with new/ancient eyes, deep time, living systems and deep ecology, and spiritual traditions. It includes some more transpersonal practices such as the Council of All Beings. The Resource Library also has an advanced search function that allows you to filter tools according to options such as resource type, topical theme, type of tool user, and language.	The library mixes up facilitation guides with lots of other kinds of resources, such as training courses, which makes it more challenging to navigate for facilitators searching for tools.
SDG Toolkit for Designing Community Projects	Daniel Wahl and Gaia Education	This toolkit supports communities, schools, universities or businesses to design projects implementing the United Nation's Sustainable Development Goals (SDGs) in a contextualised way that honours local places and their regenerative potential, and encourages critical reflection on the SDGs themselves.	Some of the resources (e.g. the SDG flashcards) are not freely available and must be purchased.
Playing for Time: Making art as if the world mattered[108]	Lucy Neal	This book is full of tools and ideas for using arts to help regenerate communities.	The book is aimed primarily at artists and community activists.
Linkingthinking: New perspectives on thinking and learning for sustainability[109]	Stephen Sterling, Paul Maiteny, Deryck Irving and John Salter for WWF Scotland	Contains a wealth of educational tools for helping students and educators to develop the relational thinking that underpins regenerative practice, as well as capacities for flexibility, resourcefulness, creativity, self-reliance and empathy. Includes ideas that draw on regenerative design.	This toolkit is now over 20 years old, although still contains much of relevance for regenerative practice.

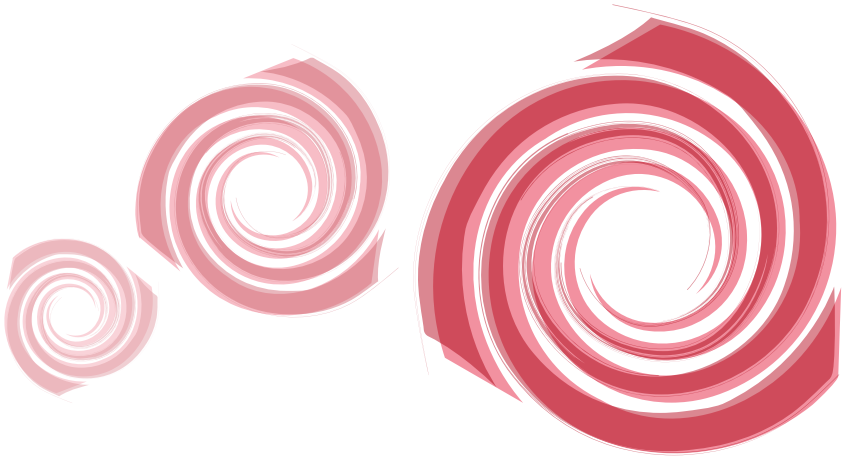
Section 8: Other useful tool guides, resource libraries and reading

Tool guide	Author(s)	Value for regenerative practice	Bear in mind…
u-school's Innovation & Resources	Presencing Institute	This resource library by Presencing Institute's u-school for Transformation contains various Creative Commons 'Methods and Tools for Social Transformation' related to Otto Scharmer's Theory U framework[83]. Many of them are relevant for regenerative practice, including Empathy Walk with Nature and Seeds, or build complexity awareness and futures consciousness more generally. Further ideas are provided in Presencing Institute's popular 'Field of the Future' blog, and case studies of Theory U applied to system transformation.	The tools are not explicitly framed around regenerative practice per se.
Transformative Innovation Policy Consortium (TIP) Resource Lab	Members of the Transformative Innovation Policy Consortium	Contains an abundance of tools focused on transformative innovation policy, which are of high relevance to transformations and navigating complexity. For example, there are tools based on Frank Geels' multi-level perspective[85,86], which inspired the Three Stages of Change tool in our guide. The lab includes tools for visioning, creating transformative theories of change, transformative innovation and experimentation, evaluating transformations, and personal and organisational capabilities for transformation.	The resources are not focused on regenerative practice per se.
The Systems Thinking Playbook: Exercises to stretch and build learning and systems thinking capabilities[110]	Linda Booth Sweeney and Dennis Meadows	This toolkit contains lots of fun, simple and accessible exercises to build capabilities for the systems thinking that underpins regenerative practice.	The exercises are not focused on regenerative practice per se.

Section 8: Other useful tool guides, resource libraries and reading

Below is a selection of recommended books that we have found inspiring and foundational for our understanding of regenerative practice, dynamics and systems.

- *Combining* by Nora Bateson[111]
- *Biomimicry: Innovation Inspired by Nature* by Janine M. Benyus[15]
- *The Design Pathway for Regenerating Earth* by Joe Brewer[112]
- *The Systems View of Life: A Unifying Vision* by Fritjof Capra and Pier Luigi Luisi[49]
- *Regeneration: Ending the Climate Crisis in One Generation* by Paul Hawken[113]
- *Regenerative Leadership: The DNA of life-affirming 21st century organizations* by Giles Hutchins and Laura Storm[5]
- *Investigations* by Stuart Kauffman[36]
- *Braiding Sweetgrass* by Robin Wall Kimmerer[33]
- *The Serviceberry* by Robin Wall Kimmerer[114]
- *Regenerative Development & Design: A Framework for Evolving Sustainability* by Pamela Mang, Ben Haggard and Regenesis[115]
- *The Cosmic Serpent, DNA and the Origins of Knowledge* by Jeremy Narby[116]
- *Order Out of Chaos: Man's New Dialogue with Nature* by Ilya Prigogine and Isabelle Stengers[43]
- *Three Horizons: The Patterning of Hope* by Bill Sharpe[75]
- *Anthology of Regenerative Futures* by Unearthodox[117]
- *Designing Regenerative Cultures* by Daniel Christian Wahl[30]
- *Sand Talk: How Indigenous Thinking Can Save the World* by Tyson Yunkaporta[118]



Appendices

Appendix 1: Versions of the Regenerative Spiral

Figures A1-4 are several different versions of the Regenerative Spiral; some may speak to you and your context more than others. Be wary of versions that replace the 'neutral' category with 'sustainable', which can create a misleading view of sustainability (see 'Facilitation tips' in the Regenerative Spiral).

