



NAVIGATING COMPLEXITY IN FOOD SYSTEMS

From Clockwork To Cloudwork

Insights from the UNDP Co-inquiry:

"How can we work more systemically to accelerate progress towards a more sustainable food system?"

NAVIGATING COMPLEXITY IN FOOD SYSTEMS: FROM CLOCKWORK TO CLOUDWORK

INSIGHTS FROM THE UNDP CO-INQUIRY: “HOW CAN WE WORK MORE SYSTEMICALLY TO ACCELERATE PROGRESS TOWARDS A MORE SUSTAINABLE FOOD SYSTEM?”

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For more information see:

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EXECUTIVE SUMMARY

About the co-inquiry

Over the past three years, UNDP has convened international development practitioners in a co-inquiry into the question: “How can we work more systemically to accelerate progress towards a more sustainable food system?” In 2022, co-inquiry participants explored questions relating to *Rethinking Programme Design*:

- What are the implications of complex systems thinking for programme funding, design and implementation, particularly for food and agricultural systems transformation?
- What currently gets in the way of applying more complex systems thinking approaches?
- What changes should be made to: funding requirements; institutional operating procedures and practices; programme design and implementation processes?
- How could these changes be implemented and mainstreamed?

This report shares some perspectives, insights and recommendations arising from the process.¹

The challenge

The philosopher Karl Popper asserted that most problems lean towards two distinct types: clock problems and cloud problems. A clock may be complicated and have multiple parts, but ultimately it can be understood through logic and can be fixed through interventions that will have predictable effects. Systemic challenges, by contrast, are “cloud” issues: constantly changing, unpredictable and impossible to control.²



The challenges of our global food and agriculture systems are cloud challenges: immensely complex, multi-dimensional and ever changing. A multiplicity of constantly interacting factors influence how and when change happens. “This implies **that we need to move beyond rational engineering approaches to system change and look for approaches that anticipate and accommodate inherent social tensions and struggles in processes of changing food system dynamics and outcomes.**”³

While the language of systems change has been widely adopted by international development organisations, the distinction between complicated (clock) challenges and complex (cloud) challenges is not widely understood and there are significant organisational barriers for working systemically.

A recent study found that most published analysis of the pathways to food system transformation “still focus essentially on what needs to be done – often from a technical perspective – not on how to do it. In sum, the contested dimension of food systems transformation is not yet fully recognized.”⁴

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1 The conversations included a range of perspectives, and this report does not claim to represent all of them. The opinions expressed in this publication are those of the authors.
2 The ‘clock’ and ‘cloud’ metaphors are drawn from Rob Ricigliano, Systems and Complexity Coach at The Omidyar Group, in his article [The Complexity Spectrum](#).
3 Leeuwis, C., Boogaard, B.K. & Atta-Krah, K. [How food systems change \(or not\): governance implications for system transformation processes](#). Food Sec. 13, 761–780 (2021).
4 Christophe Béné (2020), [Why the Great Food Transformation may not happen – A deep-dive into our food systems’ political economy, controversies and politics of evidence](#), World Development, Volume 154, 105881

This shift from ‘clockwork’ to ‘cloudwork’ represents a fundamental mindset shift for many international development organisations and has far reaching implications for:

1. The funding, design, implementation, and monitoring and evaluation of projects, programmes and portfolios.
2. Organisational culture, policies, procedures and the type of skillsets required by international development practitioners.
3. Wider systemic incentives in how donors fund and think about impacts.

Requirements from donors and development organisations for transparency and accountability for how funds will be spent, and with what results, incentivise precisely the “rational engineering approaches” to systems change that the international development sector needs to move beyond if it is to be more effective in addressing complex systemic challenges. Some of the limitations of current clockwork ways of working include:

Simplistic understanding of the complex dynamics of food systems: food systems challenges are multi-dimensional and inter-linked and involve multiple tensions, dilemmas and trade-offs that cannot be easily addressed by a typical logframe approach to programme design.

Emphasis on technocratic solutions: problem analysis and solution design tend to focus on more technocratic factors (e.g. governance mechanisms, policy reform, legal frameworks, standards, capacity building, financial instruments, public private partnerships, technology solutions) and are often too superficial in their consideration of local context, underestimating the impact of historical, cultural, social and political factors and power dynamics.

Limited stakeholder buy-in and adoption: when the design of interventions is led by outside experts, securing meaningful stakeholder buy-in and support is frequently hard to achieve. As a result, the adoption of recommendations, and the implementation and follow-through on commitments, pathways and policies, is often limited.

Insufficient attention to trust and relationship building: when problems and solutions are primarily considered through a technocratic lens, the human side of change is often neglected or ignored. In reality most successful change efforts are driven by coalitions of passionate people working together to create the change they want to see.

