

# Transformation:

An introductory guide to fundamental change for researchers and change makers in a world of crises



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## Executive summary

This report provides an overview of the concept of transformation to highlight some of the critical aspects that need to be considered when embarking on an initiative, approach or campaign which is intended to be transformational. The concept of transformation is growing in relevance because of the complex nature of the challenges we face. Overcoming serious challenges, such as climate change, hunger, obesity, mental health, and inequalities, cannot be achieved by just improving what we already do. Instead, we need much deeper and more fundamental kinds of change to transcend the systems, thinking, and mindsets that have led to, and perpetuate, the challenges.

Transformation is fundamental change that happens over time. Transformation is different to changes like adjustments or reforms, which generally focus on sustaining or improving a status quo. Instead, transformation is systemic, and usually includes changes in the core dynamics and goals of a system. While transformation is a distinct form of change, what is considered transformational also depends on a person's perspective and values. Transformation can therefore lead to both desirable and undesirable outcomes depending on a person's view or their experience of the impact of the change.

Transformations can occur at different social, geographical or time scales, with transformation at one scale often being dependent on change at other scales. Inner transformations – shifts in a person's beliefs, values, mindsets, cultures – are usually necessary for outer transformations to occur.

Supporting a process of transformation requires working with and across many different interacting elements. This can include different layers or spheres of transformation, such as an inner sphere of behaviours and technologies, a middle sphere of systems and structures, and an outer sphere of mindsets, cultures and patterns that hold other spheres in place. It can also include working with multiple actors in a system and changing the power dynamics that exist between them.

Transformation is always embedded in political processes and involves shifting patterns of power relations, agency, and inclusion, with its impacts having different implications for the different people involved. Working with resistance shown both by existing power holders and the least powerful, and using productive forms of conflict, can be effective ways of supporting change. Coalitions of different actors, such as 'rebels', 'reformers', 'organisers' and 'helpers', can help bridge the different framings or perspectives held by different sources of power, and thus lead to more collective approaches to change.





There are many different conceptual models and frameworks of transformation. Three useful ones described in detail in the main report are:

- The iceberg and leverage points model that helps focus on deep aspects of transformational change;
- The Three Horizons framework and associated approach which seeks to promote dialogue among different actors to identify transformational pathways;
- A model for transformation through conflict and resistance and the building of social movements.

There are also many examples of how transformation is playing out, and which illustrate the different aspects mentioned above. We highlight three examples in the main report that relate to transformation of food systems:

- How the agroecology movement has gradually emerged over a 90-year period;
- How Nordic countries have co-operated to shift identity and food cultures;
- How different actors in Costa Rica have been supporting transformation through bottom-up processes; developing strong visions; and strategic action to turn the country into the first in the world to meet all its needs within the means of the living planet.

In conclusion, while there are many important insights, there are five core take-away messages that need to be considered when embarking on a transformational initiative, approach or campaign. First, it is important to be clear about what the transformation is expected to look like, why and for whom. Second, given that transformation involves a fundamental change, it is important to carefully consider how an approach, in its design and implementation, will genuinely be able to support the transformation. Third, approaches that can convene and create coalitions of different people, work through conflict in positive ways, and reshape power relations, are needed to support transformations. Fourth, co-created aspirational visions that include the kinds of dynamics in a future system that can amplify intended outcomes are needed to guide transformations. Finally, given that transformation results from the contributions of many different actors, each actor should consider how they might best add value to this broader process. Further work is now needed that goes beyond underlying concepts, which was the focus of this report, to bring together the rapidly growing research on how transformations can be most effectively supported in practice.

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## 1. Why transform?

To transcend the systems, thinking, and mindsets that have led to, and perpetuate, contemporary challenges

## 2. What is transformation?

- A fundamental change occurring over time;
- Qualitatively distinct to adjustments or reforms;
- Subjective and normative: What is considered desirable transformation depends on a person's perspective and values;
- System change;
- Change at different social, geographical or temporal scales;
- Inner and outer change.



## 3. Transformation through what?

1. Working with many different interacting elements;
2. Working to support change in three layers:
  - Behaviours & Technologies;
  - Systems & structures;
  - Values, mindsets, beliefs, cultures, paradigms.
3. Cohering or orchestrating leaders, policy professionals, advocates and capacity developers.



## 7. Conceptualising transformation processes and pathways

**Concept 1:** The iceberg & leverage points model;

**Concept 2:** Three Horizons pathways;

**Concept 3:** Conceptualising power for transformational conflict and resistance within social movements.



## 4. Transformation to what?

An aspirational vision of the future

- To meet, and go beyond, the SDGs;
- Regenerative systems where human and environmental benefit spiral up and reinforce each other;
- People centred governance.

## 5. Whose transformation?

1. Transformation is always embedded in politics
2. Shifts in power relations, agency, inclusion and distributional impact;
3. Working with patterns of resistance by incumbent power holders and the least powerful;
4. Using productive forms of conflict;
5. Coalitions of different actors - 'rebels', 'reformers', 'organisers' and 'helpers' - can help bridge different perspectives linked to differences in power.

## 6. Examples of transformation



**Agroecology revolution over the last 90 years:**  
Gradual, over long-time frames;



**Transformations of the Nordic diet:**  
Shifting identity and food cultures through co-operative endeavours;



**Regenerative Costa Rica:**  
Bottom-up processes combined with strong vision and strategic transformational intent.

# Introduction

## Transformation: An emerging field

As people, organisations and societies are becoming increasingly aware of the limits of current ways of living, interest is growing in how to enable transformational change. This includes rapid growth in research on how transformation might be supported in different fields, such as health, food systems, and energy transitions. There are also scholars and practitioners focusing on learning about supporting transformations more generally, and different academic and practitioner groups and societies are emerging, such as the Transformations Community (<https://www.transformationscommunity.org/>), the Sustainability Transitions Research Network (<https://transitionsnetwork.org/>) and the Transformational Change Learning Partnership (<https://www.climateinvestmentfunds.org/tclp>).

This guide provides an overview of the concept of transformation, a process of fundamental change that is different to other kinds of change such as adjustments or reforms. The main aim is to provide scholars and professionals with a better understanding of the concept of transformation and some of the implications for how transformation might be approached or supported.

The work has been produced as part of the Transforming UK Food System Strategic Priorities Fund (<https://ukfoodsystems.ukri.org/>). As such, many of the examples are related to food system change. The main messages are, however, much more generic with wide relevance to other fields and sectors.

While our perspectives on transformation come mainly from the global North, we have also attempted to highlight some of the diverse ways transformational change is being considered and addressed in countries and cultures of the global South.

In this document we explain:

- Section 2: Why we need transformation
- Section 3: What is transformation?
- Section 4: What are we transforming towards?
- Section 5: Transformation through what?
- Section 6: Whose transformation?
- Section 7: Different ways of conceptualising transformation processes and pathways
- Section 8: Examples of transformation in practice
- Section 9: Conclusions.



## Section 2: Why transform?

Contemporary challenges – climate change, hunger, obesity, mental health, inequalities – are symptoms of how our societies and global geopolitics have developed and continue to be reinforced. Some of these challenges are now so serious that they pose an existential threat to people and the planet. The challenges are highly interconnected and, as such, actions to try to address one kind of challenge have a bearing on others (Box 1).

Together, the scale and complex interconnected nature of contemporary challenges represent a new age where new approaches that take into account these interconnections are needed (Sardar 2010). Addressing the interconnected challenges, however, cannot be overcome only by enhancing efficiencies of the status quo. Instead, humanity needs to find ways to change the systems and structures that give rise to the challenges (O'Brien 2018). These systems are embedded in many interconnected sectors such as transport, farming, education, food, or health and are underpinned, and supported by, particular ways of thinking, mindsets and cultural patterns.

In short, working with contemporary challenges requires new approaches to change that transcend and transform the systems, thinking, and mindsets that have led to, and perpetuate, contemporary challenges.



### **Box 1: Food system transformation: The example of the UK**

A good example of the need for more transformational approaches to change can be found in the challenges facing the UK's food system. In the UK, poor diets high in fat, sugar and salt result in 1 in 7 deaths every year, costing the economy £27 billion a year (Public Health 2017). Poor dietary health is compounded by increasing food poverty. Some food banks have seen a 26-fold increase in use between 2010 and 2019 (Trussell 2019). Between 2020 and 2021, 1.5 million children also faced food insecurity, such as having had to skip meals (Goudie and McIntyre 2021). The approach to food production in the UK is also unsustainable. Agriculture is responsible for 10% of UK's greenhouse gas (GHG) emissions; over half the UK's methane emissions; and three-quarters of its N<sub>2</sub>O. One-third of UK soils are degraded, with the topsoil eroded each year being 100 times more rapid than rates of formation (Banwart et al. 2015).

Intensive agricultural practices are also associated with biodiversity loss, with many species groups in long-term decline. While there is much effort directed towards enhancing policy, there are major challenges to ensure policy coherence. One analysis found, for example, that there were 16 departments or agencies involved in policy formation and implementation that impact food systems at the national level (Parsons 2020). Other challenges also now include rapidly rising food prices, partly due to overseas conflicts. As the impacts of climate change and supply chain problems continue to grow, the food security and viability of our current food system cannot be guaranteed.

New visions of future food systems and new approaches to support change towards something different are needed – a food system that is resilient, enables access to healthy food, is supported by changed patterns of consumption, and that prioritises human and environmental health. Such change will not be possible by doing more of the same or more efficiently, or by working through piecemeal or silo-based approaches. Instead – and as is increasingly being accepted across the sector from production, distribution and consumption – more holistic, integrated, systemic and transformational approaches to change are required.

### **Section 2 Key messages:**

- Many contemporary challenges cannot be overcome simply by improving existing ways of doing things.
- We need new transformational approaches to change that transcend the systems, thinking, and mindsets that have led to, and perpetuate, contemporary challenges.

## Section 3: What is transformation?

In this section we explain what constitutes transformation.

We explain:

- Transformation as a distinct form of change;
- Transformation as subjective and normative;
- Transformation as a systemic shift;
- Scale, speed and transformation;
- Inner and outer transformations;
- Combining different dimensions of transformation.



### Transformation is a distinct form of change

Transformation can be defined as a fundamental change occurring over time (Fazey and Leicester 2022). Transformation is considered by many scholars and practitioners to be a qualitatively distinct form of change to that of, for example, adjustments or reforms, which generally involve change to sustain or improve a status quo (Waddell 2011). Instead, transformational change involves deeper and more fundamental change, with a focus on different questions, and having a different purpose or action logic (Table 1).

	Adjust	Reform	Transform
Core Questions	Are we doing things right?	What are the right things to be doing?	What is right?
Purpose	Improve performance	Change the system & its parts	Create previously unimagined possibilities
Power & relationship	Confirms existing rules	Opens rules to revision	Enable new ways of thinking about power
Action logic	Project implementation	Piloting	Experimenting
Typical actions	Copying, duplicating, mimicking	Changing policy, adapting	Visioning, experimenting, inventing
Tools logic	Negotiation logic	Mediation logic	Envisioning logic

Table 1: Different kinds of change (modified from Waddell 2011).

A useful analogy of transformation as a fundamental form of change is the change from a caterpillar to a butterfly. In this transformation, a caterpillar dissolves itself in a chrysalis, re-allocating the same resources to create something new. Rather than change to produce a fatter, fitter, faster caterpillar, the transformation involves a change to something with a different function, ability, and purpose.



Transformation from a caterpillar to a butterfly involves the re-allocation of the same resources to create something new that has a different function, ability and purpose



There are many terms related to transformation that come from different lineages. These include socio-technical transitions, structural change, system change or pattern shifts (Feola 2015, Fazey and Leicester 2022). These terms often overlap but can also have some distinctions. The broad goal of these lineages and use of the terms, however, is the same. They recognise that many current challenges cannot be overcome without fundamental forms of change and aim to provide insight about how such change can be most effectively approached.



### Transformation is subjective

While transformation may be a qualitatively distinct form of change, what is considered transformational also depends on a person's subjective position, values or perspective, all of which are culturally shaped and enabled.

A useful example of transformation being subjective is a comparison of a 1950s tractor and a new, highly technically advanced, machine (Figure 1). Many farmers will view the changes to a modern tractor to be transformational because it allows them to be so much more efficient and effective in what they do. Use of modern, high-tech, tractors may well be an important part of future envisioned food systems. Yet, many scholars of transformation would probably question whether the change from the old to the new machinery is, in itself, a transformation. The tractor's function and purpose has generally remained the same (it is still a tractor). Use of the advanced machines also is likely to lead to broadly the same kind of pattern of



food production, albeit at greater speed, efficiency and scale. Thus, while on the one hand what counts as transformational change is subjective, on the other it can still be considered to be a distinct form of change.

Some transformations may also be viewed as desirable and some as not. For example, many undesirable transformations across human societies will occur if there is insufficient action to reduce greenhouse gas, such as impacts from droughts, floods or from financially stranded assets as markets shift to decarbonised economies. Other, more desirable transformations are possible that can be deliberately shaped (O'Brien 2012), such as the potential for major shifts towards green economies that also provide opportunities for enhancing human wellbeing or addressing inequalities. Again, what is considered desirable will also depend on a person's perspective.

In summary, transformation is a fundamental kind of change that is qualitatively different to minor adjustments or reforms. While what is considered transformation is often subjective, how it is perceived matters because this affects how change will be supported or approached. It is therefore important to be clear about one's interpretation of transformation when invoking the concept.