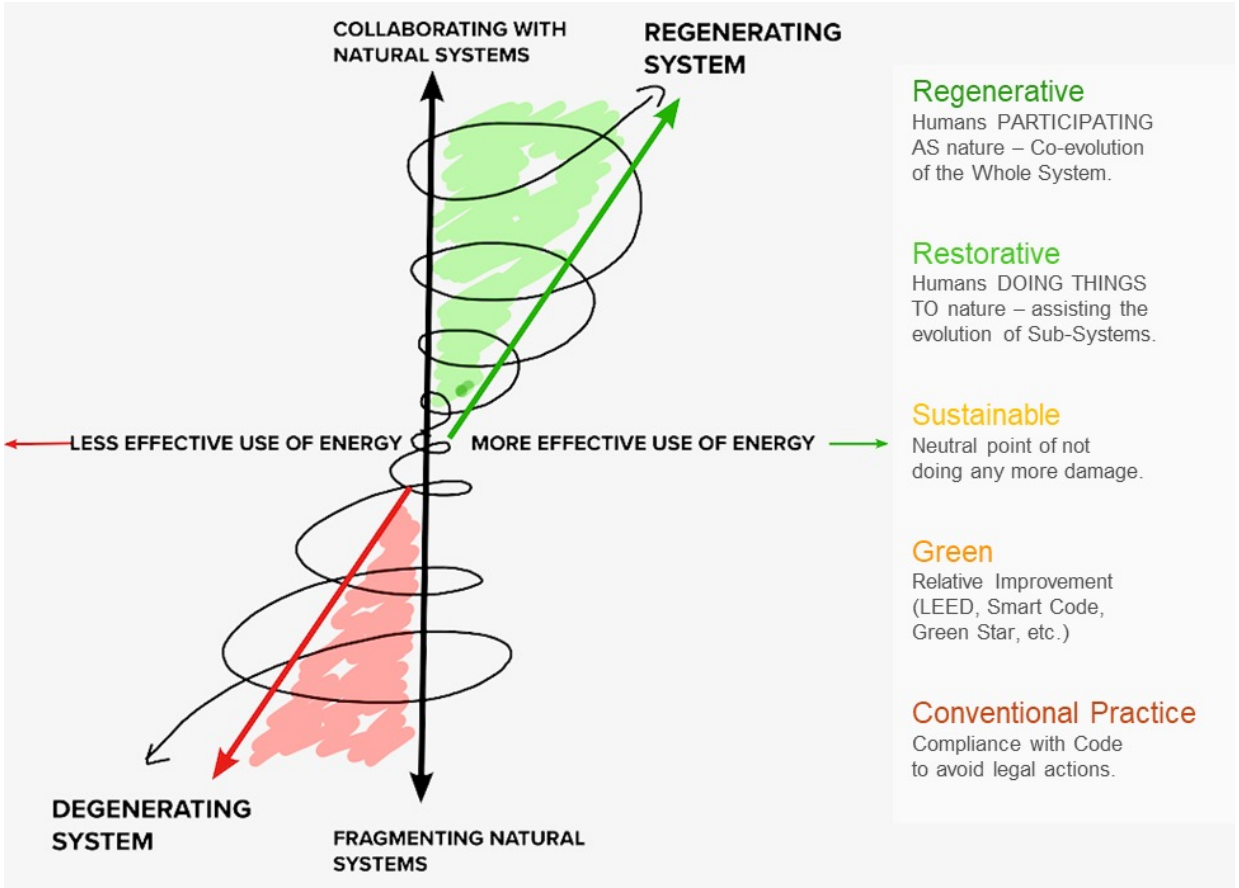
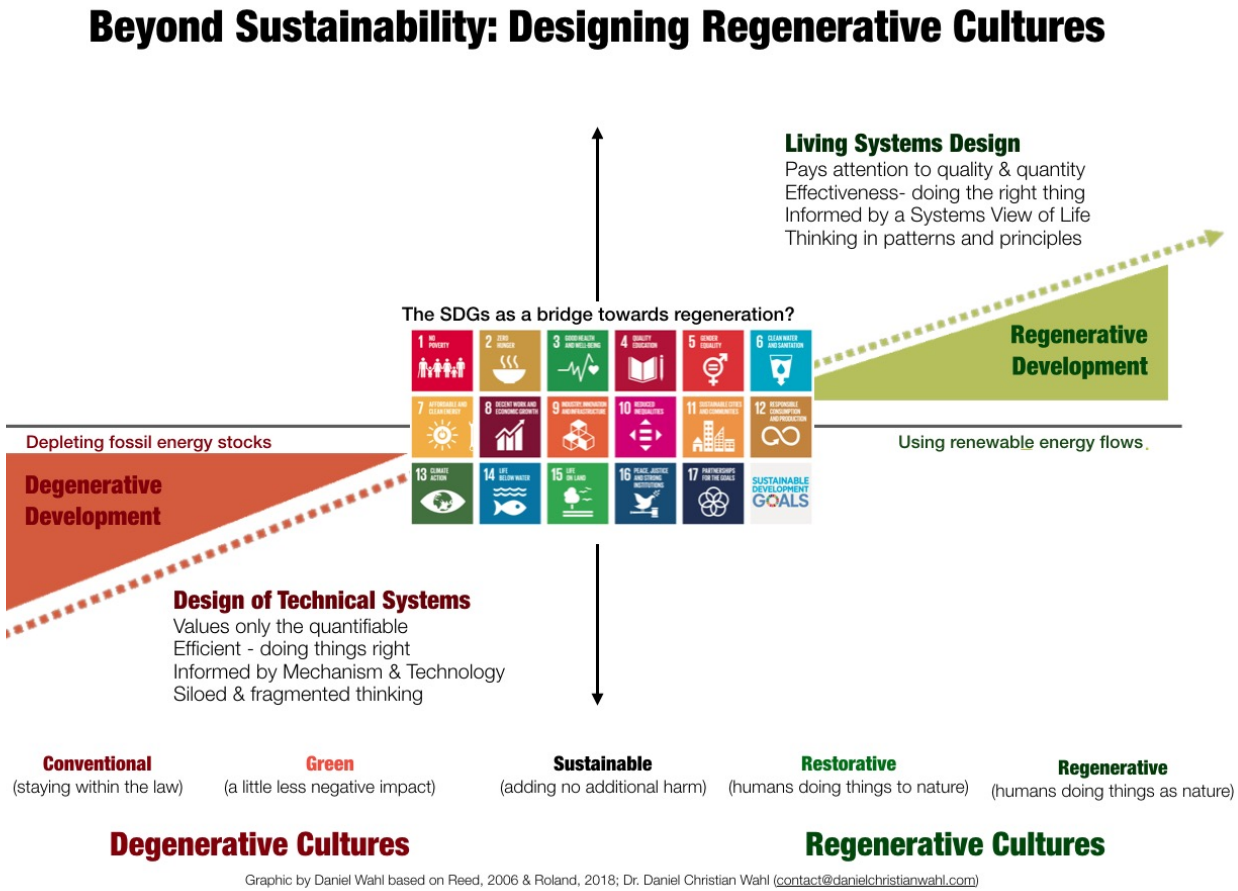


Figure A1. The Regenerative Spiral as designed by Bill Reed, Bill Sharpe and David Adams for COP26. Reproduced with permission from Bill Reed.

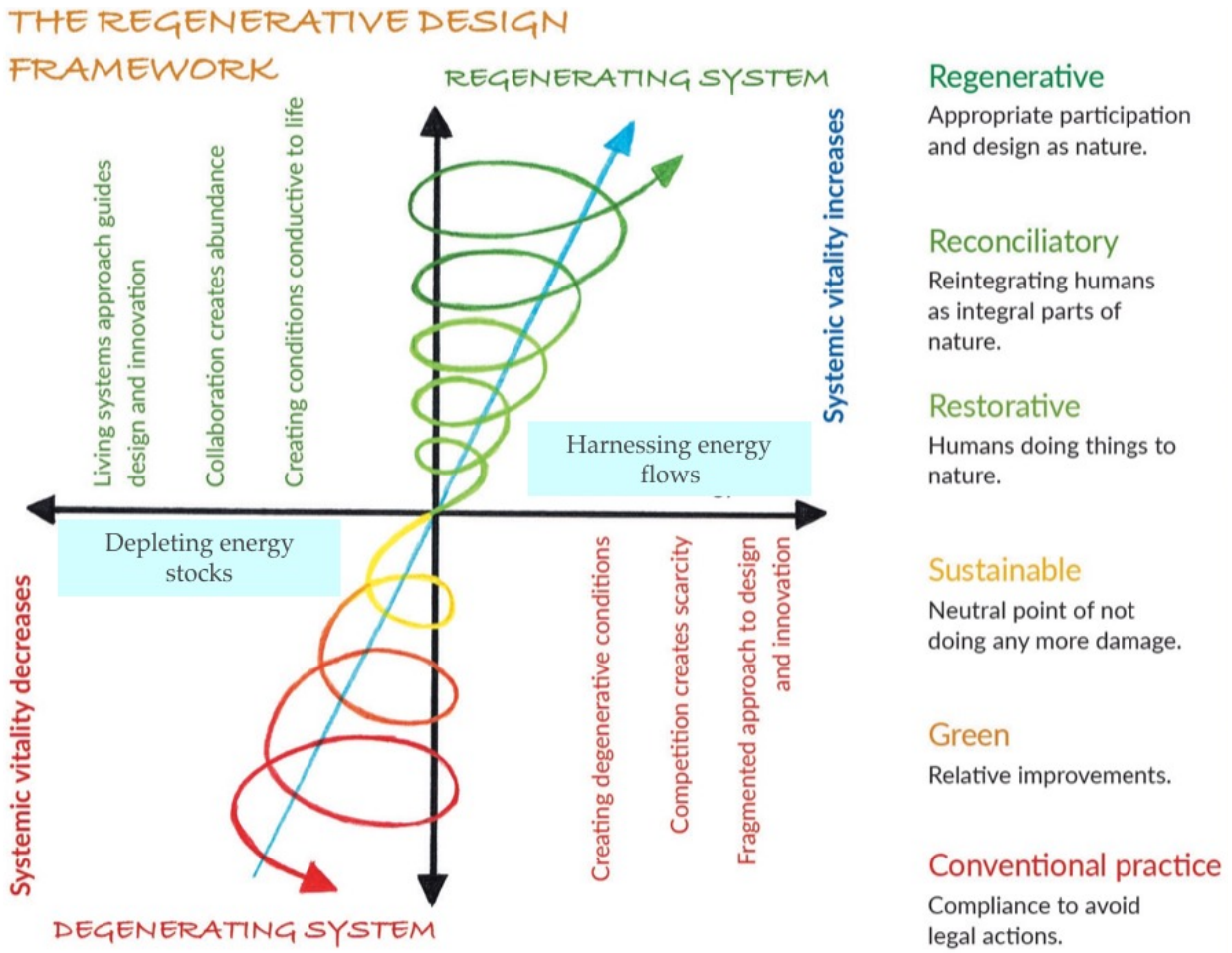
Appendix 1: Versions of the Regenerative Spiral