Limited attention to shifting mindsets: an essential aspect of the change process involves facilitating stakeholders to consider alternative viewpoints. Some of this can happen through providing access to data and analysis, but most of it needs to happen through skilfully facilitated dialogue and experiential learning. These areas are often under-invested in within typical projects.

Difficulty in adapting to changing contexts: traditional project plans can quickly become out of date and adjusting them is often cumbersome and difficult, even in the face of unexpected events and shocks.

Learning is superficial: accountability mechanisms tend to incentivise delivery organisations to demonstrate the successful delivery of project plans. There is a fear that ‘failure’ to deliver plans will be penalised. This fear of admitting to ‘failure’ gets in the way of genuine learning.

Limited long-term project sustainability: once projects end, there is often insufficient local capacity, funding or support to continue the work, which stems from (a) short-term funding cycles and (b) failure to secure genuine stakeholder ownership.

“ Although system analysis can generate detailed knowledge and understanding about food system dynamics and the likely positive or negative consequences and trade-offs of alternative courses of intervention, it will not result in mutually supported decisions. In the end, humans will make the decisions based on practical, political, economic, normative, and ethical considerations.⁵ ”

Recommendations

Applying ‘cloudwork’ approaches to transforming food systems involves:



Acknowledging complexity:

recognising the dynamic, multi-dimensional nature of the issues and being humble in holding hypotheses around how change might happen.



Facilitating collaboration through participatory processes:

recognising the fundamentally political nature of change and that change depends on navigating differences and working towards a mutually acceptable future.



Learning through doing:

putting learning at the heart of change processes, so that hypotheses are constantly being tested and revised as we learn from real world application.

We set out below a number of recommendations for donors and international development organisations on how to navigate complexity more effectively in programme design and delivery. Included in the report are links to many other publications that go more deeply into these points.

1. Adopt collaborative and adaptive approaches to programme design and implementation.

Work with the local context and realities

- **Build stakeholder buy-in and mobilise collective action:** focus on convening and connecting stakeholders to identify the problems they want to solve and support them to design and implement their own solutions.
- **Adapt to context:** adapt programmes to the complexities of local history, culture and politics, including the evolving socio-political context.
- **Acknowledge the political nature of the issues** and focus on supporting stakeholders with competing interests to move forward, negotiating a wide range of inter-connected social, environmental and economic tensions, dilemmas and trade-offs.

Food systems are complex, diverse and self-organizing wholes in which relatively autonomous stakeholders have competing interests, values and perspectives, and where transformation depends to a considerable extent on the willingness and capacity of interdependent actors to accommodate and navigate differences and work towards a mutually acceptable future.⁶

- **Build trust and relationships:** put an emphasis on building trust and relationships as the foundation of effective collaboration.
- **Acknowledge historic harms and work towards healthier relationships:** a key part of shifting systems is the healing of relationships, historic inequities and destructive patterns.
- **Look to the future as well as the past:** in order to avoid the risk of solving yesterday's problems, use foresight and participatory scenario processes to identify emerging issues and opportunities.

Support more inclusive, collaborative processes

- **Inclusive governance and decision making:** endeavour to make governance structures and decision-making processes as inclusive as possible, in order to ensure that different perspectives are included and so that decisions do not simply reinforce the existing system.

Food system synthesis emphasizes this governance aspect of food system transformation, in which explicit attention is paid to decision making processes and their legitimation in transformation processes, thus: how decisions are made, who decides, who is in- or excluded, what power inequalities are at play, and what – or whose – knowledge is in- and excluded.⁷

- **Resource collaboration properly:** collaboration can be resource-intensive and requires meaningful investment into backbone organisation(s), facilitation expertise, resourcing and supporting participation, funding collaborative activities, and so on.

Find the most promising leverage points

- **Identify leverage points:** support stakeholders to identify and act on the most promising leverage points, while also adapting and responding to changing contexts and windows of opportunity.
- **Take a whole system perspective and build on what exists:** see individual projects within the context of a wider ecosystem of actors and initiatives; and identify gaps where new initiatives can bring a useful contribution in a collaborative, rather than competitive manner.

⁶ Ibid, Leeuwis et al

⁷ Ibid, Leeuwis et al

- **Attend to mindsets and narratives:** pay attention to the role of worldviews, mindsets, narratives and values in stakeholder dialogue and identify how these can shift and change through stakeholder interaction.
- **Support champions of change:** identify and support champions of change and connect them with each other, across organisational boundaries.
- **Less is more:** set realistic objectives within the scope of the available budget and resources so that interventions are not diluted across multiple activities.