“  
**Is this transformation?**”

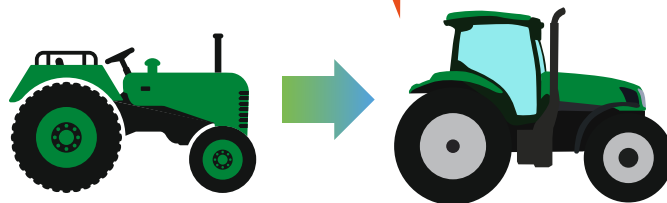


Figure 1: Is change a change from a 1950s tractor to those used in modern agricultural practices in the 21st Century transformation?



### **Transformation viewed as a systemic shift**

Transformation is often viewed as a change in the underlying dynamics of a 'system': a set of interacting parts which generate certain patterns and properties.

Food systems, for example, include many different elements such as farms, markets, people, industries, and politics (Figure 2; Parsons et al 2019). The dynamics of most current food systems create many desirable and undesirable outcomes. Current food systems, despite many failings, still provide sustenance to millions of people. Yet food systems also contribute, for example, to climate change, biodiversity loss, food poverty and poor health for many. They can also perpetuate and reinforce inequalities among people, such as when prices of quality or healthy food remain high. As such, we need fundamentally different system dynamics in food systems if these challenges are to be overcome.

One way to understand transformation is therefore to view it as a change not just in how a system behaves (for example, outcomes of more or less sustainability or healthy food) but rather as involving a change in the underlying dynamics and patterns that give rise to that behaviour. This might involve changing where connections occur in a system or the values or assumptions driving a particular pattern.

Systems thinkers and practitioners have worked with concepts of transformation for many years. As wider communities of transformations thinkers and practitioners have developed, some of these actors bring familiarity with systems thinking and

practice, but many do not. The opportunities for cross-fertilisation between the fields of systems and transformation are significant and many are now beginning to make these connections. This is vital, given that for many, systems change is such a central aspect of transformation.

There are many traditions of systems thinking and an enormous literature to draw upon. Many new networks of systems thinkers and practitioners who are sharing their tools and approaches with the field of transformation are now arising, for example: <https://illuminate-community.mn.co/>



Figure 2: Interacting components of a food system. New interactions between components, as well as different components within the food system (for example the kinds of food produced or consumed), are needed to address underlying challenges (Parsons et al 2019).



## Scale and speed of transformation

Transformation – a fundamental change – may occur at any scale, such as for an individual, household, community, organisation, sector, region, or nation. Transformation at one scale is, however, usually dependent on change at wider or lesser scales. For example, people in a household may find it difficult to transform their individual relations and dynamics without other changes in wider family and societal patterns outside of the immediate family, or without having different employment opportunities or cultural conditions. A change towards a new approach to farming on a single farm will be highly dependent on wider farming systems, such as policies, incentives, know-how within farming networks, and consumer demands.

Transformation at a smaller scale is also usually needed for wider scale change. For example, new thinking and action by a network of individuals – be these tempered radicals, a union, or official leadership – may be needed to catalyse broader transformation within an organisation.

Defining the scale at which transformation is needed or expected to occur is important. For example, overcoming challenges in food systems, including ensuring production is sustainable and inequalities are addressed, requires focusing at least on the scale of a bioregion: a region defined by characteristics of the natural environment rather than man made divisions. Focusing on such a scale would be important to enable attention to critical interactions between how food is produced, procured, managed, consumed and governed, and how land is owned.

Some organisations, such as the Climate Investment Funds, argue that given the challenges we are now facing on a planetary scale, it is vital that transformational investments focus on large-scale change. This is not to deny the changes needed at lesser scales as part of these large-scale transformations.

Transformation may also occur over different timescales with some transformations occurring faster than others. When speed of change is considered together with the scale at which they occur, four broad types of transformation have been proposed (Figure 3) (Linnér and Wibeck 2020). For most contemporary human challenges, such as overcoming climate change and health inequalities arising from current food systems, time is of the essence. Most efforts to support food system change will thus need to focus on rapid change over both smaller or larger scales. At the same time, understanding the long and sometimes slow tails of history that have brought us to the current moment, can provide important insights into how to approach convergent or quantum forms of transformation.





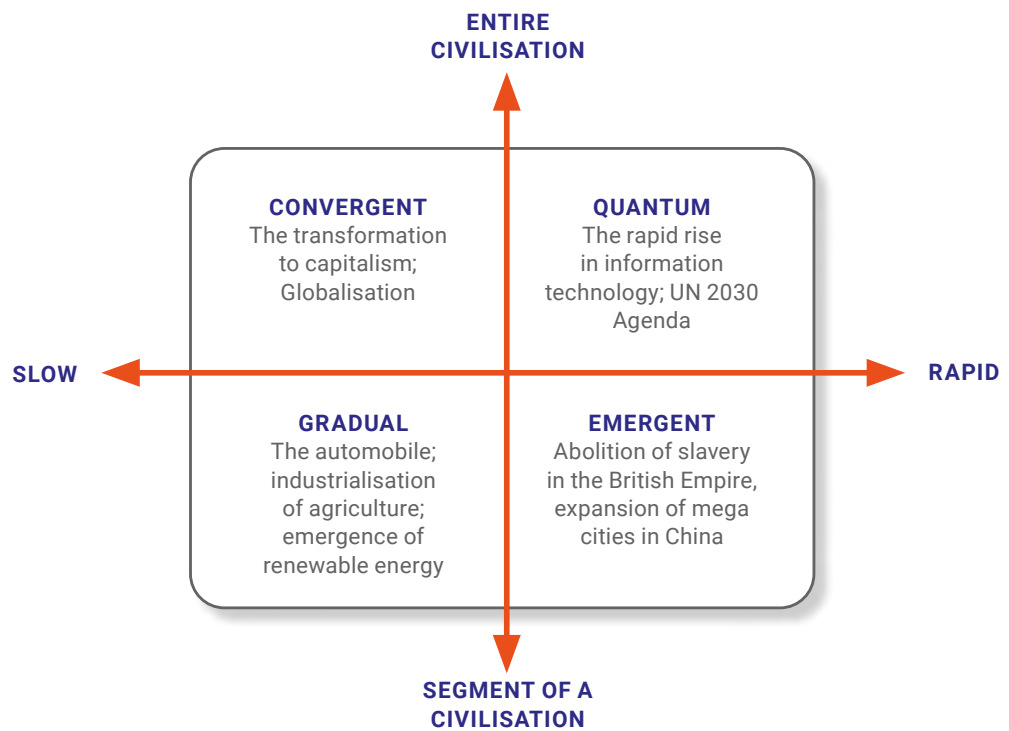


Figure 3: Four broad types of transformation in relation to timescale and social/spatial scale (Modified from Linnér and Wibeck 2020).



### Inner and outer transformations

There is a growing body of research that emphasises the importance of inner transformations to enable outer transformations towards more sustainable environmental and social futures (Woiwode 2020, Vogel and O’Brien 2022).

An example would be the need for inner changes among leaders and employees of an organisation – such as shifts in mindsets, beliefs and assumptions – to enable transformational organisational change to emerge. Another example is transformations in the mindsets that are needed so that regenerative farming can be supported. Here, a mindset is needed that revolves more around working with nature than the command and control approach that often underpins many conventional forms of farming.



Inner transformations are important for embodying new framings and understandings of problems, solutions, relationships, and approaches to change (Woiwode 2020). Outer transformations rarely occur without inner transformation of the actors involved (Vogel and O’Brien 2022).

Some of the thinking about inner transformations is reflected in work on the Inner Development Goals (<https://www.innerdevelopmentgoals.org/>), which are considered to be important enablers for the wider UN Sustainable Development Goals (SDGs).





## Combining different dimensions of transformation: An example

As the transformations field begins to mature, transformations actors are drawing on different dimensions of transformation to shape their own definitions and theory-informed practice ('praxis').

For example, the Climate Investment Funds (CIF) developed a working definition of transformational change as: "Fundamental change in systems relevant to climate action with large-scale positive impacts that shift and accelerate the trajectory of progress towards climate neutral, inclusive, resilient, and sustainable development pathways" (CIF 2021).

CIF's transformational praxis combines three of the dimensions we have discussed above – systemic change, scale and speed – as well as others. CIF also consider that for their praxis to be transformational, all five dimensions have to be present (Figure 4).

The example shows the importance of carefully considering how transformational change is interpreted when thinking about food system change. It also highlights the importance of considering how transformation, as opposed to other forms of change, is approached in practice.

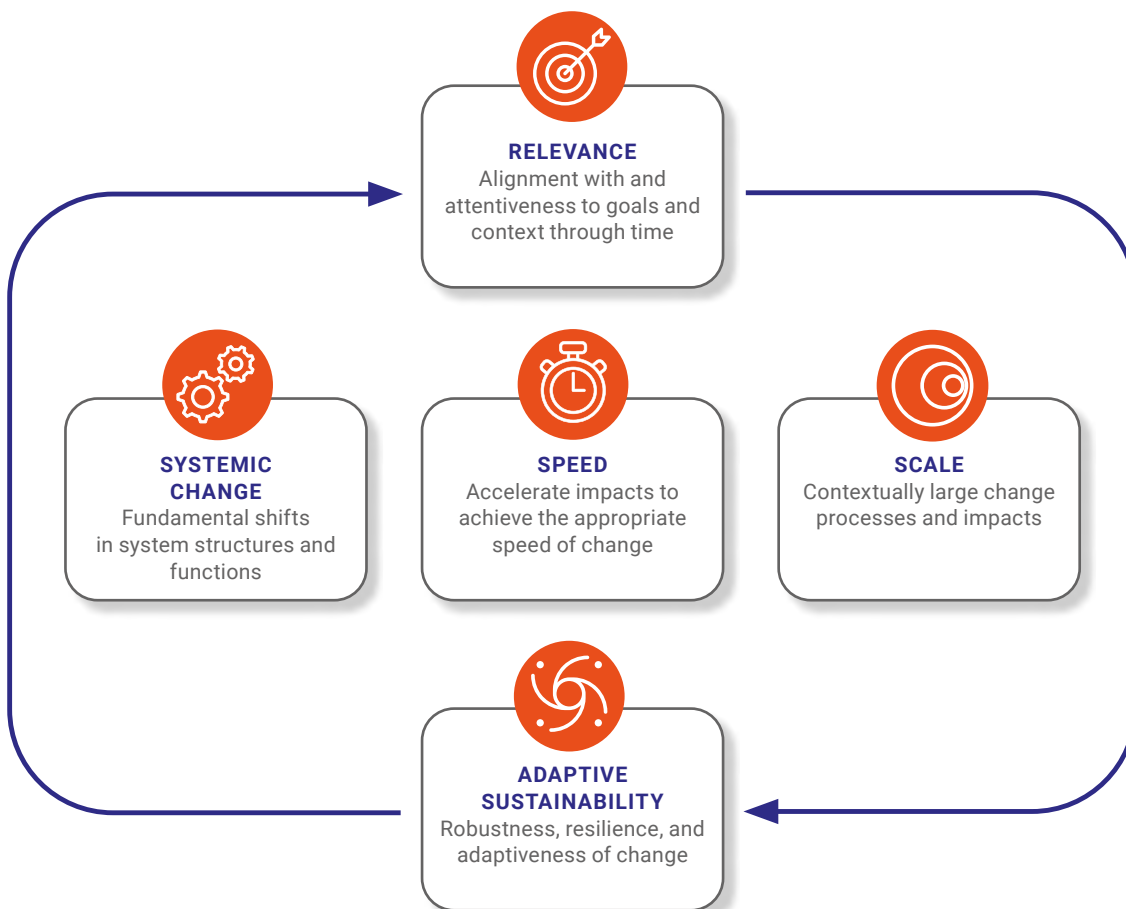


Figure 4: Five dimensions of transformational change, as understood by the Climate Investment Fund (CIF 2021. Reproduced with permission)

### Section 3 Key messages

- Transformation can be viewed as a fundamental change occurring over time.
- Transformation is a qualitatively distinct form of change compared to adjustments or reforms that support change that sustains the status quo.
- Transformation can be subjective: What is considered to be transformation to one person may be different to another.
- Transformation is normative: Not all transformations may be considered 'good' and some may be 'bad'.
- Systemic change is a key dimension of transformation, which includes changes in the fundamental dynamics and goals of a system.
- Transformation can occur at different social, geographical or temporal scales, with transformation at one scale often being dependent on change at other scales.
- In terms of food system change, time and scale are of the essence: We need changes across food systems and rapidly to be able to address the major social, economic and environmental issues that the current food system creates.
- Inner transformations are usually necessary for outer transformations to occur.



## Section 4: Transformation to what?

In this section we highlight the importance of being clear about the goal of transformation. We outline:

- The importance of having a guiding, and transformational, vision;
- Example 1: the Sustainable Development Goals (SDGs);
- Example 2: the concept of 'regenerative systems' to help guide transformation;
- Example 3: people-centred governance as a guide for transformation.

### Importance of a guiding, transformational, vision

To help support transformational forms of change, it is important to have a sense of what purpose or success might look like. This needs to include understanding of how any new system will be fundamentally different after having undergone a transformation and of the dynamics that might be involved in producing the desired outcomes of that system (for example, health, equalities or human and environmental wellbeing). There is often, for example, much rhetoric about 'transformations to sustainability'. Yet, without a genuinely transformational vision, the outcome is most likely to result in an improved version of what already exists, rather than something fundamentally different. Going back to the butterfly analogy, in the absence of an audacious or imaginative vision, efforts will most likely lead to a fatter, fitter, faster caterpillar, rather than to a butterfly with a different purpose and function.

### Example 1: The Sustainable Development Goals (SDGs)

The SDGs provide one example of a comprehensive vision for the future of the planet. The SDGs were the outcome of a great deal of deliberation and negotiation between many stakeholder groups over several years. Their agreement represents a significant achievement, and for some, interpretations of the SDGs are being used to develop significant imaginary visions to help drive action. Indeed, the preamble to the SDGs refers to a "transformed world" (UN 2015).