Figure A2. A design of the Regenerative Spiral by Daniel Wahl[29], based on previous designs by Bill Reed and Ethan Roland Soloviev.



Appendix 1: Versions of the Regenerative Spiral

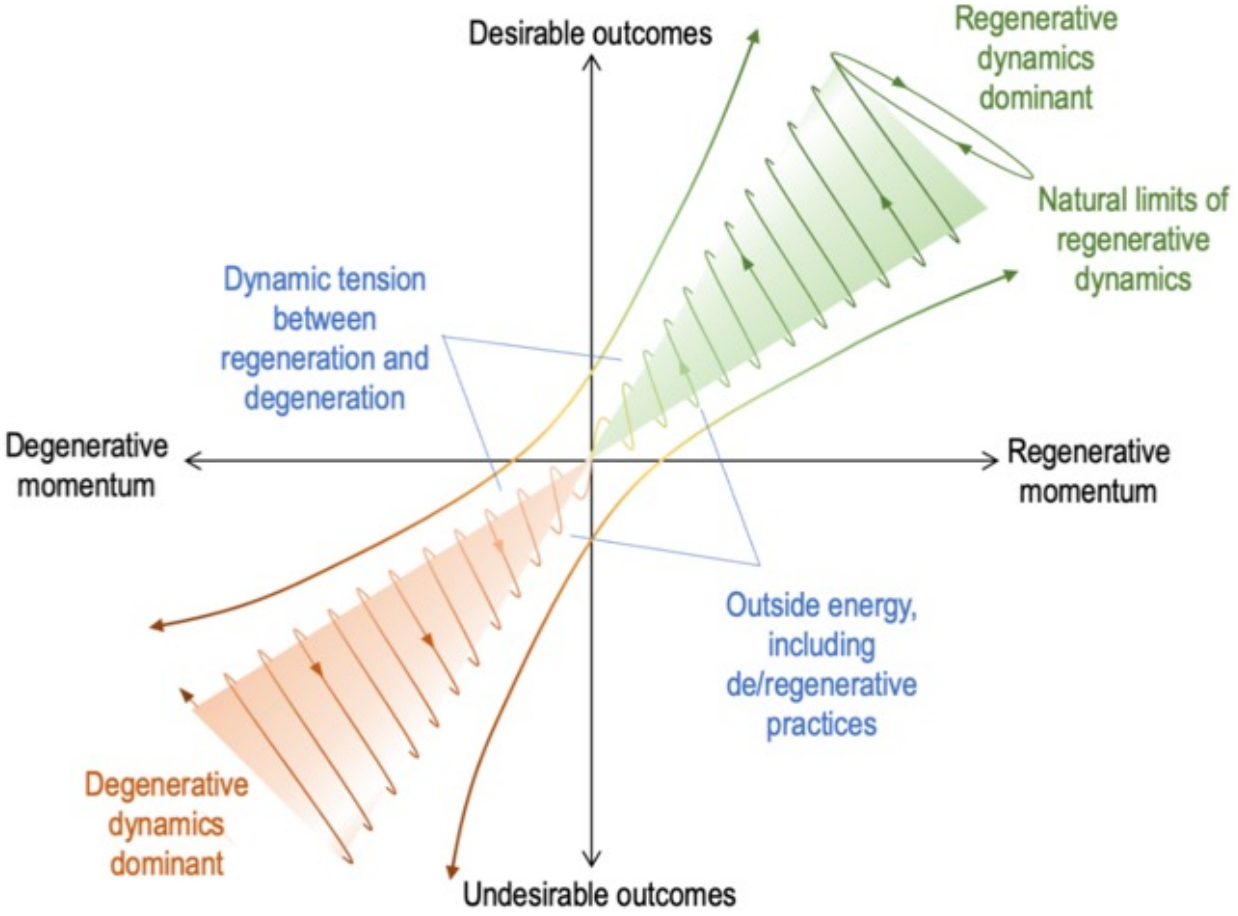
Figure A3. A design of the Regenerative Spiral by Daniel Wahl[30], based on Bill Reed's diagram.



Adapted with permission from Bill Reed, 2006 - *Designing Regenerative Cultures*, p.46

Appendix 1: Versions of the Regenerative Spiral

Figure A4. The Regenerative Spiral from a paper by Joern Fischer and colleagues[32]. Reproduced with permission from Joern Fischer.



Appendix 2: 'Come To Your Senses' meditations and poems

Below we include three possible versions of a meditation and various poems for Come To Your Senses to provide some inspiration, although we encourage you to develop and choose your own in keeping with your particular context.

Heather Mackay Young's meditation

This is a brief audio-guided meditation that we often use at the beginning of our workshops. It is a poem by the Scottish writer and shamanic practitioner Heather Mackay Young, who reads the poem beautifully with her gentle, lilting Scottish accent. One of the reasons why we like this version is because it explicitly encourages reconnection to the regenerative processes of nature, not just our own bodies.

To use this meditation, you will need to download the audio recording from Heather Mackay Young's website and have it ready to play. Note that you will need to provide your email address before you can download the recording. When you play the recording, it is worthwhile finding a good volume balance, where the audio is loud enough to be clearly heard but not so loud that it becomes harsh.

Daniel Wahl's meditation

This is a slightly longer spoken meditation provided by Daniel Wahl. We like this version particularly because it encourages people to zoom in and zoom out across all the regenerative scales of life.

I invite you to come back to your breath, to the here and the now.

This place – feel the contact your body is making with the ground that you're sitting or standing on.

Your body – feel gravity as the embrace of a loving planet.

Connect with the breath – take slow and deep inhalations through the nose, and try to take twice as long to gently let the air flow out of your mouth.

(Allow for five slow breath cycles in silence.)

Keep breathing calmly and deeply, maintaining the long exhalations without any forcing.

Pay attention to the cycle of inhalation and exhalation – of air becoming part of you every time you inhale and part of your being released into the air around you as you exhale.Try to feel the gift of oxygen as it allows every cell in your body to vibrate with aliveness in relationships to a living context.

(Allow for two to three slow breath cycles in silence.)

Keep breathing calmly and try to visualise in your mind's eye how oxygen, carbon and nitrogen are cycling into you, how your body transforms some of these gases and exhales others. Imagine the water you drink and how 71% of your body is made of water – how you transform water within your body and how a constant stream of water is flowing through you in order to keep your body hydrated and your organs functioning.

(Allow for two to three slow breath cycles in silence.)

Stay with the deep belly breathing. Now see how the small and fast cycles within your body – carbon cycles, oxygen cycles, water cycles, nutrient cycles – are mirrored in larger and slower cycles in the landscape and biome that you dwell in, and in even larger cycles in the planetary patterns by which life creates conditions conducive for more life to flourish.

Connect deeply with life's regenerative impulse flowing through you, in you and around you. Connect to this impulse with gratitude and sit for a few breaths more – simply feeling held within and by life's love for life, and therefore your own love for life.