Put learning and adaption at the heart of programmes

- **Test, learn and adapt:** navigating complexity and uncertainty requires an approach of “learning through doing”, using on-going iterative cycles of “test, learn and adapt” with robust participatory learning processes at the heart of the change process.
- **Learn from failure:** some of the richest and most important learning opportunities lie in paying attention to obstacles and ‘failures’, which is where flawed assumptions can be revealed and where there is the greatest chance that effective change strategies might be discovered.
- **Put learning at the heart of monitoring and evaluation:** change the way success is measured and evaluated: complement quantitative metrics with a more holistic, systemic perspective that considers the wider context and interconnections of different issues and qualitative indicators of change; put learning at the heart of M&E.
- **Flexible planning and budgeting:** leave a significant percentage of the budget available for supporting activities that will only be identified once the project is under way.

Think big picture and long term

- **Invest for the long term:** shifting systems is a long-term process and better results can be achieved by thinking beyond short-term project cycles and taking a longer-term perspective. When stakeholders drive the process, and prioritise the areas for action, the probability of long-term viability of the work is much higher, since they are more likely to invest the necessary time and resources to maintain the process.
- **Move from projects to portfolios:** instead of thinking about ‘single point solutions’, develop portfolios of interventions to address issues across a system; take a more joined up and coordinated approach – across organisational boundaries – towards collectively contributing towards change across a variety of intervention areas.

2. Accelerate organisational change

Build the capacity of staff

- **Build staff capacity for complex systems thinking approaches:** build greater understanding of how ‘clockwork’ approaches to problem solving do not work when working with complex systemic issues, and the implications of ‘cloudwork’ for programme design and implementation and for internal organisational structures, policies and procedures. Build the leadership competencies for working on systemic issues, including how to: lead in conditions of uncertainty; work with

power and conflict; work with inclusion, diversity and difference; build trust and create conditions of psychological safety in diverse groups; facilitate co-creative processes; manage in ways that are agile and adaptive; facilitate deep learning; and so on.

- **Diversify recruitment:** hire more people with skills and experience in facilitation and collaboration methodologies; ensure that there is more diversity of skills and perspectives within the organisation that are more reflective of the multiple dimensions of the problems we are tackling.

Break down silos and strengthen internal and external collaboration

- **Create multi-disciplinary teams:** change ways of working so that teams are multi-disciplinary.
- **Increase inter-departmental collaboration:** collaborate on cross-cutting issues across departmental boundaries; identify opportunities for joint projects; use portfolio design processes to develop integrated systems change strategies; invest in building greater trust and relationships across teams.
- **Increase partnerships and collaboration:** take an ecosystem view to identify the comparative strengths of different institutions to create strategic relationships that create genuine synergies.

Strengthen organisational culture and learning

- **Organisational culture:** strengthen trust and relationships within organisations; support greater flexibility, agility and adaptation across the organisation.
- **Learning:** build a culture of organisational learning, across project boundaries, between functional silos and teams, and underpinned by robust processes for enabling, capturing and sharing learning; and support inter-institutional learning.

Adjust organisational procedures to be more agile and adaptive

- **Procurement:** adapt procurement (and other back office) procedures to be more agile and adaptive.

Empower staff to catalyse organisational change from within

- **Use participatory processes to catalyse change:** build internal coalitions for change, driven by key champions from across different parts of the organisation; develop and test hypotheses for catalysing organisational change, using cycles of learning and reflection to adapt and iterate.

3. Change the wider **system incentives**

Mainstreaming more adaptive, collaborative approaches to address food systems challenges requires more than just technical 'fixes' by individual institutions. Existing practices are kept in place not just by the norms, policies and procedures of each individual institution, but by the dominant 'rules of the game' across the sector. Shifting these requires a much larger scale, collective effort of multiple champions from across different actors in the international development system working together to learn from each other, to share and develop good practice and to help mobilise allies and key decision makers within their own institutions who can deliver both the internal organisational changes and the system-level changes that are required.

Invitation to collaborate

UNDP invites governments, donors, development agencies, researchers and academics, civil society organisations and the private sector to join us in re-shaping how the international development sector addresses complex environmental challenges.

We are developing a series of Collaboration Labs to be convened at both country and global levels. Each Lab will focus on a specific environmental challenge (initially focused on issues relating to the food-climate-biodiversity nexus and bring together a cohort of leaders from across different organisations to:

Build leadership capacity
for working more collaboratively
and more systemically

Build trust and relationships
between participants as the foundation
for greater collaboration

Develop and strengthen collaborations
between different institutions and programmes
working on related issues

**Catalyse organisational
and wider systemic change**
by addressing institutional barriers
and disincentives to collaboration
and strengthening the enabling environment

If you want to partner with UNDP in this collective endeavour, please get in touch with charles.omalley@undp.org.