Others argue, however, that the SDGs are fundamentally compromised by their framing within a capitalist rather than postcapitalist mindset, with an attendant failure to imagine pathways of economic development which might halt rather than accelerate the rapid destruction of the planet's biodiversity and life support systems (Hickel 2019, Menton et al. 2020). Others point to the domination of particular patterns of mainstream thinking from the global North, underpinning the ways in which the SDGs are conceptualised and measured, in contrast to other patterns of thinking that come from different and more diverse ways of knowing prevalent in the global South (De Souza Santos 2016). Thus, while the importance of the SDGs for generating beneficial outcomes may not itself be under question, it is debatable as to whether the SDG framework provides a sufficiently transformative vision to address deep underlying issues that perpetuate many crises facing people around the world.



## Example 2: Regenerative systems

A useful concept to guide transformation that is now rapidly gaining widespread cultural purchase is that of 'regenerative systems'. This concept stems from recognition that a common approach over the last 50 years of reducing harm to sustainable levels is not enough given how degraded ecological and social environments have become. Instead, and as argued by scholars and practitioners of regenerative systems, new kinds of transformed systems that regenerate human and natural conditions are required (Wahl 2016).

Regenerative systems are those with dynamics that spiral up, and provide positive benefit to, human and environmental wellbeing (Figure 5). Even though this concept of 'regenerative systems' is still in its infancy, it is rapidly gaining interest and prominence and is very helpful in providing a guide for transformative action. The concept is already being applied in many fields and at different social or geographical scales.

In very broad terms, a system (region, sector, organisation) can be understood to be regenerative when it regenerates both itself internally and the wider, external, system of which it is a part (for example, environment or regional economy). A system is not regenerative when it extracts resources from itself or the wider system without ever repaying these. Examples of the four combinations of internal/external regeneration and internal/external extraction are provided in Figure 5. Something like a food system can only thus be truly regenerative if it sustains both itself internally (its people and immediate environment) and the wider system (regional or global climate, ecosystems, and other people).

A goal for transformation is thus to create pattern shifts to the kinds of systems that have dynamics that are both externally and internally regenerative. There are many examples of organisations working to support change towards regenerative systems, such as in relation to regenerative economics (<https://doughnuteconomics.org/>); regenerative development (<https://common.earth/>); and regenerative agriculture or food systems (<https://regenerationinternational.org/> and <https://afsafrica.org/>). An example of transformation to regenerative food systems is provided at the end of this document.

The key point, however, is that the concept of regenerative systems challenges agents of transformation to think very differently – creatively and imaginatively – about what might constitute a pattern shift that is genuinely different to that of a current pattern. Such a shift would need to involve a fundamental change in underlying dynamics, such as relations between people and their environment, if the outcome was to be a regenerative system (Figure 5; Figure 6).

## Example 3: People-centred land governance as a guide for transformation

Another, more specific example of a powerful vision that can guide transformation is that of the International Land Coalition (<https://www.landcoalition.org/en/>) (ILC). This recognises that equitable land rights are key to progress on human rights, flourishing and healthy societies and a sustainable planet. They are central to the most urgent challenge of our time: avoiding catastrophic climate breakdown. Equitable land rights also underpin peaceful and democratic societies, sustainable



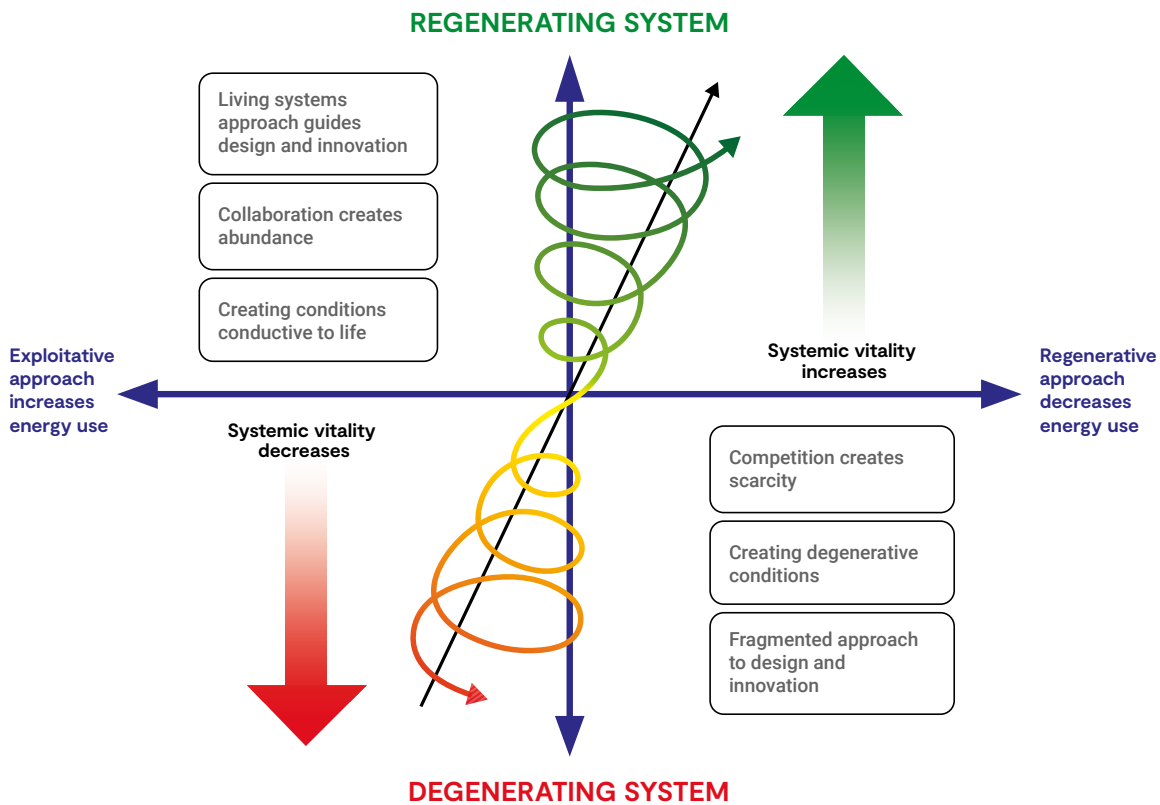


Figure 5: Regenerative systems versus an approach to reduce harm to sustainable levels (Wahl 2016)

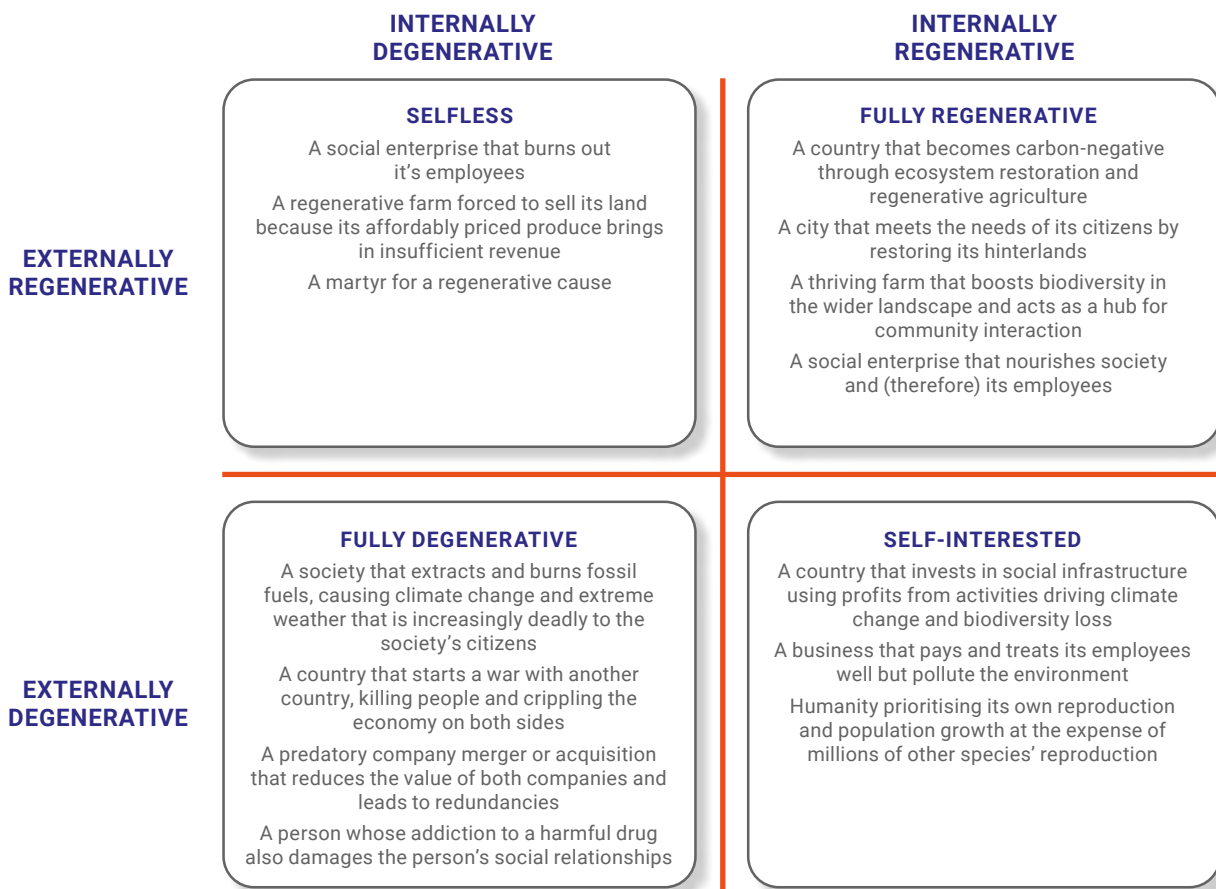


Figure 6: Regenerative systems need to be internally and externally regenerative (Buckton et al under review)

and resilient local food systems, and help overcome growing inequality, particularly in relation to gender.

Many people are marginalised from how land is governed or owned and face narrowing civic space and democratic process. Four-fifths of the land claimed by indigenous peoples and local communities, for example, is not recognised legally as theirs and 70% of the world's agricultural land is under the control of a mere 1% of landowning corporations and individuals (Answeweew and Baldinelli 2020).

The ILC therefore hold a strong vision of transformation to people-centred land governance – in which people living on and from the land, by which they mean the women, youth, family and peasant farmers, indigenous peoples, pastoralists, forest dwellers, hunter-gatherers, fisherfolks, afro-descendants and local communities – are the voices that must be the loudest in decision-making spaces, particularly over their land (<https://www.landcoalition.org/en/about-ilc/our-strategy/>).

Similarly, approaches have been proposed in the UK that recognise how many issues – inequality and exclusion; the massive cost of renting or buying homes; financial crises, housing asset bubbles; collapse of wildlife and ecosystems; or the lack of public amenities – relate to the way land is owned and controlled. The report 'Land for the Many' proposes radical but practical changes in the way land in the UK is used, owned, governed and financed (Monbiot et al. 2019).

Overall, such transformational visions help to keep focus on tackling deep issues underpinning wider, more manifest challenges and help maintain transformational intent as action progresses.

## Section 4 Key messages

- For transformation to occur, a strong sense of what fundamental change might look like in the future is needed to help guide change and retain transformational intent.
- Such a vision needs to have a sense of how a change in the underlying dynamics might lead to what is desired, such as a significant shift in human and environmental wellbeing.
- The SDGs have been a powerful driver of action across the world, but it is debatable whether they provide a sufficiently transformational vision to address deep underlying issues that give rise to the many crises facing people and the planet.
- A useful guiding concept for transformation is regenerative systems. Rather than focusing on reducing harm to sustainable levels, such thinking helps provide focus on finding ways to create dynamics that spiral up human and environmental benefit.
- Another example of a strong and powerful vision to guide transformation is a focus on addressing inequalities in land ownership and governance through people-centred land governance, and, in so doing, addressing underlying issues creating health, environmental and poverty-related challenges.

## Section 5: Transformation through what?

In the previous section we focused on what desired futures might need to look like in order to support transformations and maintain transformational intent. In this section we focus on the elements of the current system that might be the focus of transformation efforts. We explain:

- The need to work with different system elements;
- The need to work with different layers or spheres;
- Example 1: working with different elements by the Climate Investment Funds (CIF);
- Example 2: focusing on a specific element: ecosystems for financing transformation.

### Working with different elements of transformation

We noted earlier that food systems may include many different elements, for example, farms, markets, people, industries, and politics. It is the interactions between these elements – feedback loops and the multiple actors and the power dynamics between them – that determine the overall dynamics of the system. It is therefore necessary to consider interactions between these different elements when working to support transformations. Identifying or mapping the multiple elements involved rapidly generates complexity from which simpler key dynamics or specific areas to focus on can be determined (Figure 2).

### Working with different layers of transformation

It can also be helpful to examine different layers of the different elements that might need to be included when considering transformation. A useful way to consider this is the framework called the Three Spheres of transformation (Figure 7). This highlights that while people are generally good at supporting changes in behaviours or technologies, this is difficult to achieve without changing the structures or systems around them. The systems and structures, in turn, are difficult to change without changing beliefs, mindsets or cultures of those involved. Changing the spheres towards the outside is more difficult than changing those towards the inside. Yet, the impact of changing outer spheres has much more substantive outcomes on system change as a whole, and is thus more likely to support transformational kinds of change (O'Brien 2018).