(Allow for five slow and deep breaths in silence.)

Appendix 2: 'Come To Your Senses' meditations and poems

Ioan Fazey's meditation

This is a 5-10 minute spoken meditation that involves a process of journeying to engage our multisensory capacities.

In coming together, it can be helpful to make sure we're bringing our whole selves. We are all unique and have a unique combination of qualities to offer. And yet we tend to limit our offerings because we rely so much on our minds. In this brief meditation, we will explore how – by focusing on our senses – we can step fully into this work by exploring how we feel in our bodies and by expanding our awareness beyond ourselves through our senses.

So begin to focus on your breath. Breathing in, breathing out, breathing in, breathing out. Notice whether your breath is deep or shallow. Notice whether you're breathing through your mouth or your nose. Maybe through one nostril more than the other. You might notice that the breath coming in is cooler than the breath going out. Just spend a moment observing your breath. And now begin to expand this to what you feel in other parts of your body. Maybe in some places there is pain, heat, coolness or perspiration. Tightness, softness, or fluidity. Maybe you can feel the clothes on your skin, the seat beneath you. Are your feet planted on the ground, giving you stability? Or are you sitting more loosely? Where do you notice these different sensations in your body? Don't try to change them, just observe them.

Now choose one of these sensations, maybe a part of you in pain or in tension, or a part that is soft and relaxed. Observe this for a moment. What is the sensation? Where does it begin and end? How does it merge into a different sensation? How deep does the sensation go? What colour might describe it? Is there any imagery or metaphor that helps express it? Perhaps a knot, a rock, ice cube, ocean, cloud, or flower. Again notice the edges. In all of these observations, there's no attachment here. You don't need to change it, just observe it. Use this particular sensation as a tool to help you go deeper into sensing in your body and help you expand beyond the limits of your mind.

And now it is time to begin to expand your awareness beyond your body. What do you feel and sense around you in the room? What do you smell? What do you hear? What do you see? What do you taste? What does the room feel like when you sense beyond yourself?

And now take this awareness further by going to a place that is special to you in nature. A place where you can feel calm, relaxed and heal. This special place might be somewhere you visited a long time ago in another country, or it might be a place in your back garden. It could be a pond, a tree, a rock, a stream, a dune, a grassland, a landscape. It could be the ocean. Go to this place in your mind and spend a little bit of time there. Imagine walking or sitting or perhaps lying in this place. Anything that you feel drawn to be doing. This is your special place where you can allow your senses to openly explore what is around you, becoming more and more aware of the multisensory way in which you engage with the world beyond you.

In this special place begin to explore what you can hear, taste, feel or see. What does it feel like to touch the bark of your tree or put your hand in the cool stream? What does it feel like with the insects and the birds flying around you? Is the sun shining on your face, or the wind brushing against your skin? Is the moon above or the awe of the stars above? Explore your experience of what happens when you become aware through all of your senses. How does this vivid and muti-sensorial experience open you up to the possibilities of how you are nature and not just separate from it? Spend a moment here.

And now slowly return to the room noticing how you are now bringing more of yourself into this space than just your mind. As you gently open your eyes and become accustomed to the room, slowly look at others around you and silently, acknowledging their presence. Feel the unique wholeness they bring and all of the possibilities that this provides…

Appendix 2: 'Come To Your Senses' meditations and poems

Suggested poems

Below is a list of possible examples of poems that you may wish to recite, as well as essays that you might select extracts from:

Praise this Day … by Adyashanti

Hieroglyphic Stairway by Drew Dellinger

Aphorisms on the Theory of Nature and Science by Johann Wolfgang von Goethe (translated by Daniel Wahl), and the related essay by Georg Christoph Tobler and translated by T. H. Huxley (often mis-attributed to Goethe)

Hymn to Time by Ursula Le Guin

Interbeing by Thich Nhat Hanh

Please Call Me By My True Names by Thich Nhat Hanh

Quotes from Braiding Sweetgrass by Robin Wall Kimmerer[33]

Dear Darkening Ground by Rainer Maria Rilke (you could alternatively play The Impossible Future's powerful animation of this poem read by Vandana Shiva)

Let Darkness Be a Belltower by Rainer Maria Rilke

Widening Circles by Rainer Maria Rilke

Come, Come, Whoever You Are by Jalaluddin Rumi

For the Children by Gary Snyder

Lost by David Wagoner



Appendix 3: Nested system diagrams

Figures A5-8 are some different examples of nested system diagrams that include scales that you may find useful to consider when applying the Nested Systems tool.

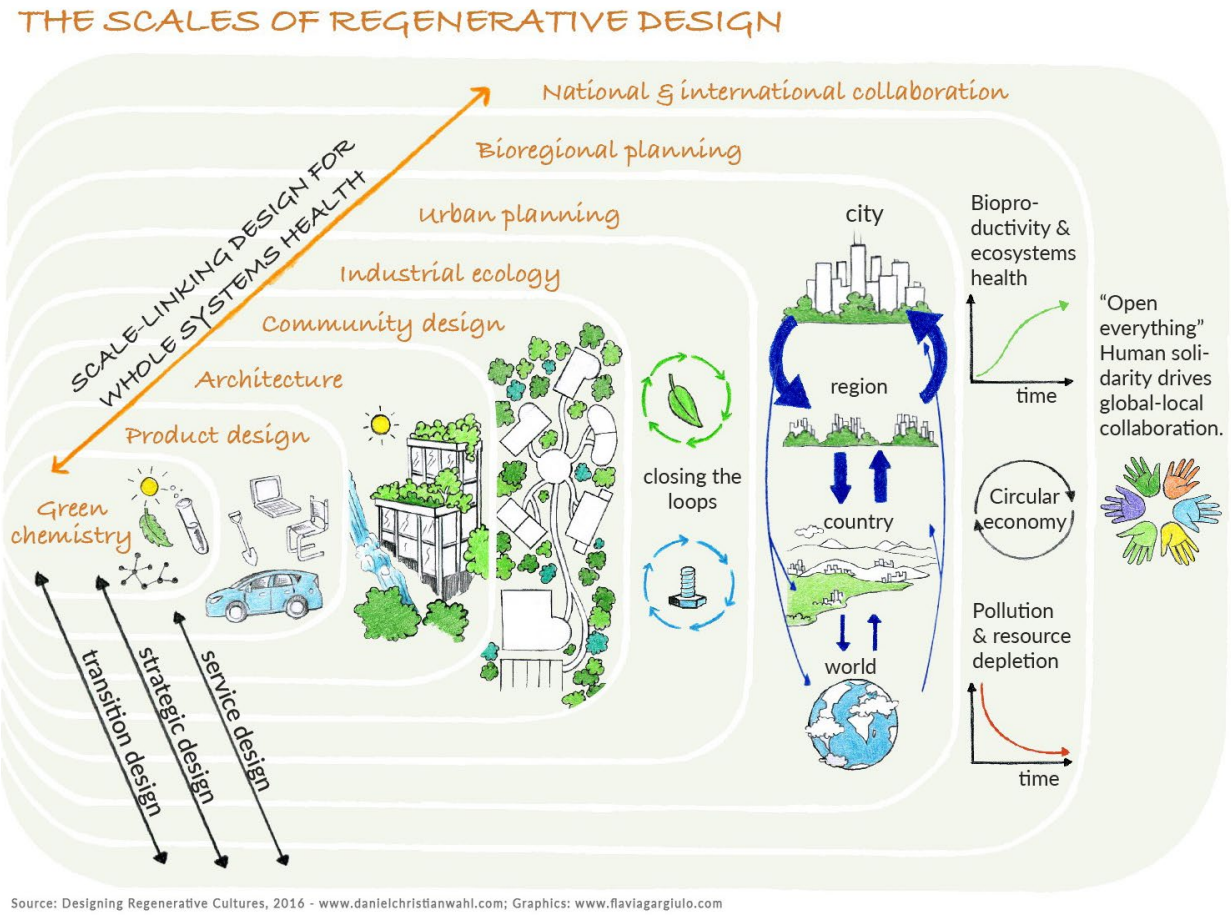
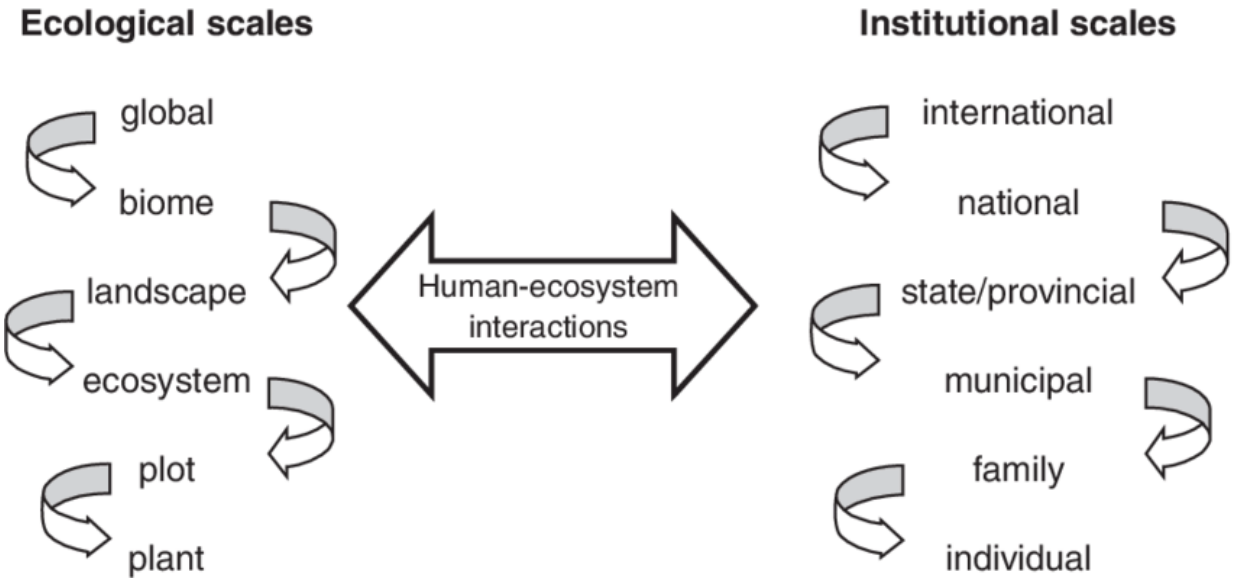