1



INTRODUCTION

Between 2020 and 2022 UNDP facilitated three cycles of a co-inquiry into the question: “How can we work more systemically to accelerate progress towards a more sustainable food system?” This report shares insights and recommendations from the co-inquiry stream on *Rethinking Programme Design* that was part of the third cycle and that focused on the question: “How can international development programmes integrate complex systems thinking approaches more effectively for food and agricultural systems transformation?”

(The other stream in the third cycle was focused on *Working with Power*: “How can we work more effectively with power and conflict in multi-stakeholder processes for changing food and agriculture systems?” A separate report is [available](#).)

For more information on the previous cycles of the co-inquiry, please refer to [Appendix A](#).

Objectives

The objectives of this co-inquiry cycle were to generate learning and insights on:

- What are the implications of complex systems thinking for programme funding, design and implementation, particularly for food and agricultural systems transformation?
- What currently gets in the way of applying more complex systems thinking approaches?
- How could these changes be implemented and mainstreamed?

What changes should be made to:

- Funding requirements?
- Institutional operating procedures and practices?
- Programme design and implementation processes?

Context

The world faces fundamental challenges of how to feed a growing global population in a healthy and sustainable manner in a context where agriculture has been a key driver of environmental degradation (e.g. land degradation, habitat destruction, biodiversity loss, deforestation, soil depletion, greenhouse gas emissions, depletion of aquifers, pollution of waterways and oceans, and so on). At the same time, agriculture serves as a vital source of livelihoods for around one billion people.

Since 2022 these issues have become even more acute as a result of global conflicts, disruptions to food and fertilizer markets, and soaring prices for food, fertilizer and energy, raising critical questions about risks to global supply chains and how governments should best ensure food security for their populations.

Scope of the co-inquiry

The co-inquiry focused particularly on the role of multilateral and bilateral funders, UN agencies and other large international development organisations, looking at how development needs to be done differently in order to be more effective in catalysing transformation in global food and agriculture systems – with a particular focus on the important role of convening, facilitating and enabling governments and other stakeholders to shift the “rules of the game” in food and agriculture for improved development outcomes. We recognise that there are other strategies that private philanthropic funders, international NGOs and civil society organisations can follow, that may have a greater emphasis on advocacy and campaigning, but that was not a focus for the co-inquiry.

Our starting hypothesis

Moving towards more sustainable food and agricultural production is a complex and multi-dimensional challenge. As with any complex challenge of this nature, it cannot be reduced down to easily identifiable interventions that have predictable effects. Complexity means that there will always be unanticipated effects from any intervention in a system. In Cycle 2 of the co-inquiry, we identified that any attempts to work towards systems transformation should be designed with the following principles in mind:



Integrated approach: not treating issues in isolation, but acknowledging and working with multiple, complex, inter-connections across economic, social and political systems.

Inclusive, participatory and co-creative: facilitating stakeholders to identify problems and develop and implement solutions collaboratively, rather than attempting to bring in predefined solutions from outside, which may not be suitable for the local context.

Agile and adaptive: taking a ‘test and learn’ approach, constantly iterating and adapting based on learning from what happens and adjusting to changing contexts.

Tracking a wider range of signals of change: attending to a broader range of indicators of change and impact including, for example: strengthened trust and relationships; increased collective awareness of system dynamics and perspectives; and shifts in narratives and mindsets.

Realistic objectives: taking longer term perspectives with realistic objectives rather than looking for overly ambitious, quick fix, ‘silver bullet’ solutions.

Donors and implementing agencies have been developing project approaches that integrate these elements. Many of these approaches are already being successfully advanced by innovation units in development organisations. However, while mainstream development programming is also increasingly using the language of systems change, many of the programme methodologies are still being designed around ‘logframe’ approaches, with pre-planned activities and pre-defined outcomes – following a linear logic of (1) assess (2) design (3) implement (4) monitor – leaving limited room for more participatory, emergent and iterative approaches.

In addition, the organisational processes and practices of governments, implementing agencies and large civil society organisations also tend to be focused on linear planning and struggle to accommodate approaches based on *complex systems thinking* which need to be more agile and adaptive. Existing ways of working are kept in place through an array of institutional policies, structures, procedures, cultures and habits. While the language of systems thinking and systems change is now being widely adopted, less attention is being paid to how these institutional processes need to change. As a result, we are seeing relatively limited change in the way food and agricultural systems transformation programmes are implemented. This is the challenge that the co-inquiry was focused on addressing.

Scope of this report

This report is built on the foundation of the perspectives, experiences, insights and recommendations that were shared by participants during the co-inquiry. Many of the discussions happened in breakout sessions, which were recorded and transcribed. Additional notes were captured from participants. Some of the direct quotes from participants are included in the text.