Finding ways to dramatically increase cycling in a city is a good example. One cannot get many more people cycling without changing the infrastructure and city planning, which usually has developed to support motorised forms of mobility. Changing infrastructure then requires changes in mindsets, cultures, and narratives, such as ideas about what constitutes human progress, development or wellbeing. Using the Three Spheres framework can help ensure there is focus on the diverse aspects needed to support transformations.

Working with the different elements or layers of transformation highlights that silo-based or single interventions in themselves have limits in being able to support systemic change. As such, approaches need to be viewed more as a process of cohering or orchestration – such as by convening thought leaders, policy professionals, advocates and capacity developers – in a way that brings them together to create a symphony of and for change.

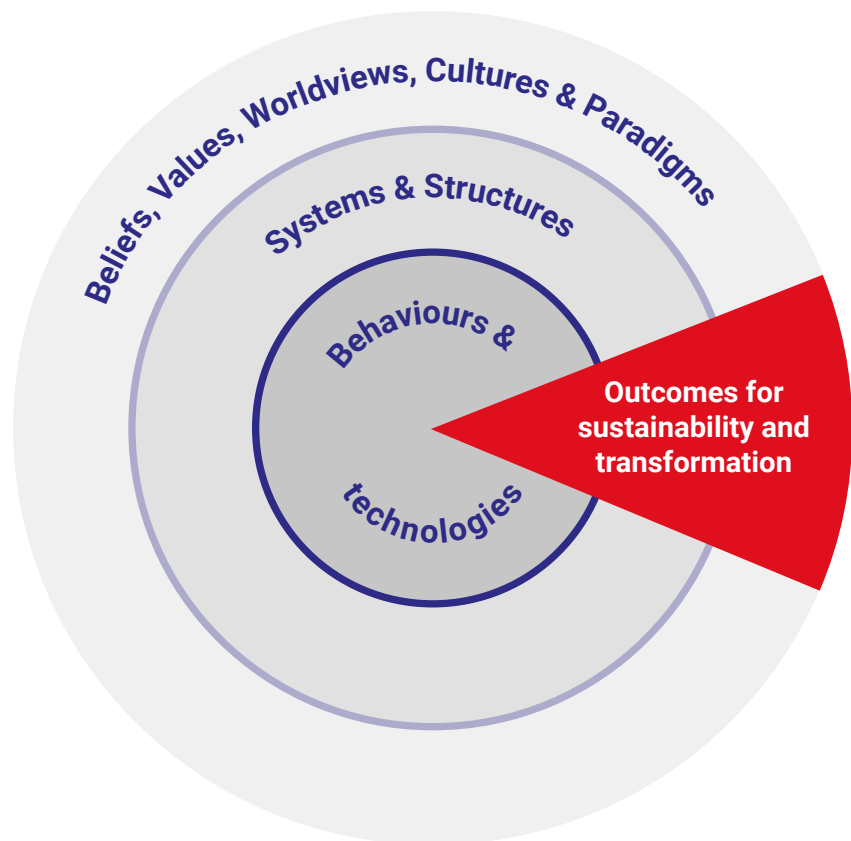


Figure 7: Three spheres of transformation (Modified from O'Brien 2018).



## Example 1: Working with different elements by the Climate Investment Funds (CIF)

In 2017, the Climate Investment Funds developed a conceptual model of transformational change that focused on 9 elements (which they called ‘arenas’). Some of these are material (finance, technologies, natural capital, knowledge and information) and some are institutional (institutions, governance, markets, policies, mindsets).

System change is visualised in terms of the interactions within and between these 9 ‘arenas’, each of which could be a target of interventions, depending on the CIF programme and country concerned (Figure 8). These interventions were in turn agreed as components of CIF investments through an inclusive, programmatic and strategic planning approach.

One of the strengths of the CIF model is that it allows for mixing, matching, choreographing and sequencing across different arenas. This highlights the orchestrator role of (in this case) the regional development banks who are responsible for the delivery of CIF programmes and the value of conceptual clarity in translating transformational thinking into transformational design – a process that, in the case of the CIF, involves multiple actors in each country targeted for funding. For example, in addition to the regional development bank, this might involve relevant government ministries as well as wider networks from civil society, NGOs and the private sector.

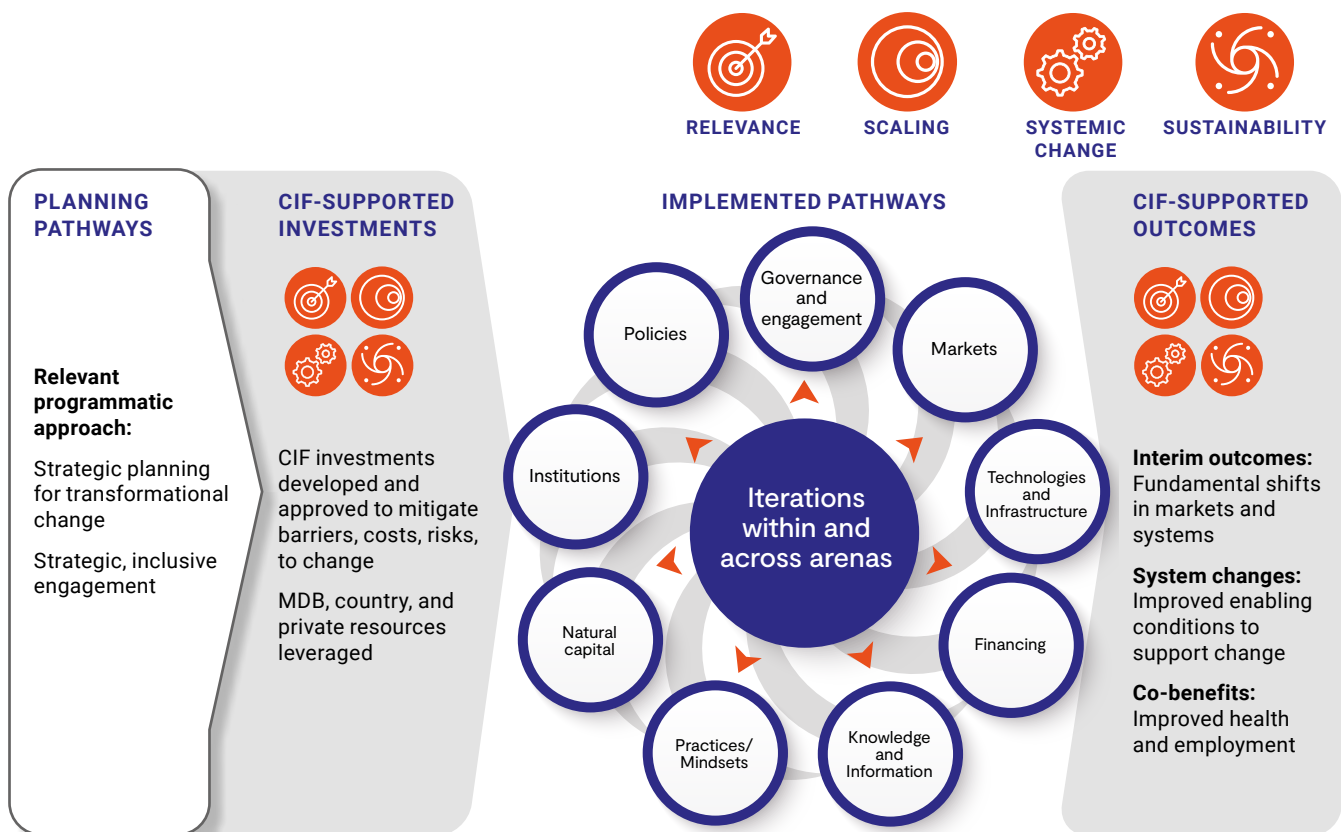


Figure 8: Theory of transformational change for the Climate Investment Funds (Hargreaves et al. 2017. Reproduced with permission).

## Example 2: Working on a specific element: ecosystems for financing transformation

The idea of mapping different elements or arenas for systems transformation highlights the many interdependencies between arenas. One should be cautious, therefore, about focusing on any one element over another. Nonetheless, finance plays such a key role in either enabling or blocking transformation that there is value in reflecting briefly on this element here. For example, CIF mobilises different kinds of funding through the World Bank, regional development banks and the private sector.

Recent work by Catalyst 2030 with Bounce Beyond (Waddell 2021) has been looking at the ecosystem for financing transformation and system change. The work is based on the observation that much of the funds available tend to support the kinds of change that, to only a limited extent, challenge the current pattern. In short, the work recognises that to support transformation, a transformation in financing is required.

In order to envision what they term ‘ecosystems for financing transformation’ (EFTs), Catalyst 2030 and Bounce Beyond have mapped different modalities of financing that might be relevant to sustainability-oriented EFTs (Figure 9). Here, they note a number of modalities of recent or disproportionate growth, that have the potential to act in either enabling or constraining ways for sustainability-directed transformations.

The work by Catalyst 2030 and Bounce Beyond also highlights a key role for what it refers to as ‘stewards’ of transformation – organisations, such as CIF and Climate-KIC, who convene thought leaders, policymakers, convenors, advocates and capacity developers, each of whom play key roles in developing EFTs. In the context of food system transformation, a key point for consideration is how actors wishing to enable transformation might position themselves within EFTs, by taking roles (for example, as thought leaders, researchers, convenors etc.) that best play to their strengths.



The arrows do not intend to reflect direct relationships, but rather emphasize there is a mess of relationships between all modalities.

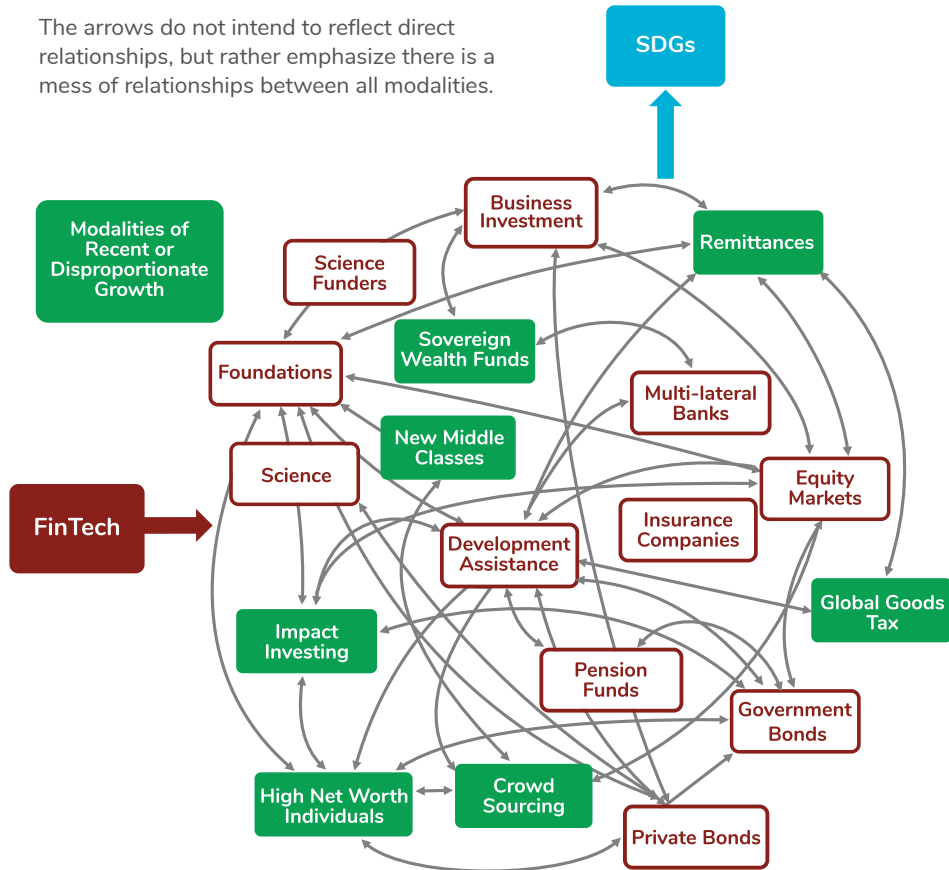


Figure 9: Different modalities with the potential to enable or block financing for sustainability-directed transformation efforts (Waddell 2021. Reproduced with permission).

## Section 5 Key messages

- Supporting transformation requires working with and across the many different interacting elements; mapping and identifying these elements is a key part of systems mapping.
- This can include mapping and then working to change the feedback loops and the multiple actors and the power dynamics between them.
- It can also include a focus on different layers or spheres of transformation: an inner sphere of behaviours and technologies; a middle sphere of systems and structures; and an outer sphere of mindsets, cultures and paradigms holding these in place.
- Examples of those taking a transformational approach that focus on diverse elements include: Climate Investment Funds; and developing new ecosystems for financing transformation by Catalyst 2030 and Bounce Beyond.
- The examples highlight the need for transformations actors to develop approaches that involve orchestrating transformations – such as by convening thought leaders, policy professionals, advocates and capacity developers – in a way that brings them together to create a symphony for change. That is, change that recognises the many interconnections across the system of focus and that brings together the many people that then need to be involved.

## Section 6: Whose transformation?

The previous section explained why it is important to work with different elements and layers of transformation. In this section we explain why it is important to recognise and work with different framings of transformation held by different people and with the underlying differences in the power of those involved.

We explain:

- How transformation is linked to power and is a political process;
- That conflict and resistance can be part of transformation;
- That effective transformations can include political coalitions of actors with multiple perspectives.

### **Transformation is linked to differences in power and is a political process**

Transformation is not a neutral concept, goal or process of change. As highlighted earlier, different groups in society, or different cultures or countries, may see transformation in different ways. For example, a large agribusiness or multinational food company may seek to transform a landscape (or the world) in one direction, whereas a smallholder farmer or the agroecology movement might wish to transform the same landscape (or the world) in another. Working with these different ‘framings’ of transformation may itself be vital to achieving transformational outcomes.