Figure A5. Nested systems design by Daniel Wahl of the scales of regenerative design[30].

Appendix 3: Nested system diagrams

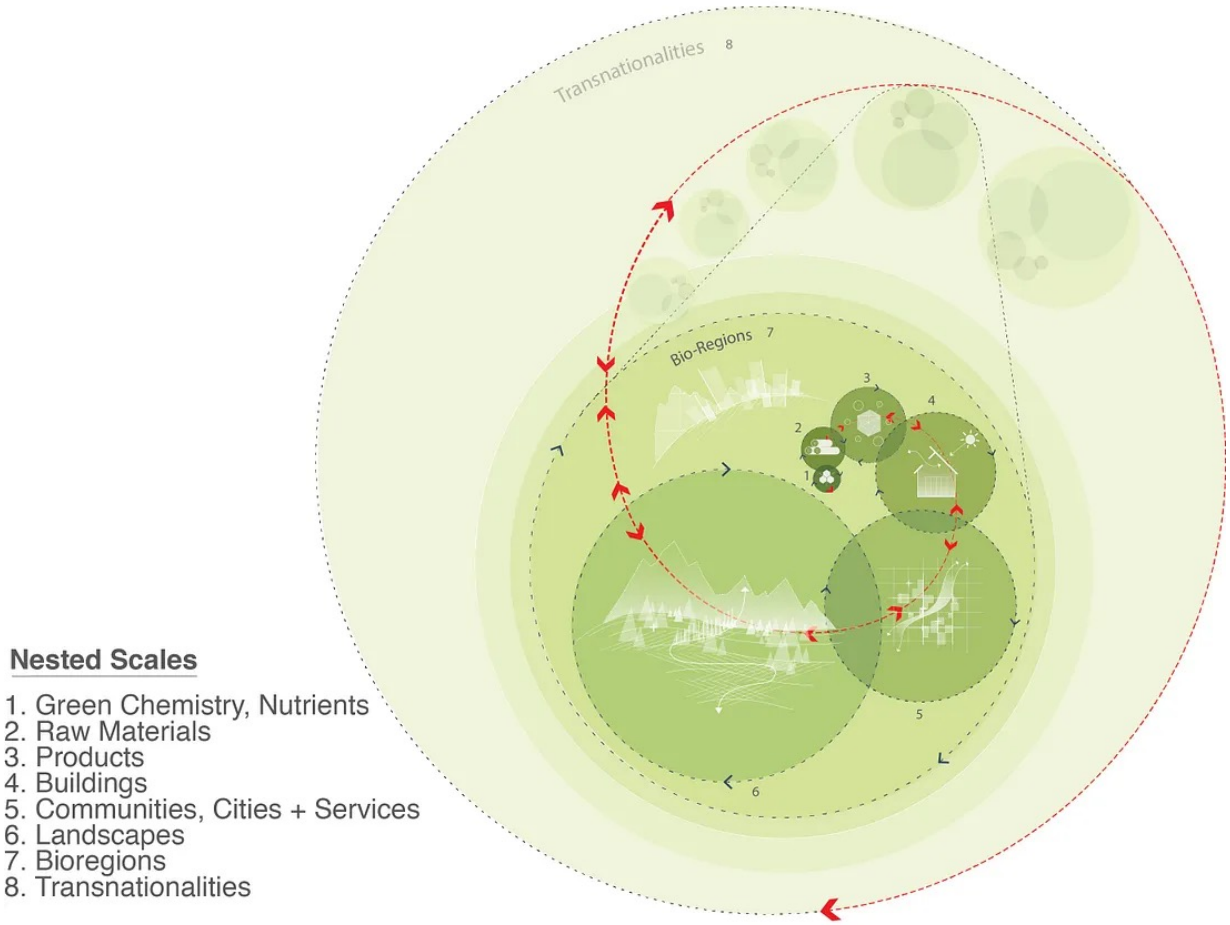
Figure A6. Diagram of selected ecological and institutional scales by Lars Hein and colleagues[119], adapted from an earlier diagram by Rik Leemans.