The report also draws on the paper [How food systems change \(or not\): governance implications for system transformation processes](#) by Cees Leeuwis, Birgit Boogaard and Kwesi Atta-Krah which was pre-reading for the co-inquiry and was presented by Cees Leeuwis in the first session.

In addition, we have added links to additional resources for many of the recommendations. This is a vast topic, which this report can only hope to scratch the surface of, but we hope that the resources can provide a doorway for the reader to go deeper on any topic of particular interest.

The core team

The Rethinking Programme Design stream of the co-inquiry was convened and facilitated by Charles O'Malley, with support from Nicolas Petit and Henriette Friling. We are particularly grateful for input and advice from: Søren Vester Haldrup, UNDP; Nina Strandberg, SIDA; Benjamin Kumpf, OECD; and Cees Leeuwis, Wageningen University & Research.



2



THE CHALLENGE

2.1. Food and agriculture systems are more like clouds than clocks

The philosopher Karl Popper asserted that most problems lean towards two distinct types: clock problems and cloud problems. A clock may be complicated and have multiple parts, but ultimately it can be understood through logic and can be fixed through interventions that will have predictable effects. Systemic challenges, by contrast, are “cloud” issues – that is, they are constantly changing, unpredictable and impossible to control.⁸



Our approach to solving problems needs to be different for different types of challenges, depending on where on this spectrum (from clock to cloud) the nature of the issue lies.

The environmental, social, economic and political challenges of our global food and agriculture systems are cloud challenges: immensely complex, multi-dimensional and ever changing. A multiplicity of constantly interacting factors influence how and when change happens.