The different framings or perspectives on transformation are often linked to differences in power (Scoones et al. 2015). Incumbent power holders are likely to want to maintain and expand the status quo, whereas those with the least power may have a very different vision and perspective on transformation.

Some actors, such as those from the Just Transition Initiative, highlight that transformation is therefore only likely to emerge through approaches that include empowerment of diverse actors and which have a broad distribution of impact (Just Transition Initiative 2020) (Figure 10, top right hand). This contrasts with other processes aiming to support transitions, such as narrowly focused transitions which may empower but have limited distributional impact (Figure 10, top left hand), or top down and directed transitions which have broad impact but are less inclusive (Figure 10, bottom right hand).

Transformation is thus almost always embedded in political processes and involves transforming power relations. Some, although not all, schools of systems thinking and practice recognise power is a core issue. Where it is recognised, power will then be mapped out as part of their approach to help identify leverage points that can support transformational change.



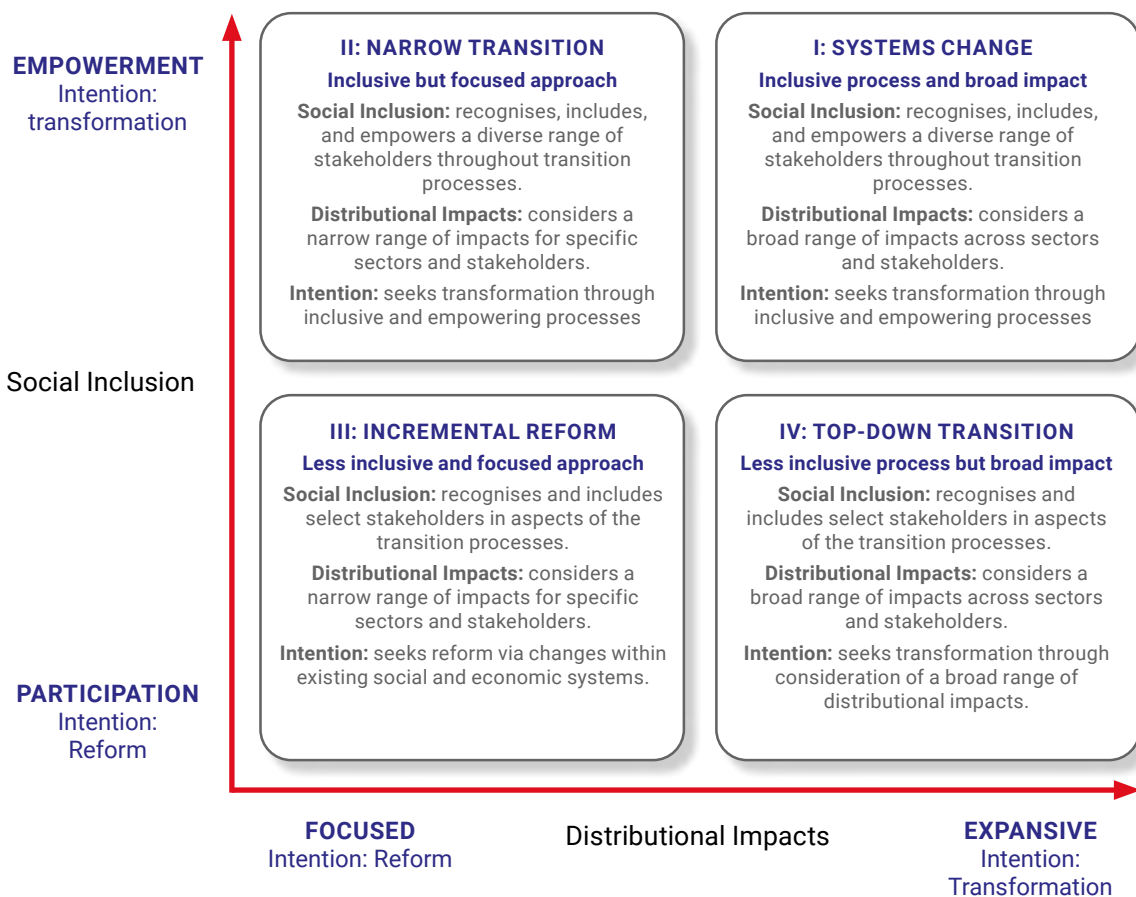


Figure 10: Different approaches to social inclusion and distributional impacts shape different kinds of just transition (Just Transition Initiative 2020. Reproduced with permission).

## Conflict and resistance as part of transformation

Some actors and scholars also suggest that conflict and resistance can have an important and central role in transformation, and even that transformation may not occur without it.

ACKnowl-EJ – a collaboration between EJAtlas, the Grupo Confluencias network and Vikalp Sangam (‘Alternatives Confluences’) (Temper et al. 2018) – have sought to find ways to work with conflict and power relations to support more radical transformations for environmental and social justice.

In their perspective, different views of, and resistance to, existing systems and structures of power are considered key in the creation of alternative ways of being and doing. Here, conflict is seen as productive rather than something to be avoided, because it helps get to the root issues as a path towards transformations. Radical alternative perspectives to that of the status quo can also be viewed as a form of resistance to advance visions of what sustainable transformative processes could look like. Such radical alternatives are then used to help transform power relations.

Overall, transformation studies and initiatives need to pay much greater attention to power relations across multiple dimensions and scales to fully capture how transformation processes occur and ensure that processes aimed at supporting change are truly transformative, and that inequalities and injustices are not being created elsewhere or are being displaced.

## Transformations involve political coalitions of actors with multiple perspectives

Transformations can also emerge when different stakeholders with different motives and priorities choose or are forced to work together. Here, transformation may be an unintended outcome or something emerging through having a shared goal. For example, it is argued that China's massive investment in renewable energy over the past 20 years has been driven primarily by a range of concerns about energy security and ambitions to build new competitive sectors, with a focus mainly on local economic development and jobs, rather than by concerns about global climate change (Schmitz and Scoones 2019). A similar set of motivations has driven the expansion of renewable energy in India without a coherent strategy. Instead, interest in both the solar and wind energy sectors has been driven by a range of considerations among different actors, including industrialisation, job creation and energy security with climate change mitigation only being considered, at best, as a 'co-benefit'.

These insights are not just of analytical but also of political importance, as it means that climate-relevant policies and associated transformations can draw on support from a wide constituency and not just from those with green convictions. While no single actor has the resources to bring about the transition to renewable energy, paying attention to alignments of interest across government, business and civil society can pay dividends. In some cases – for example in India and Brazil – alliances around renewable energy appear to have emerged in incidental ways and remain as 'alignments of interest', in other cases – as in China and South Africa – particular actors have played informal but critical convening roles (Schmitz 2016).

Another study, this time of the UK, has shown how a diverse climate movement can bring together the breadth of functions needed to challenge the status quo in multiple, mutually reinforcing ways. Here the significance of informal coalitions of actors – aware of each other's positioning but each able to target different elements of the status quo, including those actively resisting transformational change – is that it is only through this diversity of effort that the system as a whole might begin to transform. As shown in Figure 11, while some act as 'rebels', others adopt different roles, such as 'reformers', 'organisers' and 'helpers'.

## Coalitions of actors



Figure 11: Examples of organisations within the UK's climate movement and the different roles adopted within a broad coalition of interest (Runnymede and IPPR (2021), pp.23-24).

## Section 6 Key messages

- Transformation is always embedded in political processes.
- Seeing shifting patterns of power relations, agency, inclusion and distributional impact as core elements of 'system change' is aligned with this perspective.
- Recognising patterns of resistance (both by incumbent power holders and the least powerful) and productive conflict can also support this analysis.
- While different framings or perspectives on transformation are often linked to differences in power, coalitions of actors – for example, 'rebels', 'reformers', 'organisers' and 'helpers' – that bridge these differences can lead to transformational change.
- Transformation can also be an emergent property of the activities of coalitions of actors driven by a range of other motives tangential to this transformation, as in the case of renewable energy transformations in China, India, Brazil and South Africa.





## Section 7: Conceptualising transformation processes and pathways

There are many different ways to conceptualise transformation processes and pathways. These include the multi-level perspective from socio-technical transitions (Victor et al. 2019), through to system change models focused on identifying leverage points (Abson et al. 2017), to more practice-based concepts and approaches for working through conflict (Temper et al. 2018). In this section we cover three common models specifically used to help direct action:

- Concept 1: the iceberg & leverage points model;
- Concept 2: Three Horizons pathways;
- Concept 3: conceptualising power for transformational conflict and resistance within social movements.



### Core concept 1: The iceberg and leverage points model

This useful concept combines ideas about working with different levels with different kinds of leverage points that can effect change at these different levels (Figure 12). The different levels broadly refer to the Three Spheres of Transformation described in earlier sections (refer to previous figure), and are used to represent different 'depths of change'.

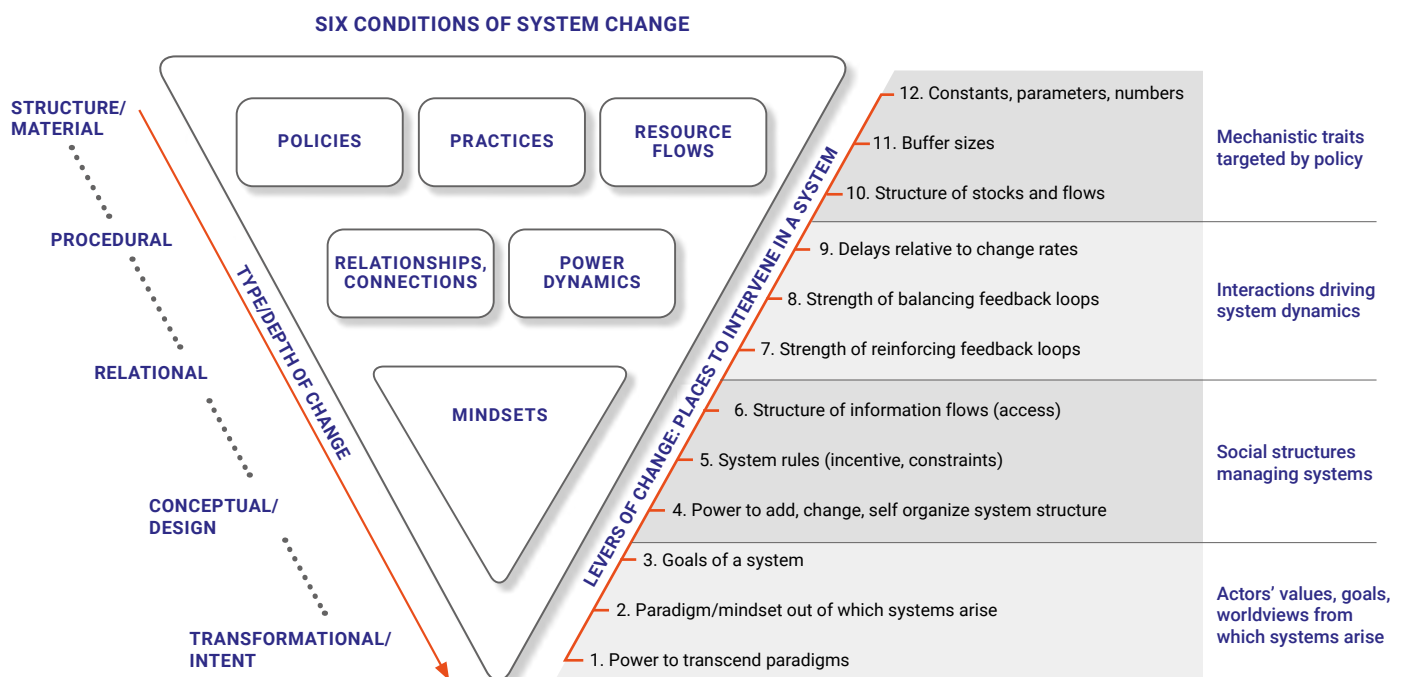


Figure 12: The iceberg and leverage points model (Shi and Moser 2021. Reproduced with permission).



In this model (Figure 12), six factors are considered to keep systems in place: policies, practices and resource flows; relationships and power dynamics (systems and structures); and mindsets. These are viewed to exist as levels of increasing ‘depth’: more practical aspects, systems and structures, and mindsets.

Change at these different levels can then be achieved by working on different kinds of leverage points (right hand side of Figure 12). When identified and enacted, leverage points are considered to result in significant shifts in other parts of a system (Abson et al. 2017).



More superficial points – such as changing or buffering numbers in a system – have the least effect on the system as a whole and don’t change deeper aspects. These more superficial aspects of a system are often targeted by policy (for example recent handouts by UK government to UK families to reduce burden on households caused by increasing inflation and energy and food prices). Deeper points such as changing the underlying mindset, values, goals and worldviews out of which systems arise – have the greatest effects on changing the system as a whole.

Overall, this framework is useful for developing comprehensive strategies for action because of the way this helps focus identification of what is needed at different layers or spheres of change and the kinds of leverage that can be used to support change (Box 2).

### Box 2: Example of application of the iceberg and leverage points framework

The iceberg and leverage points framework (Figure 12) has been useful in understanding how more transformational approaches for adaptation to climate impacts might be supported in the USA (Shi and Moser 2021). Many communities are facing increasing climate impacts, from droughts, fires, floods and increased hurricanes and storm surges. Yet adaptation to climate change over recent years has been beset by two critical challenges: federal retreat or stalling on comprehensive adaptation policy and support and private-sector engagement reinforcing existing economic paradigms and interests. At the same time, there has been growing civil society critique, resistance, and movement building against traditional forms of adaptation and towards more transformative forms of adaptation that place social justice more squarely at the heart of any change.