Appendix 3: Nested system diagrams

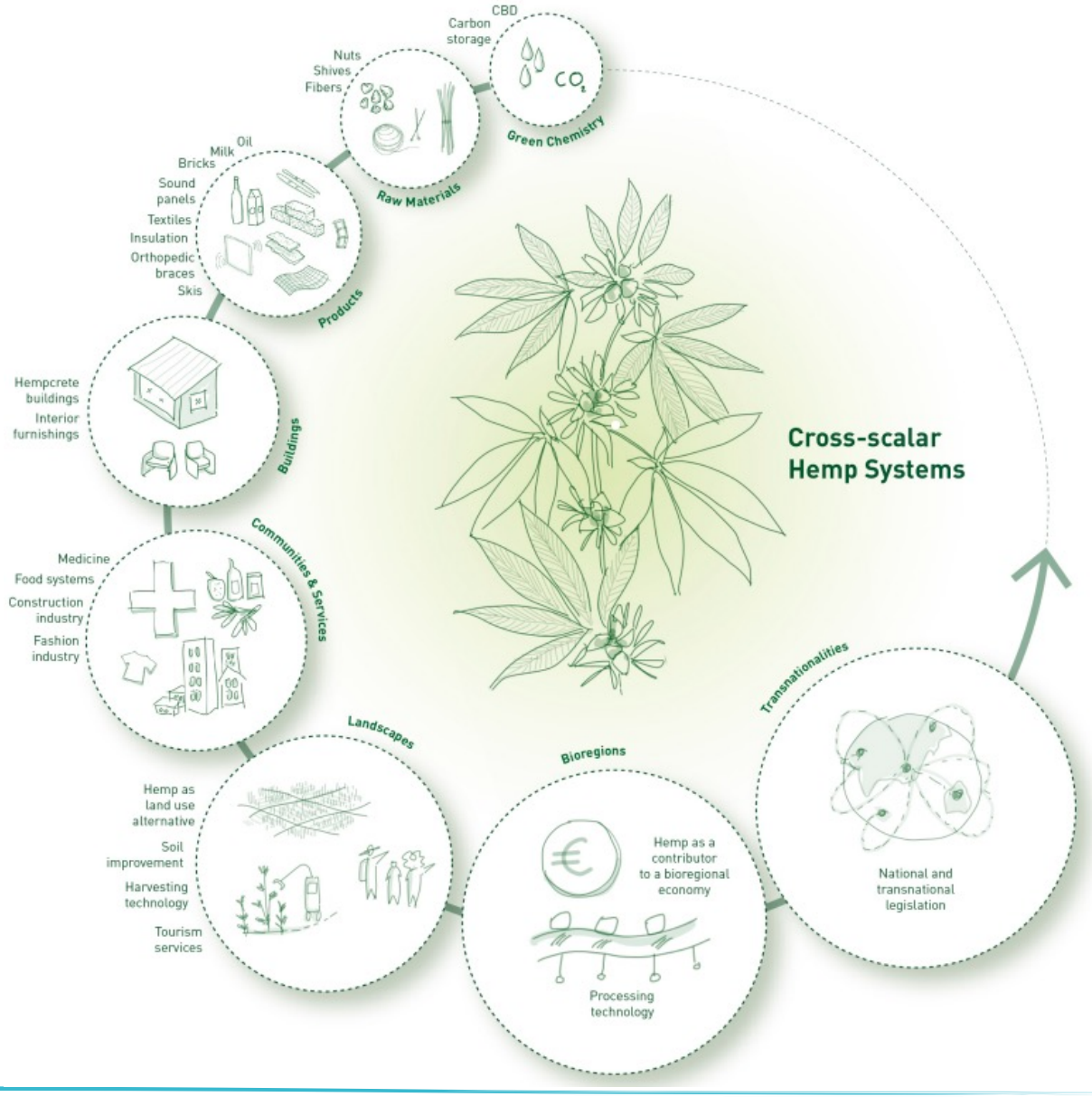
Figure A7. The 'circular cross-scalar governance spiral' for designing for bioregional regeneration, by Tobias Luthe, Haley Fitzpatrick and Daniel Wahl[120,121].

Circular cross-scalar governance spiral



Appendix 3: Nested system diagrams

Figure A8. Example of the 'circular cross-scalar governance spiral' for the hemp system transition, by Tobias Luthe[120–122].



Appendix 4: Regenerative Lens additional diagrams

Figures A9-10 are additional diagrams related to the Regenerative Lens.

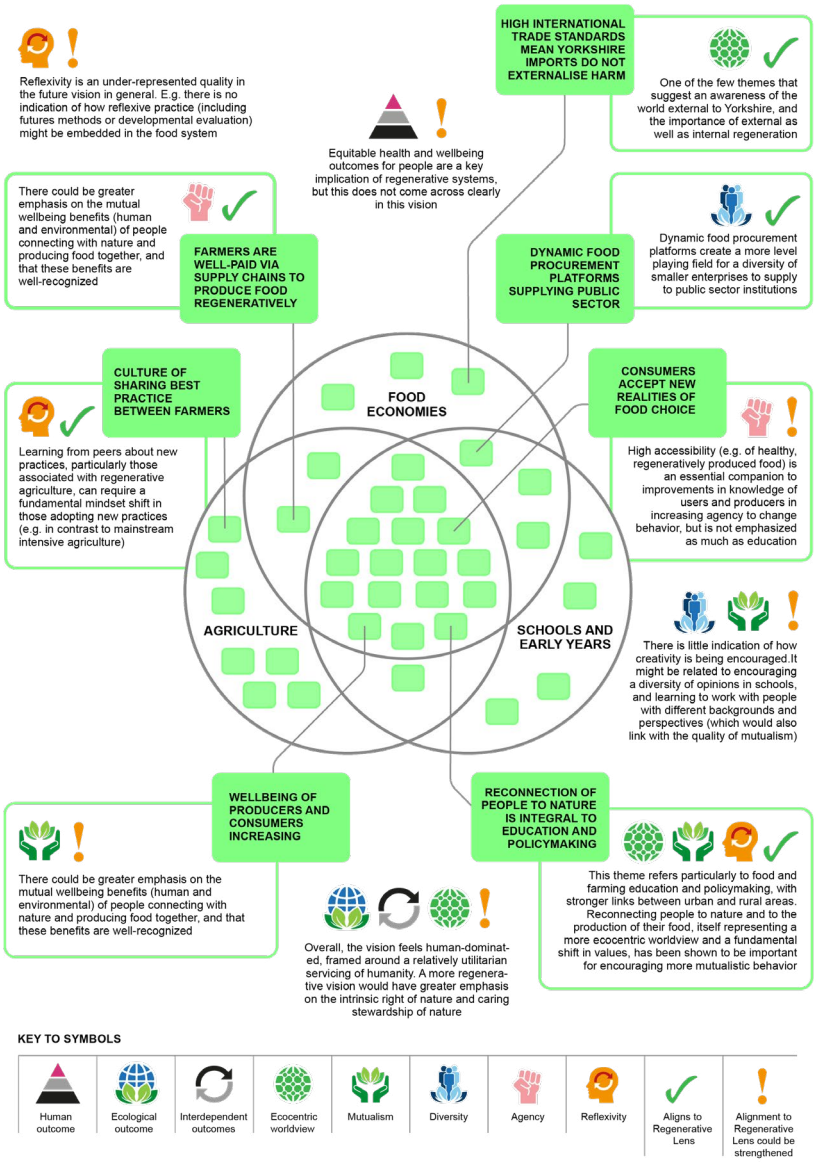
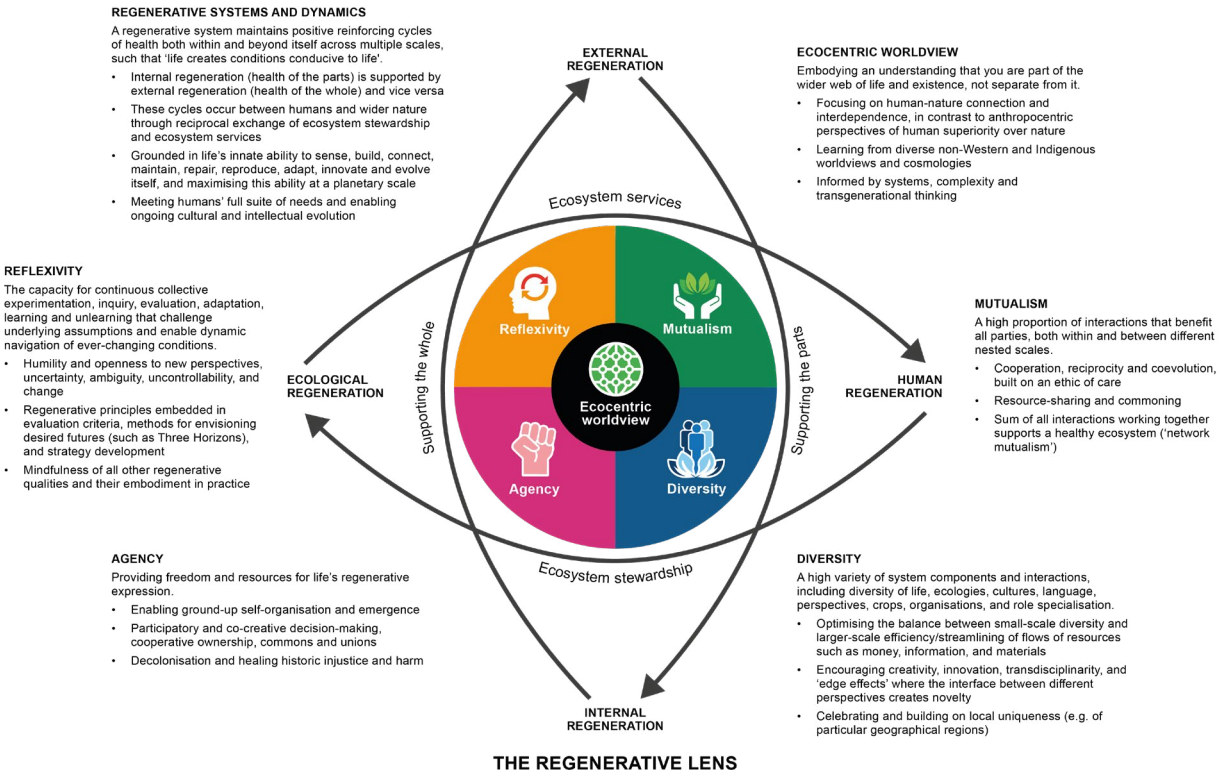


Figure A9. An example of applying the Regenerative Lens to a third horizon vision of a future desired food system, from work by FixOurFood[16,96,123]. Image designed by Sam Buckton, and Dave Gledhill of 1790 Creative.