The Global Food System

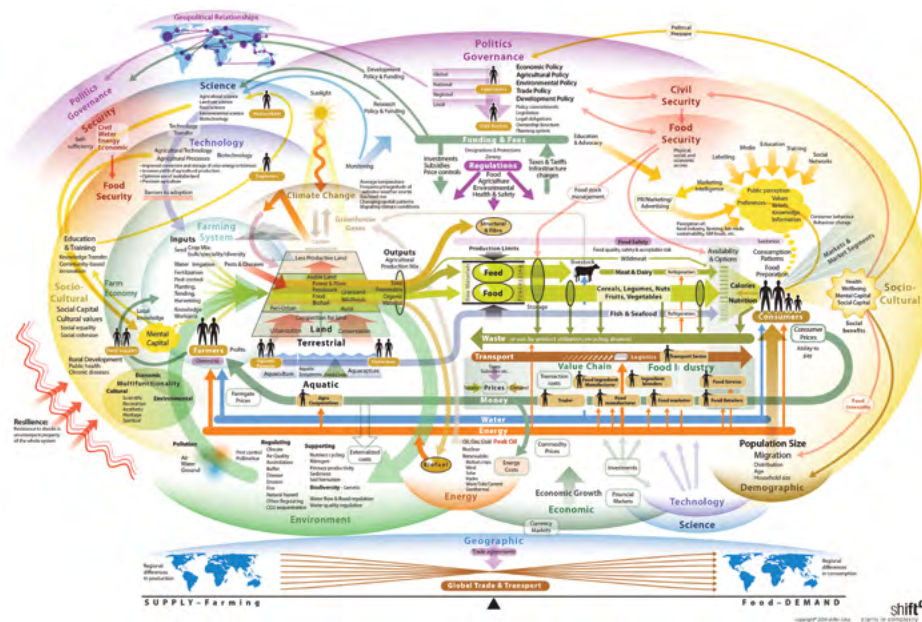


Image: Global Food System Map. Source: ShiftN, 2009

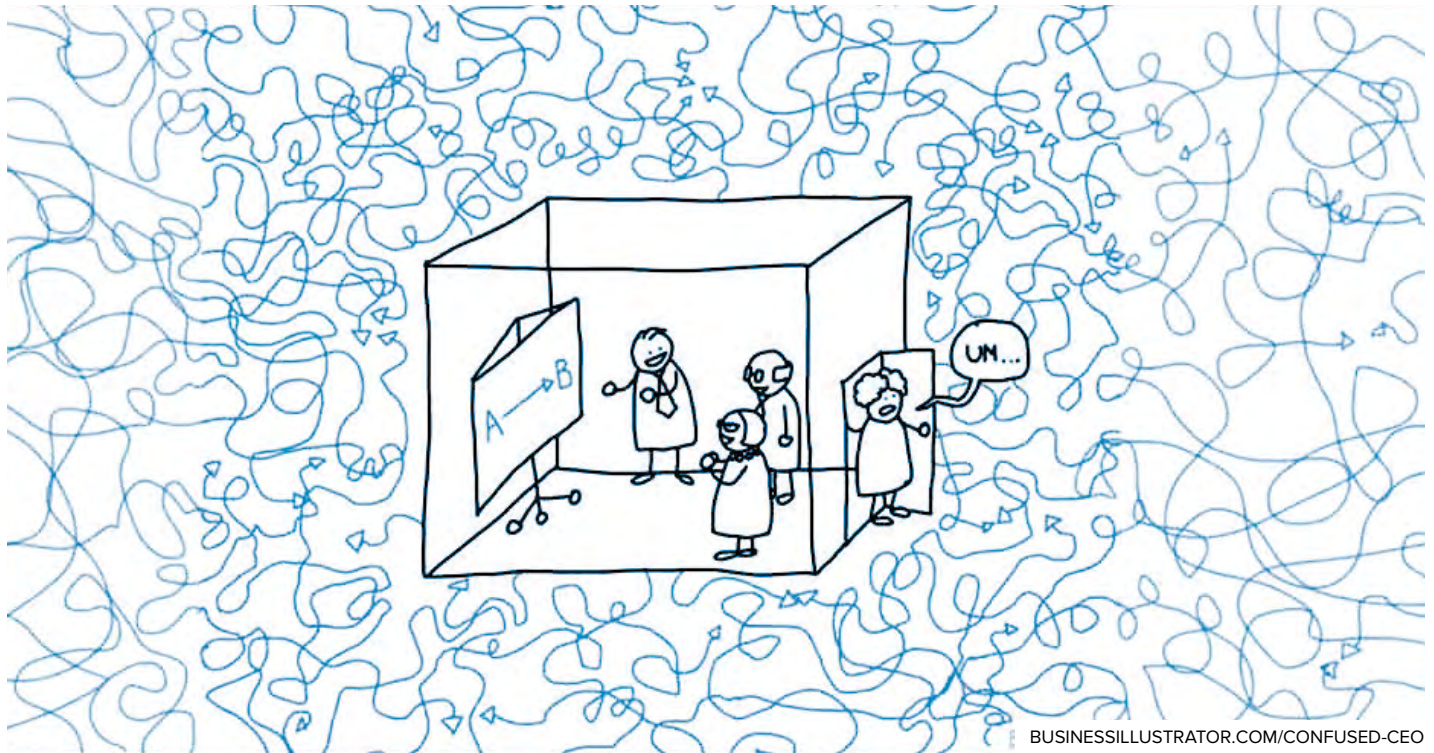
Within food and agriculture systems – whether at the global, regional, or local level – there are multiple different and competing perspectives on what the most critical problems are, why they exist and how to fix them. There are multiple dilemmas in how to balance the interests of different stakeholders, and how to prioritise trade-offs between different environmental, social, economic and political objectives and between short-term and long-term considerations.

The following list of food system challenges, drivers and potential intervention areas – prioritised according to perceived importance, based on a 2021 survey of several hundred sector experts – illustrates the breadth of social, environmental, economic and political considerations that need to be taken into account when attempting to catalyse transformation of food systems.⁹

Food system challenges	Food system drivers	Priority intervention areas
<ul style="list-style-type: none"> • Income below living standards • Availability of food • Affordability of food • Food safety • Nutritional quality of food • Sustainability and the environment • Employment creation and stability • Diversity of food • Political stability 	<ul style="list-style-type: none"> • Market dynamics • Policies and regulations • Environmental constraints • Demographic changes • Access to finance • Social and cultural factors • Power misuse / imbalances • Access to markets • Science and technology • Conflict and insecurity 	<ul style="list-style-type: none"> • Government policies and regulations • Market access and infrastructure • Research and technological innovation • Employment • Peace and stability • Environment • Social and cultural change • Investment climate



⁹ The table is drawn from an IFAD survey of several hundred agri-food professionals from across different sectors (public, private, civil society, academics and researchers) and different geographic regions: Dengerink, J., Dirks, F., Likoko, E. et al. [One size doesn't fit all: regional differences in priorities for food system transformation](#). Food Sec. 13, 1455–1466 (2021).



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The knowledge and competencies required for addressing these types of complex “cloud-like” systemic challenges are quite different from those required for complicated “clock-like” issues. Clock issues can be more appropriately addressed through traditional expert-led analysis, logframes (“logical frameworks”), a focus on the effective implementation of planned activities. Cloud issues on the other hand defy conventional analysis and planning based approaches.

A typical Theory of Change and accompanying logframe assumes that programme interventions and activities will have predictable effects. More elaborate “systems maps” with multiple positive and negative feedback loops can provide a better representation of the many inter-dependent dynamics of a complex system. However, regardless of how thorough the analysis, no complex system can be reduced to an engineering problem, where planned interventions will have predictable effects.