Informed by the iceberg and leverage points concept, an approach presented at COP25,

illustrates how transformational forms of adaptation might emerge. This approach is summarised in Figure 13. It points to the need for:

- adaptation to respond to the magnitude of climate risks (yellow arrow) by addressing root drivers of vulnerability (grey arrow)
- large-scale, systemic thinking to coordinate adaptation across scales, sectors, and hazards (orange arrow)
- societal mobilisation that includes both deep deliberation across silos (green arrow) and an assertion of normative values of justice and equity (red arrow) so that large-scale actions do not repeat racist, inequitable, and unsustainable outcomes
- transformative thinking at all 3 levels (material, relational, and mindset) in all areas that shape societal well-being and across urban-rural landscapes

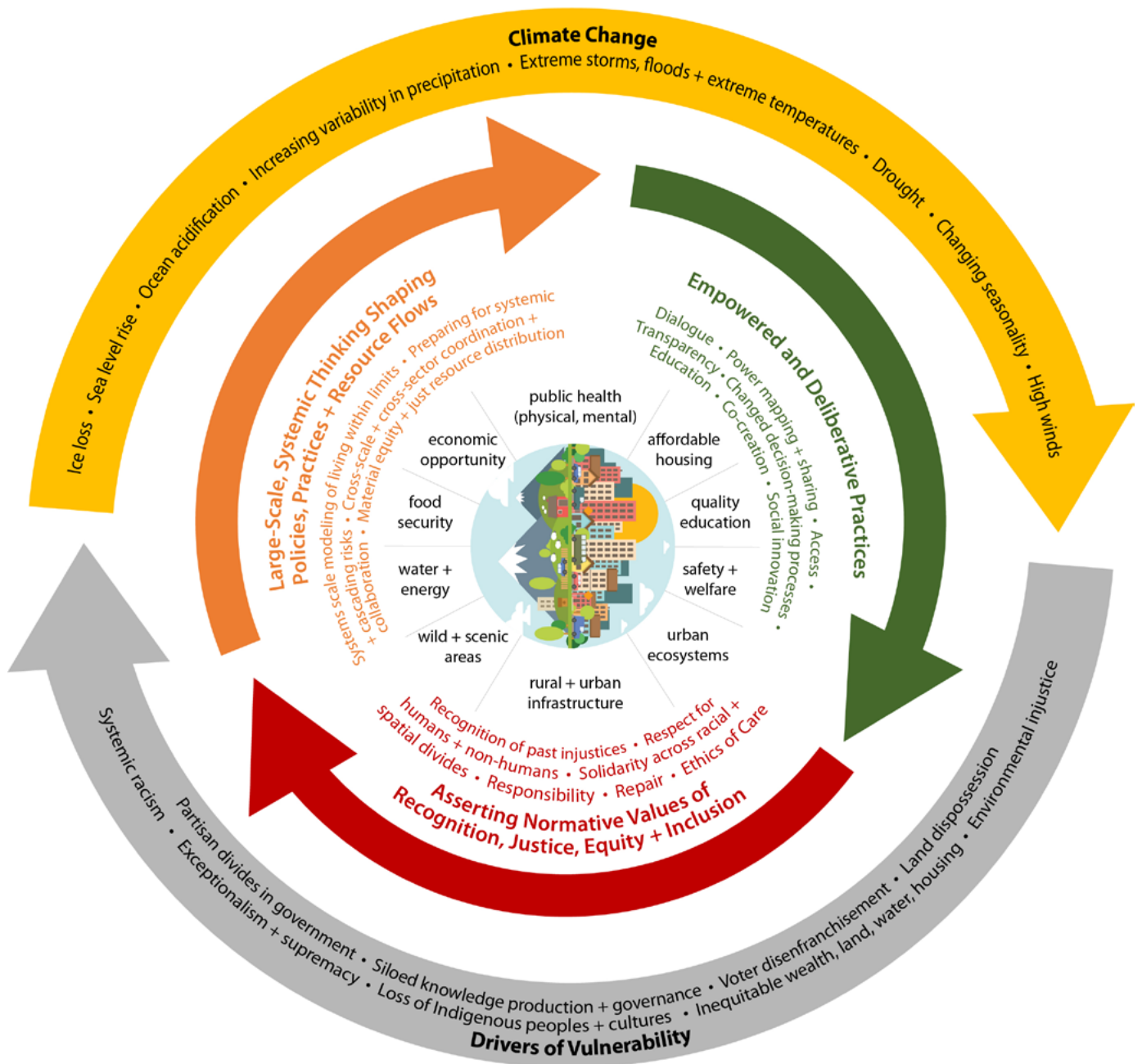


Figure 13: An approach to transformative forms of adaptation developed using the iceberg and leverage framework (Shi and Moser 2021. Reproduced with permission).

Overall, this suggested approach to support transformational adaptation in the face of climate change considers both the need for depth of change (layers) and the kinds of leverage needed to support it (leverage points).



## Core concept 2: Three Horizons

Three Horizons is a simple framework developed as part of a process to support dialogue among different actors about how they can act more effectively to bring about transformation. It is a part of a futures practice used to identify broad pathways in a context of complexity and where futures are uncertain (Sharpe et al. 2016).

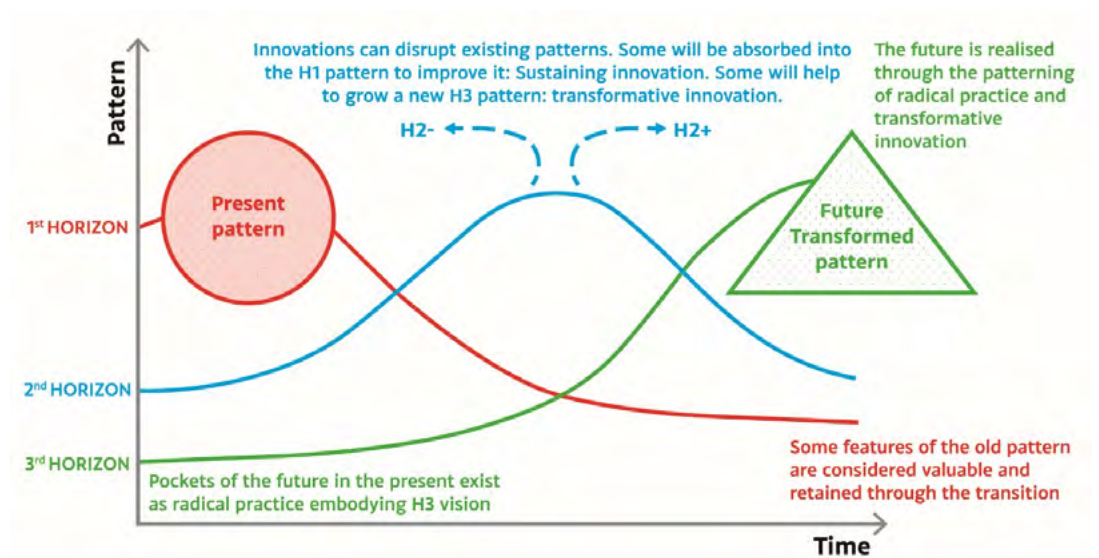


Figure 14: The Three Horizons framework (Fazey and Leicester 2022).

The framework (Figure 14) views a transformation as occurring through three overlapping horizons:

- Horizon 1 (H1): the dominant system in the present, including its business-as-usual activities, values, cultures, technologies, behaviours, approaches, or practices. As the world changes many of these aspects are no longer fit for purpose and decline
- The third horizon (H3) is the long-term successor to business as usual. It grows from fringe activity in the present, introducing completely new patterns. H3 embodies different logics, assumptions, or values relative to H1
- The second horizon (H2) is a pattern of transition activities, initiatives and innovations. Some initiatives will be absorbed into H1 systems to improve and prolong them (H2-). Others may create space for a radically different H3 pattern to grow (H2+).

In the process of exploring potential transformation, the three lines act like the five-line stave in music on which notation is added. Actors work through different questions revolving around the different horizons to map out different issues of concern: challenges being faced in the present, desired future visions and the kinds of actions most likely to support a significant pattern shift.





The core intention is to imagine the future as something radically different to the present, understand the essence of how this differs from the present, then work carefully to identify the actions and innovations most likely to support emergence of that future.

Three Horizons is meant to be a simple framework rather than an in-depth theory. Yet it can be a powerful tool for helping shift conversations towards how transformational change, as opposed to adjustments or reforms, might be brought about.

### Example

Three Horizons as a practice is being applied in a very diverse range of contexts and for different sectors and issues. One of the more striking examples is how the Welsh Government has been training its staff to facilitate Three Horizons to be able to support the Well-being of Future Generations Act.

This act requires public bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health

inequalities and climate change. The act is unique to Wales and is attracting interest from countries across the world.

Three Horizons is increasingly being used within conversations at all policy levels to help work with creating different thinking, bring the longer term considerations into the present, and encourage conversations that support transformational intent.

A toolkit for using Three Horizons has been developed by Public Health Wales and the Future Generations Commissioner's Office.



### Core concept 3: Conceptualising power for transformational conflict and resistance within social movements

Ways of conceptualising and mobilising power are of central concern for social movements working with conflict and resistance and against existing patterns of power. The Acknowl-EJ coalition, whose work we referred to in section 6 above, have developed a useful model and process to support radical transformation, including a series of strategies to impact on the people, structural and cultural dimensions through which power and domination can occur. In this process, the coalition helps those involved envisage a situation where local alternatives to the dominant pattern can flourish, shaping wider political transformations and addressing historical, social and political issues (Temper et al, 2018). So, for example, hopelessness and submission to oppressive conditions is transformed to a readiness to challenge those conditions, where shifts from *doler* (hurting) to *saber* (knowing), *querer* (desiring), *poder* (acting), and *hacer* (doing) occur. In this process, questioning inequalities becomes part of the transformation because it requires imagining that things could be done another way (Monedero 2009).

This collective process is then directed towards engagement with three types of power – that of people and networks, structural power (institutional, legal, economic and political frameworks) and cultural power (discourse, narratives, values and world

views) (Figure 15). For example, in engaging with people and networks in positions of power (central column), the aim is to impact and produce a change in people's interactions to create conditions for dialogue. Strategies for effecting this kind of engagement include local organisation strengthening, capacity building on conflict transformation, and sensitising decision-makers and the business sector.

Power Type	Institutional, legal, economic and political frameworks	People, networks	Discourse, narratives, values, world views
Aim	To impact and change in existing frameworks in order to acknowledge human and political rights, cultural difference, etc	To impact and produce a change in peoples interactions in order to create conditions for dialogue	To unmask the apparent institutional neutrality and the historical roots of exclusion. Create social consensus over new meaning
Strategies	Resistance: social/ political mobilization, networking, plebiscites. Advocacy: lobbying Create new institutions: autonomous governments and forms of territorial control. Participation in existing structures: local governments, customary institutions, assemblies, committees	Local organisation strengthening Capacity building on conflict transformation Sensitise decision-makers and business sector Produce and disseminate new knowledge	Enable new ways of thinking about power

Figure 15: Strategies to impact on the people, structural and cultural dimensions of domination (Temper et al. 2018).

Second, in engaging with structural power (left hand column), the aim is to impact existing institutional, legal, economic and political frameworks to acknowledge, for example, human and political rights or cultural differences. Here, a wide range of strategies can be employed, from resistance, to advocacy, creating new institutions, participation in existing structures and the creation of new modes of production. Finally, the aim of engaging with cultural power (right hand column) is to unmask the apparent institutional neutrality and the historical roots of exclusion and to create new fields of social consensus and meaning. Again, a number of strategies can be employed to achieve this.

Like Three Horizons, the core intention of Acknowl-EJ coalition's framework and process is to imagine futures that are radically different to the present. This may include protection of particular worldviews or ways of doing things into the future, such as indigenous and pastoralist practices that already underpin, for example,



sustainable land management in many parts of the world, using conflict if necessary to resist the eradication of these practices.

Furthermore, reflecting the iceberg and leverage points model, this approach digs deeper into strategies for engaging with cultural power, structural power and the informal power of people and networks – three of the six conditions for systems change that offer opportunities for deeper leverage. As such, the approach can be a powerful tool for confronting inequalities, resisting unsustainable pathways of transformation, and shaping direction towards more radical transformations to sustainability (see also <https://transformationstosustainability.org/>; <https://t2sresearch.org/>).

### **Example of application of the framework and process for conceptualising power for transformational conflict and resistance**

This example is of a transformative pathway that emerged from a tragic experience which then scaled out in unanticipated ways. The story began in 2005 with the intention of the transnational Pacific Rim Corporation to exploit a gold mine in Cabañas, El Salvador, which over time generated conflicts, increased social divisions, and eventually resulted in the deaths of four anti-mining activists. These deaths sparked the growth of a national movement against mining (the Mesa) which mobilised growing anti-mining sentiment into an effective political force (EJAtlas 2022). Meanwhile, an international dispute arbitration case filed by the Canadian-Australian company, OceanaGold, for \$258 million compensation against El Salvador for not granting the company the mining permit, was finally rejected (Temper et al. 2018).

Things came to a head in 2017, when El Salvador banned mining. This law was the first of its kind in the world and strengthened

the claims of communities opposing large mining projects in the region and the world, questioning large-scale mining as an engine of development. This then further emboldened Salvadorean activists to create transnational alliances with anti-mining activists in Honduras and Guatemala to resist 49 extractive projects that threatened transborder river contamination and to mobilise transnationally to eliminate “investor-state” clauses from trade and investment treaties, which have the potential to strangle countries’ ability to safeguard their environment and allow foreign investors to hijack local democracy (Temper et al. 2018).