Appendix 4: Regenerative Lens additional diagrams

Figure A10. A more detailed version of the Regenerative Lens[16]. Image designed by Sam Buckton, and Dave Gledhill of 1790 Creative.



Appendix 5: Bioregional Quiz template

Theme	Quiz questions	Total points available	Your score
Orientation	From where you are right now, point north.	1	
	How many days is it until the moon is full (give or take two days)?	1	
		2	
Geology and biogeochemistry	What shaped your region's current topography?	3	
	Consider the main soil type in your region. • What is its texture and composition? (1 point) • What is its pH? (1 point) • How did it form? (3 points)	5	
	What is the biggest carbon sink in your region?	1	
	Name the top five sources of atmospheric carbon in your region.	5	
	Where does your solid household waste go, and what happens to it?	3	
		17	
Energy	Consider the electricity that you use in your home. • What sources of energy or fuel produced this electricity, and in what proportion? (3 points) • Where is your electricity generated? (1 point)	4	
	What sources of energy are readily available in your region?	3	
		7	

Appendix 5: Bioregional Quiz template

Theme	Quiz questions	Total points available	Your score
Water	Trace the water you drink from precipitation to tap.	3	
	What happens to the water and waste that drains from your sinks and toilets? Where does it go, and what happens to it?	3	
	Identify your nearest river. • What is its name? (1 point) • Where is its source? (1 point) • Where does it join the sea? (1 point)	3	
		9	
Climate and season	What are the first ecological signals of spring arriving in your region?	3	
	From what direction do storms tend to come in your region? (1 point) How does this vary throughout the year? (2 points)	3	
	Which months are typically the rainiest of the year in your region?	3	
	What is the average minimum temperature in your region (give or take 2 degrees)? (1 point) What is the average maximum temperature in your region (give or take 2 degrees)? (1 point)	2	
	Describe the five most significant climatic changes in your region over the last century.	5	
		16	

Appendix 5: Bioregional Quiz template

Theme	Quiz questions	Total points available	Your score
Non-human neighbours	Name five wild edible plant species found in your region. (5 points) What are their seasons of availability? (5 points)	10	
	Name five wild plant species in your region used for medicinal purposes by humans. (5 points) What are each of them used for? (5 points)	10	
	Name two species of edible fungi found in your region. (2 points) Name two species of deadly fungi found in your region. (2 points)	4	
	Name five common wild species of pollinating insect found in your region.	5	
	Name five common species of wild invertebrate animals found in your region that are not insects.	5	
	Name five wild resident bird species found in your region. (5 points) Name five wild migratory bird species found in your region. (5 points)	10	
	Name five wild fish species found in your region. (5 points) Which of them, if any, are typically caught to eat by humans? (5 points)	10	
	Name five species of reptile or amphibian found in your region.	5	
	Name five species of wild non-human mammal found in your region	5	
	Name five types of habitat (other than urban, agricultural or horticultural areas) that characterise your region.	5	
	What is the most biodiverse part of your region?	1	

Appendix 5: Bioregional Quiz template

Theme	Quiz questions	Total points available	Your score
Non-human neighbours (continued)	Name five species in your region that are found nowhere else (i.e. 'endemic'), or in very few other places.	5	
	Name a wild non-human species in your region that you consider to be a 'keystone species' with a major impact on its surrounding ecology. Provide justification.	2	
	Name five invasive species in your region introduced by humans.	5	
	Name five species that have become extinct in your region.	5	
		87	
Human culture	Name the top five human land use types in your region in terms of area.	5	
	Name the five main crops produced in your region. (5 points) Name the five most problematic crop pests or diseases in your region. (5 points)	10	
	Name five goods that your region exports. (5 points) Name five goods that your region imports. (5 points)	10	
	Identify as many ingredients as you can in the last meal you ate, and where each of them came from.	5	
	Name the top five industries in your region in terms of the number of people they employ.	5	
	Name all of the public authorities and governments in your region at city and regional scales or larger.	5	

Appendix 5: Bioregional Quiz template

Theme	Quiz questions	Total points available	Your score
Human culture (continued)	Name the top five religions in your region in terms of numbers of followers. (Include atheism and agnosticism amongst these if necessary.)	5	
	Name the top five languages in your region in terms of number of current speakers.	5	
	Name the top five threats to human health in your region (in terms of numbers of deaths per year).	5	
	Consider the materials used to make the buildings in your local village, town or city. • What is the most common material? (1 point) • Where did it originate from? (1 point) • How did its associated raw materials form? (3 points)	5	
	Identify your nearest human settlement (e.g. a village, town or city). • What does its name mean? (1 point) • Why does it have this name? (1 point) • Who named it? (1 point)	3	
	Consider the first human culture that there is evidence of in your region. • Who were they? (1 point) • What language did they speak? (1 point) • How did they make their living? (3 points)	5	
	Consider the main groups of people that have subsequently colonised your region throughout its history. • Who are they? (5 points) • When did each of them arrive? (5 points)	10	
		78	
		Grand total 216	

Appendix 6: Three Horizons additional diagrams

Figures A11-12 are additional diagrams related to Three Horizons that are more colour-blind-friendly (using purple instead of red for Horizon 1).

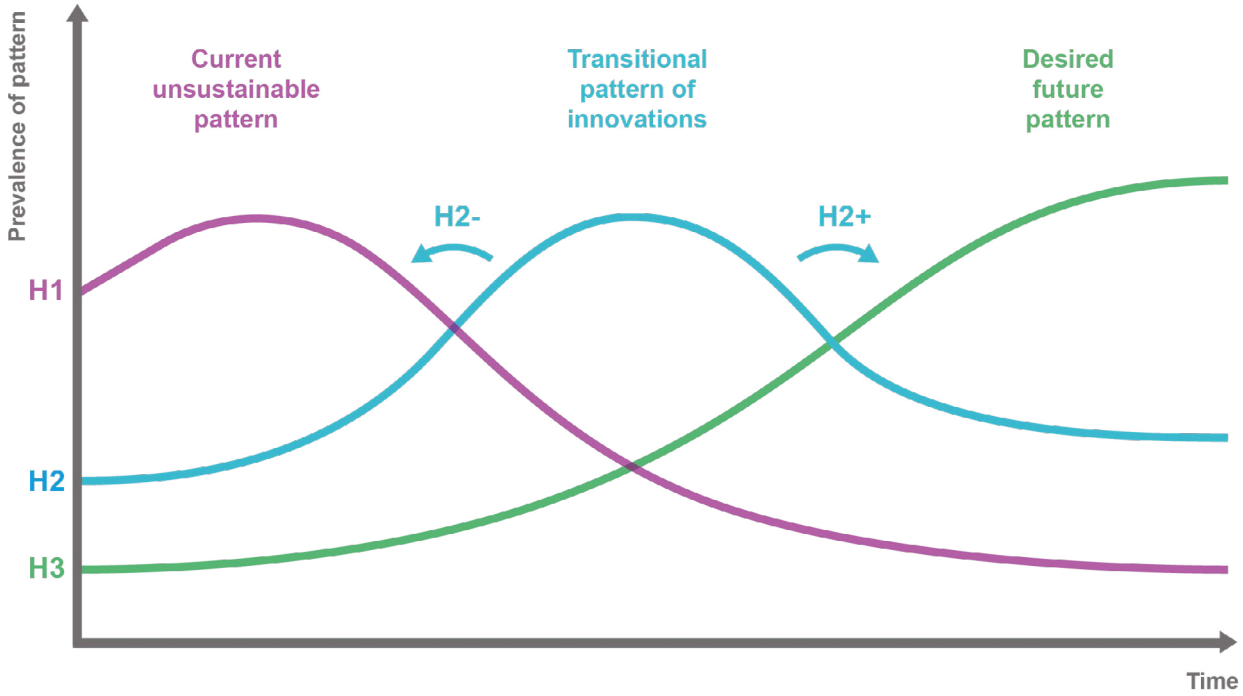


Figure A11. Version of the basic Three Horizons diagram with purple used for Horizon 1 rather than red. See the main Three Horizons tool for the origins of the diagram. This particular version was designed by Sam Buckton, and Dave Gledhill of 1790 Creative.