According to Rob Ricigliano, Systems and Complexity Coach at The Omidyar Group:

“Like most organizations, philanthropies traditionally focus on a clock approach: solve problems, fix what’s broken, and get it done as quickly as we can. But that’s not how systems work:

- **Systems don’t get solved.** At best, we hope to shift systems to a healthier state.
- **Systems don’t just need things fixed.** They need healing — healing of relationships, historic inequities, destructive patterns, and the environment.
- **Systems are infinite.** There is no finish line that can be crossed in days or even a few years. Maintaining healthy systems is an ongoing task.

Damage can be done when we try to fix what needs to be healed or think we can solve that which is unsolvable. Rather we must apply the appropriate approach to the type of problem being addressed.”¹⁰

As co-inquiry participant Cees Leeuwis states (in a co-authored paper)¹¹:

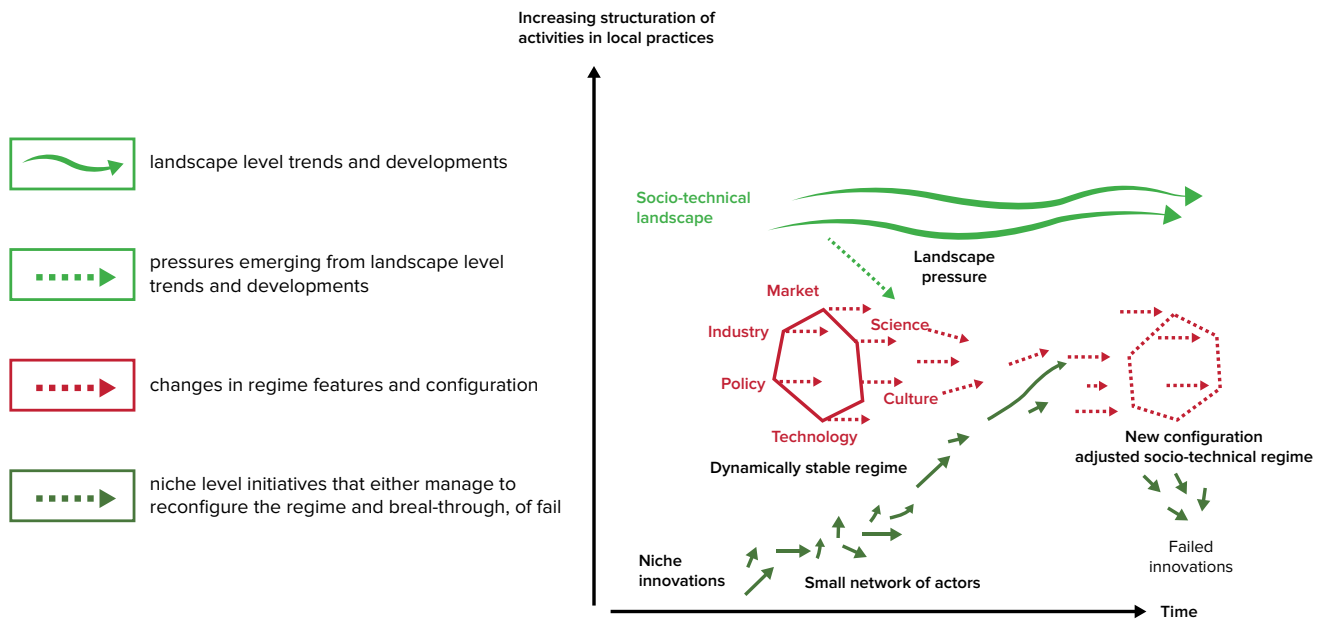
Supporting food system transformation requires more than obtaining science-based understanding and analysis of how components in the system interact. We argue that changing the emergent properties of food systems (what we call food system synthesis) is a socio-political challenge that is affected by competing views regarding system boundaries and purposes, and limited possibilities for central steering and control. We point to different traditions of ‘systems thinking’ that each emphasize particular types of interventions for achieving system change and argue that food systems are best looked at as complex multi-dimensional systems. This implies that we need to move beyond rational engineering approaches to system change and look for approaches that anticipate and accommodate inherent social tensions and struggles in processes of changing food system dynamics and outcomes.

In the same paper, Leeuwis and his co-authors highlight the multilevel perspective (“MLP”) of Frank Geels and Johan Schot which explains systems transformations in terms of interactions between three levels: regime, niche and landscape.