This story, briefly told, offers insight into the power of combined strategies to impact on the people, structural and cultural dimensions of domination, whether or not these are centrally orchestrated, and how these can gather momentum to take transformational pathways to scale.



## Section 7 Key messages

- There are many different concepts and theoretical models of transformation.
- The iceberg and leverage points conceptual model helps focus on deep aspects of transformational change.
- Three Horizons is a simple framework that is part of a practice that includes supporting conversations among different actors about transformational pathways.
- The framework for conceptualising power for transformational conflict and resistance provides a different perspective and orientation to transformation through conflict and resistance and the building of social movements.



## Section 8: Examples of how transformation has been playing out in practice

There are growing examples of how transformations have been playing out, in practice. Here we provide three examples:

- Agroecology revolution over the last 90 years;
- Transformations of Nordic diets;
- Regenerative Costa Rica.



### Example 1: The agroecology revolution: A 90-year history towards transformation

With its long history of development, the story of agroecology provides a significant example of food systems transformation in practice. This 90-year story, with its roots as a scientific discipline, has involved a gradual expansion of practices, to the emergence of agroecology as a social movement and, more recently, to the movement of agroecology playing a role in shaping policy at local to global levels. The vision of actors working in the agroecology movement has been to build long-term soil fertility, healthy agroecosystems, and secure livelihoods. It is founded on an understanding of the need to transform current industrial food systems (given their uniformity and low resilience, and negative ecological and social impacts of their reliance on chemical fertilisers, pesticides and preventive use of antibiotics) and their governance. It has involved action aimed at supporting:

- Shifts in economic and political power;
- Ability to operate and influence at multiple scales, and multiple strategies to achieve its goals (Figure 16).

In recent policy formulations, agroecology is presented as a diversified solution for the transformation both of subsistence and industrial agricultures (Figure 17).

The growth of agroecology began as a scientific discipline, applied to the development of plot and field-level agroecosystems. During this phase of its evolution – roughly from the 1930s to the mid 1960s (Figure 16) – agroecology sought to apply ecological concepts and principles to farming systems, focusing on interactions between plants, animals, humans and the environment. In doing so, it built on dynamic local knowledge systems that had already developed complex approaches to managing pests, diseases and ensuring culturally appropriate, nutrient rich food supplies. Agroecology has continued to develop as a scientific discipline, embracing new disciplines and transdisciplinary approaches (Gliessman 2018).



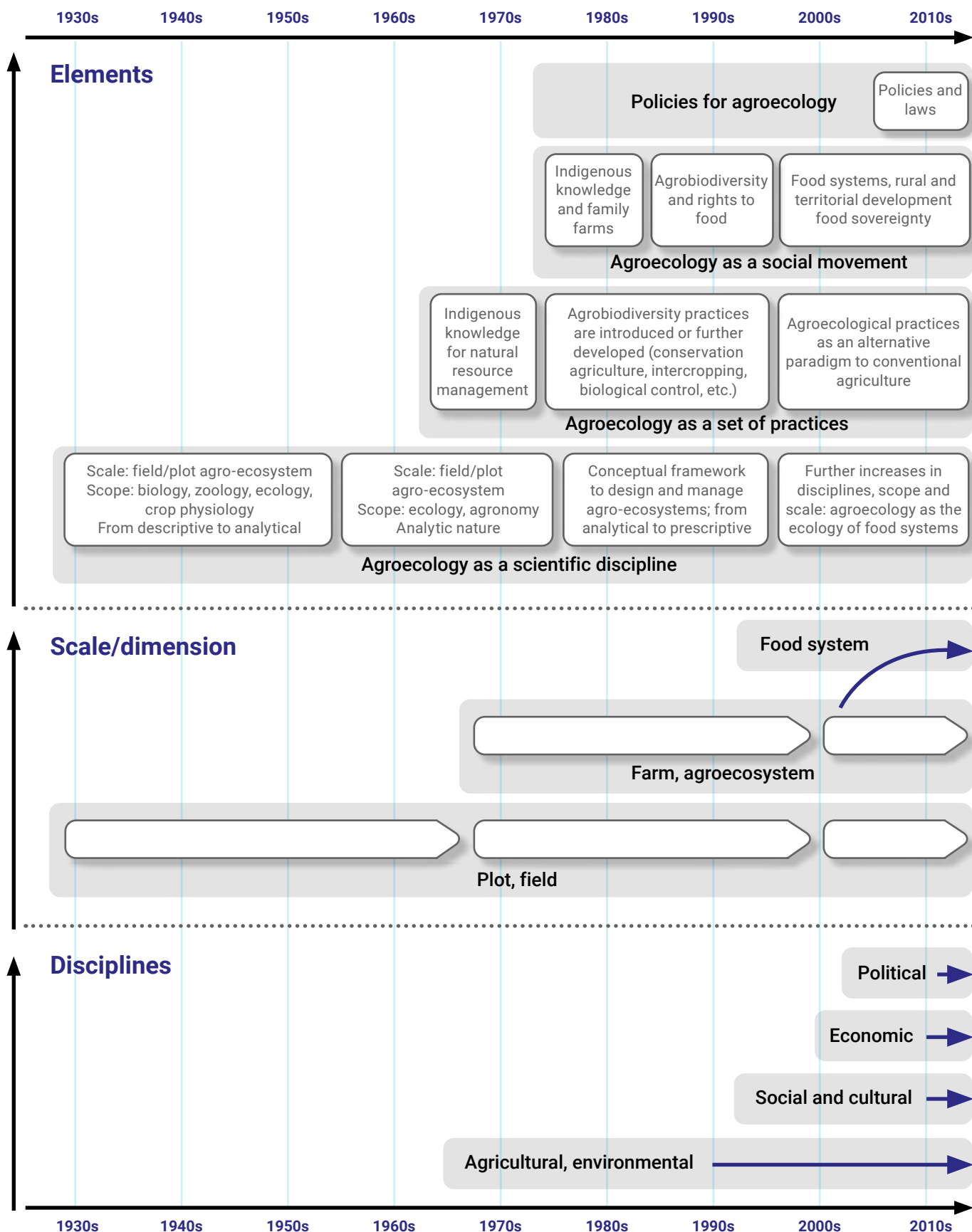


Figure 16: Historical evolution of agroecology (HLPE 2019. Reproduced with permission).

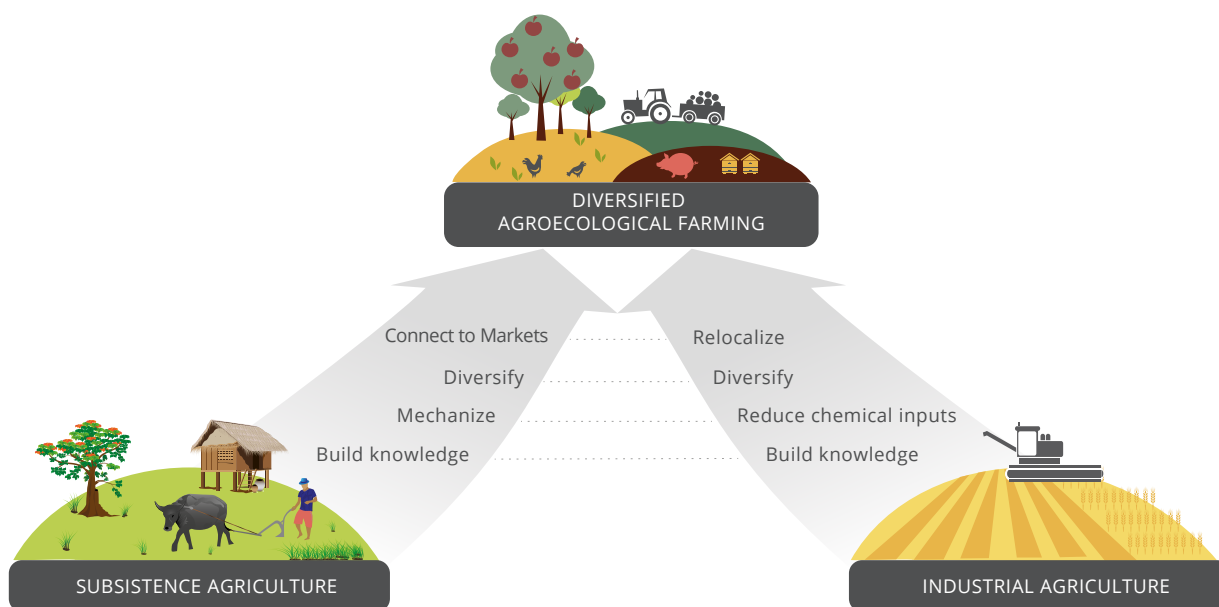


Figure 17: Transformations from different starting points towards diversified agroecological farming practices (IPES–Food 2016. Reproduced with permission).

From the mid-1960s onwards, agroecology also began to emerge as a set of practices (Figure 16). As a set of practices, agroecology aims at designing complex and resilient agroecosystems that assemble “crops, animals, trees, soils and other factors in spatially and temporally diversified schemes” in order to “favour natural processes and biological interactions that optimize synergies so that diversified farms are able to sponsor their own soil fertility, crop protection and productivity” (Altieri 2002). Attempts to define which specific practices can be qualified as agroecological are only recently emerging. Some of these practices have been applied to varying extents in different parts of the world for decades, while others have emerged more recently and as yet still have limited levels of adoption.

One way of thinking about agroecology is to qualify agricultural practices along a spectrum as more or less “agroecological”, depending on the extent to which they: (i) rely on ecological processes as opposed to the use of agrochemical inputs; (ii) are equitable, environmentally friendly, locally adapted and controlled; and (iii) adopt a systemic approach, rather than focusing only on specific technical measures (HLPE 2019). A complementary perspective is to define agroecological practice according to a set of principles (Figure 18).

In more recent years, agroecology has also become the political framework under which many social movements around the world defend their collective rights and advocate for a diversity of locally adapted agriculture and food systems practised by small-scale food producers in different territories (Nyéléni Center 2015; Figure 16). Agroecology is seen here as a bottom-up pathway to food sovereignty, building on traditional knowledge systems, supported, as opposed to being driven by science. Small producers, their communities and organisations, not agrifood business, play a central role. Agroecological approaches aim at building resilient and sustainable local food systems, strongly linked and adapted to their territories and ecosystems (Nyéléni, 2015, <https://afsafrica.org/>).

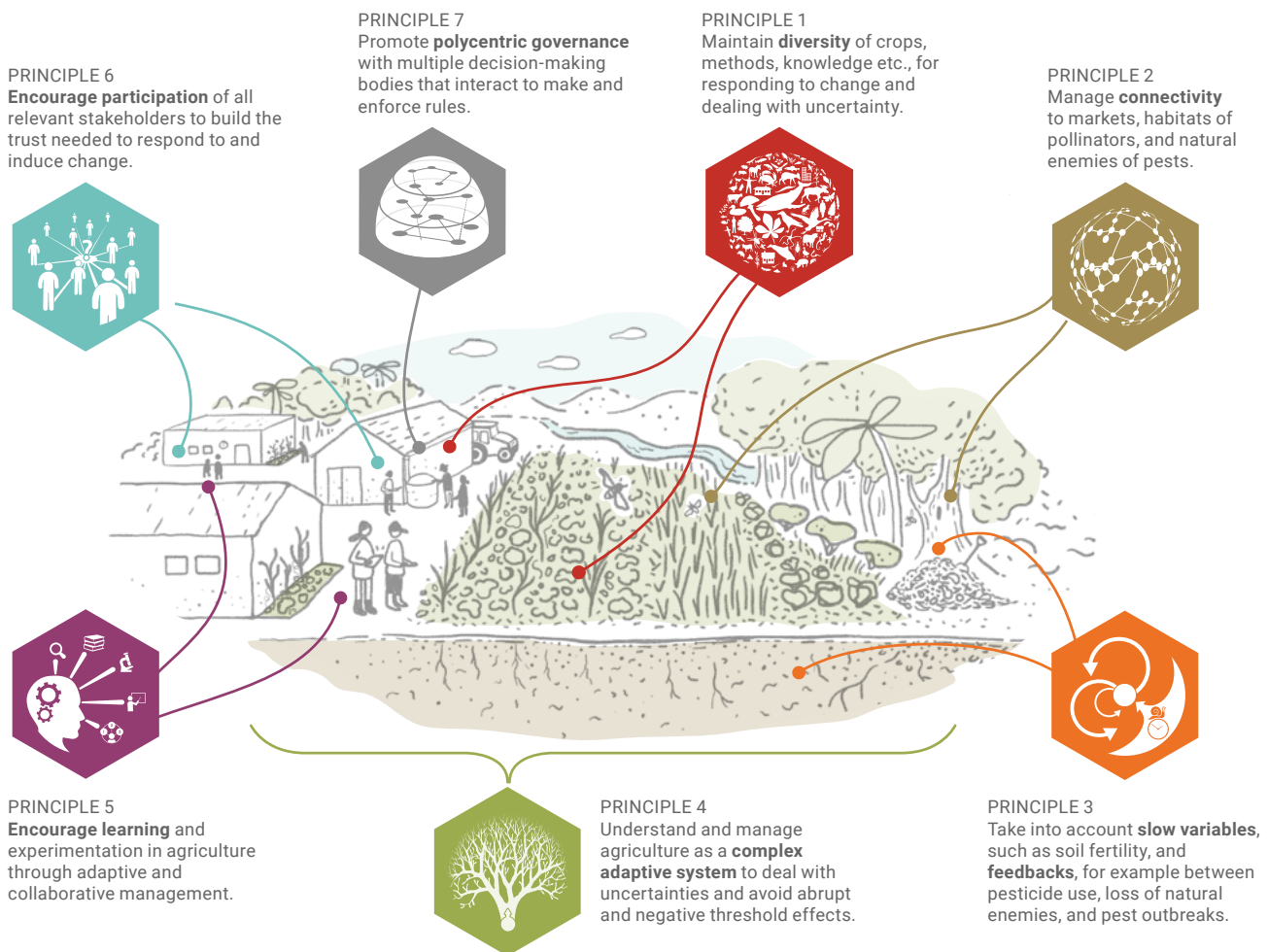


Figure 18: Principles underlying agroecology practice in Africa (Belay 2019. Reproduced with permission, E. Wikander/Azote).