Appendix 6: Three Horizons additional diagrams

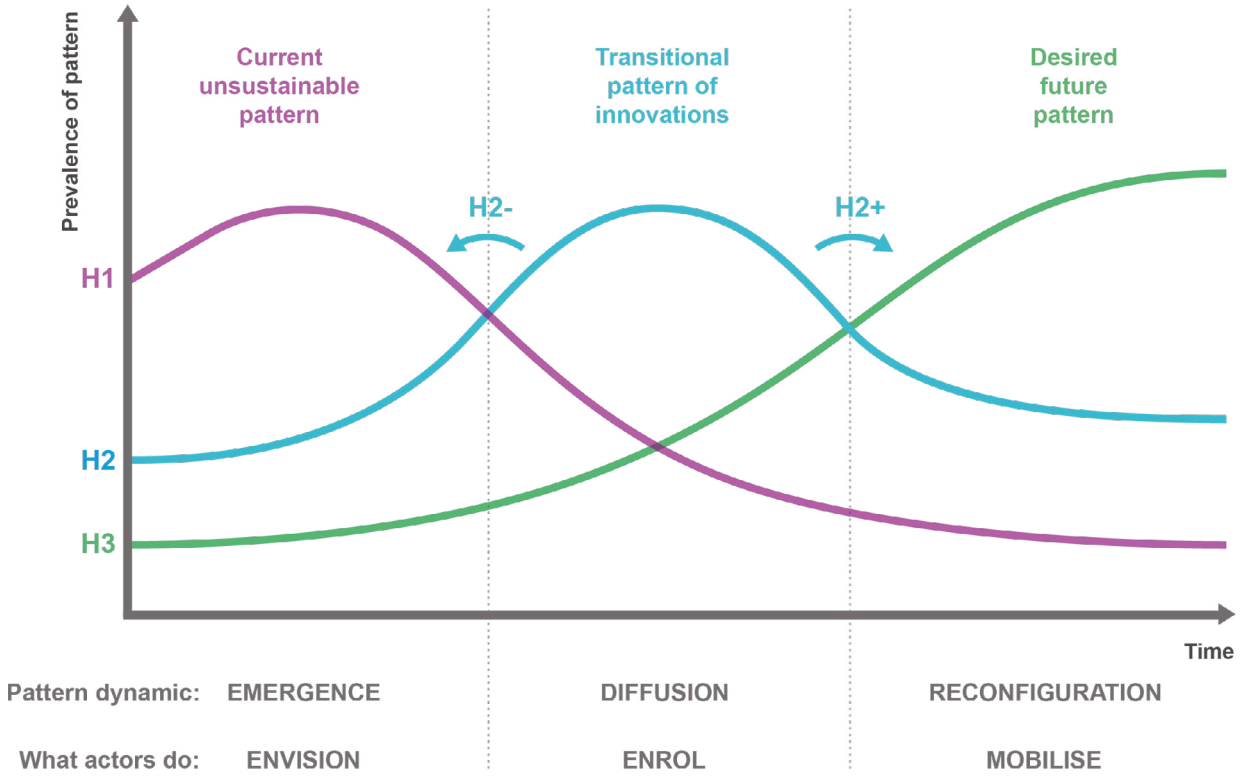


Figure A12. Version of the Three Stages of Change diagram with purple used for Horizon 1 rather than red. See the main Three Stages of Change tool for the origins of the diagram. This particular version was designed by Sam Buckton, and Dave Gledhill of 1790 Creative.

About the lead authors

Sam Buckton is a 'pracademic': a facilitator, researcher, evaluator and teacher with a primary interest in understanding how to support societal transformations towards regenerative futures, especially through evaluation practice. As a researcher with the FixOurFood programme at the University of York, he has advised and contributed to the likes of the IPBES Transformative Change Assessment[3], Global Assessment for a New Economics (GANE), the International Evaluation Academy, Unearthodox, the Transformations Community, Collaborative for Bioregional Action Learning & Transformation (COBALT), and national and regional food strategies in the UK. He works with Ioan Fazey as a consultant facilitator, helping organisations to develop transformation-focused strategies for action. He is also an ecologist and naturalist, and has led fieldwork training for various nature conservation charities. Sam lives in York, within the wider Yorkshire and Humber bioregion of north-east England, where he helped to revive the York Naturalists group in 2024, and supports the work of the Yorkshire Naturalists' Union and Good Food York Alliance.

Ioan Fazey is a Professor at the University of York with internationally recognised expertise in societal transformations. He works as a facilitator, coach, and trainer, helping groups and leaders navigate complexity and drive systemic change. As an experienced shamanic practitioner, he helps people reconnect with nature's regenerative power and support deep inner transformations. Ioan has conducted projects on five continents, from working with the Governor of Louisiana to supporting community leaders in Bangladesh, South Pacific, and the UK. He co-founded the Transformations Community and is founder of ShamanicHealing.org.uk.

Bill Sharpe is a futures practitioner and systems thinker, specialising in the intersection between science, technology, and society. Following a career of innovation in the computer industry he has focused on helping organisations meet the challenges of a complex and uncertain future. He is known for pioneering the Three Horizons futures practice and is author of the book *Three Horizons: the patterning of hope*[75].

Bill is a co-founder and leader of Future Stewards, the home of the Three Horizons hub and commons, working to build a regenerative future where we meet the needs of all life to flourish within the means of the planet. He is a member of H3Uni and the International Futures Forum with whom he works to build a global commons of futures practice for transformative change. He lives in Pembrokeshire, West Wales, where the deep history of human habitation reflects the rise and fall of civilisations.

Daniel Wahl is an author, systems weaver, and one of the catalysts of the rising reGeneration. He is the author of the 2016 best-selling book *Designing Regenerative Cultures*[30], which has been translated into nine languages. He works as a consultant, educator and activist with NGOs, businesses, governments and global change agents. He teaches for ETH Zürich's Designing Resilient Regenerative Systems programme, Gaia Education, and Costa Rica's Universidad de Cooperacion Internacional. With degrees in biology and holistic science, and a PhD in Design for Human and Planetary Health, his work has been seminal in shaping the emerging fields of regenerative design and salutogenic design. Daniel co-hosts the popular podcast Regeneration Rising in collaboration with RSA Oceania. He has been awarded the RSA Bicentenary Medal (2021) for applying design in service to society, as well as a two-year Volans Fellowship (2022), and has been nominated for the Blue Planet Prize five years in a row. Daniel lives on Majorca with his wife and daughter in a fledgling Mediterranean regenerative food forest, which he is nurturing as a research site for regenerative agroforestry on the island. His bioregional work on Majorca included supporting the SmartUIB project of the University of the Balearic Islands, working with the tourism sector through Balears.t and in collaboration with Save the Med Foundation, and supporting the creation of the Aliança Mar i Terra de Mallorca (Land & Sea Alliance of Majorca). Daniel collaborates with many local NGOs and businesses to work on landscape-scale bioregional regeneration.

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