As a result of the influencing activities of the agroecology movement, a very recent development has seen a number of national governments in both the global South and the global North adopting or promoting policies embracing the principles of agroecology and food sovereignty in order to transform food systems (HLPE 2019, Lampkin et al. 2020). Aligned with this, agroecology is being advanced in some select countries through an action plan that the United Nations' (UN) Food and Agriculture Organization (FAO) has developed in collaboration with partners, known as the scaling up agroecology initiative (SUAI), a platform to catalyse cooperation on agroecology within the UN system (<https://www.fao.org/3/nd420en/ND420EN.pdf>). The International Fund for Agricultural Development (IFAD)'s engagement with SUAI has in turn resulted in a stocktaking report on agroecology in IFAD operations, looking at all 207 IFAD-supported projects across countries in the five IFAD regions (IFAD, 2021).

With these most recent developments, transformation in some aspects of food systems towards agroecology has continued to evolve, through recognition of the way agroecology has helped with food security; creating more sustainable, resilient and just economies; and addressing the climate crisis by rejuvenating biodiversity, restoring degraded land, improving ecosystem services, and increasing soil carbon sequestration (Leippert et al. 2020, McGreevy et al. 2022).

Overall, the example is more akin to gradual transformations: relatively slow and for a segment of civilisation. Yet, while some of the change has emerged through an evolution over time, it has also been supported by some through aspiring to

bring about a transformational vision. The direction is towards a fundamentally different system or way of operating to that of more Western, conventional forms of agriculture, which have also been going through their own transformation over the same time frame. The example also shows the importance of social movements and associated narratives in shaping how change can emerge.

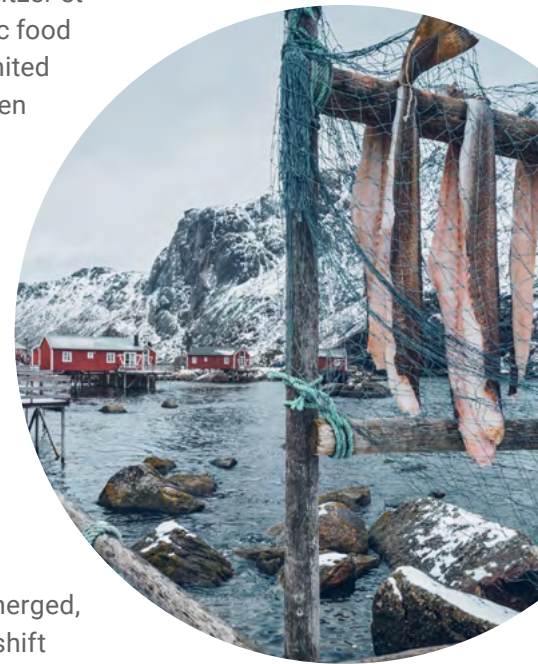


## Example 2: Nordic diet and grains

A useful entry point to change food systems is through transforming diets. For over three decades, efforts have been made across Nordic countries to support dietary changes that can help achieve positive human and planetary health outcomes. To meet these goals, current eating patterns in Nordic countries will need to change to include more fruit, vegetables, whole grain, seeds, nuts and legumes and many people will also need to consume less added sugar, salt and unhealthy fats, red and processed meats, and overall energy intake (Meltzer et al. 2019). There is also a need to address underlying vulnerabilities of Nordic food systems, such as challenges of providing appropriate labour, addressing limited access of vulnerable people to healthy food, and increasing distance between consumers and producers (Wood et al. 2020).

There is growing recognition between the Nordic countries of the need to co-operate to address the interconnected issues. Co-operation first started in the 1980s when a single set of integrated concise recommendations for Nordic populations were first released. The co-creation of a new Nordic food identity by Nordic governments then emerged in 2004 through the New Nordic Food Manifesto. In 2017, the five Nordic prime ministers then launched the initiative “Nordic Solutions to Global Challenges”. The objective was to help meet the UN Sustainable Development Goals by sharing Nordic knowledge and experiences across three themes: Nordic Green, Nordic Gender Effect and Nordic Food and Welfare. From this, the Nordic Food Policy Lab (NFPL) (see: <https://www.norden.org/en/nordic-food-policy-lab>) of the Nordic Council of Ministers emerged, tasked to help develop innovative, close-to-the-consumer policies that can shift food demand patterns. The NFPL’s inaugural lab at the United Nations Climate Conference (COP23) was one of the first to put food policy solutions at the heart of the Nordic climate change agenda.

An example of cooperation across the countries is the Keyhole front-of-package labelling scheme and an agreement to halve food waste in the region by 2030. Between 2021 and 2024, the Nordic Council of Ministers will focus on sustainable lifestyles in the region, in which changing dietary behaviour plays a significant role. The work at national levels has also been complemented at city levels (Wood et al. 2020). Mayors of several Nordic capitals, for example, have pledged to ensure all public kitchens are equipped to serve ‘planetary health meals’ in service of people and our planet. Municipalities, citizens, chefs, farmers and young people are building bottom-up efforts to create sustainable food systems, while at wider national level policies are being created in collaboration with other Nordic countries (Wood et al. 2020).





While the effort to approach change in Nordic diets has not always been framed as transformation, recognition of the need to view it in this way is increasing. As such, it provides a useful example of how this might be approached at scale. It includes actions and coalitions across, and at, different scales and an integrated approach that brings together the many different elements involved and across different geographical regions. It shows the need for leadership at both government and non-government levels and for the cohering of different actors, as well as the need to view the transformation as one that is cultural and about shifting a sense of identity, as well as being about practical change.



### Example 3: Regenerative Costa Rica

An example of another visionary and ambitious approach to transformation at scale is in Costa Rica. Led and supported by Regenerative Costa Rica, a range of conceptual frameworks are being used to drive change at fundamental levels and provide a roadmap towards a regenerative system at a country level. The goal is not just to reduce harm to sustainable levels, but to shift a whole country towards regenerative dynamics where people can thrive while living within planetary boundaries.

As highlighted by the good life tool, which ranks different countries based on the extent to which a country is achieving the goal of a safe and just future for all, Costa Rica is already one of the countries that has the least bio-physical impacts and some of the best social outcomes. Yet much more is needed in Costa Rica to address deep inequalities and to support transformations towards new economies, practices and food systems where people can thrive within ecological limits.

Regenerative Costa Rica is providing a gateway to move a whole country forward. It helps cohere a wide set of initiatives and coalition of different organisations through a holistic framework for regenerative development. This includes focus on a number of different elements:

- Environmental (regenerate ecosystems, nature-based solutions, biodiversity and ecosystems above other interests);
- Social (inclusive and equitable societies);
- Economic (regenerative economics, well-being economy, common good);
- Political (participatory governance, transparency, ethics and youth engagement);
- Cultural (regenerative cultural design, respect, responsibility, towards a new consciousness);
- Spiritual (values, ethics, earth charter).

Regenerative Costa Rica is applying this framework in diverse ways. For example, it is working directly with a small number of local authorities to support significant shifts. In these municipalities much of the traditional tourism in Costa Rica collapsed during COVID-19, with around 200,000 people losing their jobs. This crisis, however, has been used as an opportunity to bring in more local forms of development, with much of this work focusing on food production and its consumption.



This has included finding ways to reduce supply chains, enhance quality of life, involve all in the value chains, and solve diverse social issues. Using methods from Cuba and from permaculture practice, the work has focused on changing food production into something healthy, fun, and which creates new employment. Collaboration with the global alliance, Savory, has also involved programmes that work with cattle ranchers to rapidly advance carbon sequestration.

The work has initially focused on creating exemplar shifts towards genuinely regenerative bioregions. These exemplars will then make it much easier to stimulate change in other parts of Costa Rica. The approach has involved an array of complex processes to help redesign educational programmes; apply novel approaches to evaluation to help drive change; and work with crypto currencies to help bypass limits of traditional financial frames whilst, overall, helping to create new infrastructures for new kinds of economies and societies. The work is a genuinely transformative initiative in the way it seeks to create a fundamentally different social and ecological economy. It demonstrates the need for strong visions, a focus on systemic change, working with coalitions, and tackling issues of social power and inequalities.

## Section 8 Key messages

There are many emerging case studies of transformation; three are illustrated in this report.

- The agroecology case study illustrates how a global transformation towards sustainable food systems can take many years to evolve, from interdisciplinary scientific foundations which later expanded into a set of principles-based practices, a global social movement and, most recently, engagement with policy change in both the global South and global North. Both systems change and scaling dimensions are highlighted in this case study.
- The Nordic diet case study highlights actions and coalitions across and at different scales and an integrated approach. It shows the need for leadership at both government and non-government levels, for the cohering of action across different actors, and the need for shifts in cultural identity as well as practical change.
- The Coast Rica case study is an example where the change has been explicitly framed as transformation, and one with a strong vision of what that change might look like. While still in its infancy, it has high ambition and, like the case of the Nordic diet, includes concerted efforts to bring together different actors and organisations and specific attempts to shift mindsets, assumptions and create and draw on appropriate cultural conditions.

## Section 9: Conclusions

This report provides an overview of the concept of transformation to highlight some of the critical aspects that need to be considered when embarking on a transformational initiative, approach or campaign. There are many important insights (Box 3). There are also six core take-away messages.

1. Transformation is a distinct form of change: Transformation is a fundamental change occurring over time. Whilst transformation is subjective and may be desirable to some but not others, it is also qualitatively distinct to minor adjustments or reforms. When invoking the concept, it is therefore important to be clear about what the transformation is expected to look like, and why.
2. Transformation involves systemic change: Transformation requires change across interconnected issues, and in systems, structures, assumptions, mindsets and cultures that give rise to the challenges being faced. As such, it is important to carefully consider how an approach, in its design and implementation, will genuinely be able to support transformational change.
3. Transformation is political and related to patterns of power: Transformation is always embedded in political processes and involves shifting patterns of power relations, agency, inclusion and addressing inequalities. This highlights that approaches that can convene and create coalitions of different people, and work through conflict in positive ways, are needed to support transformations.
4. Transformation requires aspirational visions: Aspirational visions that are co-created and shared are needed to guide transformations. These visions need to include consideration of the kinds of dynamics in a future system that will create and amplify the intended outcomes.
5. Transformation results from the contributions of many different actors: Given the systemic complexity and scale of most transformational processes, there is a need to differentiate between the bigger picture of transformation and individual actors' own specific contributions and positioning.
6. While the many examples and concepts provided in the report show different ways in which transformations might be approached, this report has focused largely on the underlying concepts. Further work is now needed to bring together the rapidly growing research on how transformations can be most effectively supported in practice. This will need to include aspects such as how to:
  - Work with power and inequalities;
  - Create narratives that support transformations;
  - Design for transformations;
  - Develop transformative policies;
  - Work effectively with social movements;
  - Cohere or choreograph change and actors at scale;

- Develop specific theories of how transformational change is expected to come about;
- Make new kinds of transformational models and approaches to research and evaluation most effective in catalysing and supporting transformational change.

### **Box 3: Core messages about the concept of transformation and how to approach transformational change**

1. New transformational approaches to change are needed to transcend the systems, thinking, and mindsets that have led to, and perpetuate, contemporary challenges.
2. Transformation is a fundamental change occurring over time and is qualitatively distinct to adjustments or reforms that sustain the status quo.
3. What is considered to be transformation, or desirable transformation, depends on a person's perspective and values.
4. Systemic change is a key dimension of transformation, which includes changes in the fundamental dynamics and goals of a system.
5. Transformation can occur at different social, geographical or temporal scales with transformation at one scale often being dependent on change at other scales.
6. Inner transformations – shifts in a person's beliefs, values, mindsets, cultures – are usually necessary for outer transformations to occur.
7. Aspirational visions of the future are needed to guide transformations, including visions of what kinds of systems and their dynamics will be needed that will enable desired outcomes.
8. Supporting transformation requires mapping and working with and across many different interacting elements.
9. Examples of cases focusing on different elements highlight the need for those seeking to support transformations to use cohering or orchestrating leaders, policy professionals, advocates and capacity developers to create a symphony for change.
10. Transformation requires working across 3 layers: behaviours and technologies; systems and structures; beliefs, mindsets, assumptions, paradigms and cultures.
11. Transformation is always embedded in political processes and involves shifting patterns of power relations, agency, inclusion and distributional impact.
12. Working with patterns of resistance, both by incumbent power holders and the least powerful, and by using productive forms of conflict, can be powerful ways of supporting transformational change.
13. Coalitions of different actors, such as 'rebels', 'reformers', 'organisers' and 'helpers', can help bridge different framings or perspectives linked to differences in power.
14. There are many different conceptual models of transformation. Three useful ones include: the iceberg and leverage points conceptual model that help focus on deep aspects of transformational change; The Three Horizons framework, which is part of a practice to convene dialogue among different actors to identify transformational pathways; and the framework for conceptualising power for transformational conflict and resistance, which provides a different perspective and orientation to transformation.
15. There are diverse examples of transformation, ranging from the agroecology movement, which has occurred more gradually and over longer time frames, to concerted efforts to shift identity and food cultures in Nordic countries through co-operative endeavours, and to those in Costa Rica involving bottom-up processes combined with strong visions and transformational intent.

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