1. **The regime level:** established policies, practices and technologies that dominate a particular sector or system. Regime practices are characterized by a high degree of stability and institutionalization, and they are supported by a wide range of actors, including companies, governments, and consumers. Regime practices are often reinforced by lock-in effects, such as network effects, path dependencies, and economies of scale, which make it difficult for niche innovations to gain traction and displace existing practices.
2. **The niche level:** where new ideas, products, and technologies are developed and tested by small groups of innovators who are willing to take risks and explore new possibilities. Niche innovations are often considered radical or disruptive, and they may challenge existing practices and technologies. However, they are often limited in their impact, as they typically have a narrow user base and may face barriers to scaling up and diffusing more widely.
3. **The landscape level:** the level of broader cultural, societal and environmental factors that shape the context in which innovations and technologies are developed and diffused and are beyond the direct influence of actors at niche and regime levels. Landscape factors include cultural values, economic conditions, political institutions, and natural resource availability and constraints. These factors can either enable or constrain the development and diffusion of new technologies and practices. For example, supportive policies and cultural norms can facilitate the adoption of new technologies, while resource constraints and political opposition can hinder their diffusion. Changes in the landscape level can emerge gradually or happen through sudden shocks.

¹¹ Leeuwis, C., Boogaard, B.K. & Atta-Krah, K. [How food systems change \(or not\): governance implications for system transformation processes](#). Food Sec. 13, 761–780 (2021). Shared with co-inquiry participants as pre-reading for the co-inquiry. In addition, Cees Leeuwis presented a summary of these ideas to the co-inquiry.

The multi-level perspective on system innovation



Adapted from Schot & Geels, 2008

Expert-led, pre-planned approaches to change are often in line with the logic of the existing dominant regime, rather than attempts to disrupt or shift it.

“ Planned interventions generally approach change and development as a rational process, not as a process of struggle between regime and niches. As such, there tends to be a lack of attention for mechanisms that keep the existing regime in place and for interventions that may destabilize the existing regime and, as a consequence, regime issues are often left unaddressed.¹² ”

For example, supply chain approaches to strengthen sustainable agricultural production practices have typically had a strong emphasis on working with dominant market actors: large retailers, food manufacturers, commodity traders and agribusinesses – particularly focusing on improving industry environmental and social practices. While undoubtedly this has made a contribution to improving the environmental and social performance of industry players, the approach largely ignores other more politically sensitive ‘regime’ issues, such as market concentration and the use of market power, and the political influence of large corporates on the policy making process in ways that tend to reinforce the current ‘regime’ rather than challenge it.

As Cees Leeuwis and co-authors point out:

“

It is important to recognize that socio-technical transformation processes are shaped by different actors who interact, struggle, form coalitions, and negotiate space in order to create change. Transformation processes are thus about politics and power struggles between actors at regime and niche level. Dominant players often try to maintain the current situation, which leads to a certain ‘lock-in’ of the existing regime.

”

“

This puts the issue of politics, inequalities, and power struggles at the center of system transformation processes.¹³

”

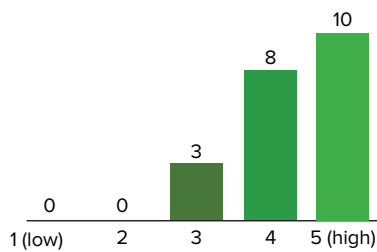
Due to the political sensitivity of addressing ‘regime’ issues, international development programmes often avoid directly addressing issues of power and politics and try to take a more ‘neutral’ position. In the process, they run the risk of being naïve and ineffective by not addressing more fundamental root cause issues.



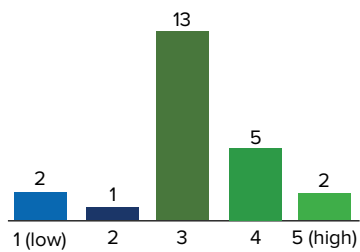
2.2. ‘Clockwork’ approaches still dominate in international development

While the language of systems change has been widely adopted by international development organisations, the distinction between complicated (clock) challenges and complex (cloud) challenges is not widely understood and there are significant organisational barriers for working systemically.

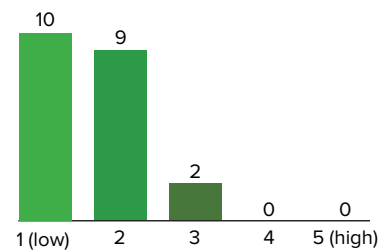
In the opening session we asked:



How important do you think the application of complexity and systems thinking approaches are for the success of programmes?




How do you assess your level of understanding of complexity and systems thinking?



How do you assess the levels to which complexity and systems thinking are applied in programmes?

This poll reveals that, in the opinion of the co-inquiry participants, there is a clear gap between, on the one hand, the importance of complexity and systems thinking for the success of systems transformation programmes in food and agriculture and, on the other hand, the current levels of the application of complexity and systems thinking approaches.


The shift from ‘clockwork’ to ‘cloudwork’ represents a fundamental mindset shift for many international development organisations. It also has far reaching implications for:



Project funding, design, implementation, monitoring and evaluation

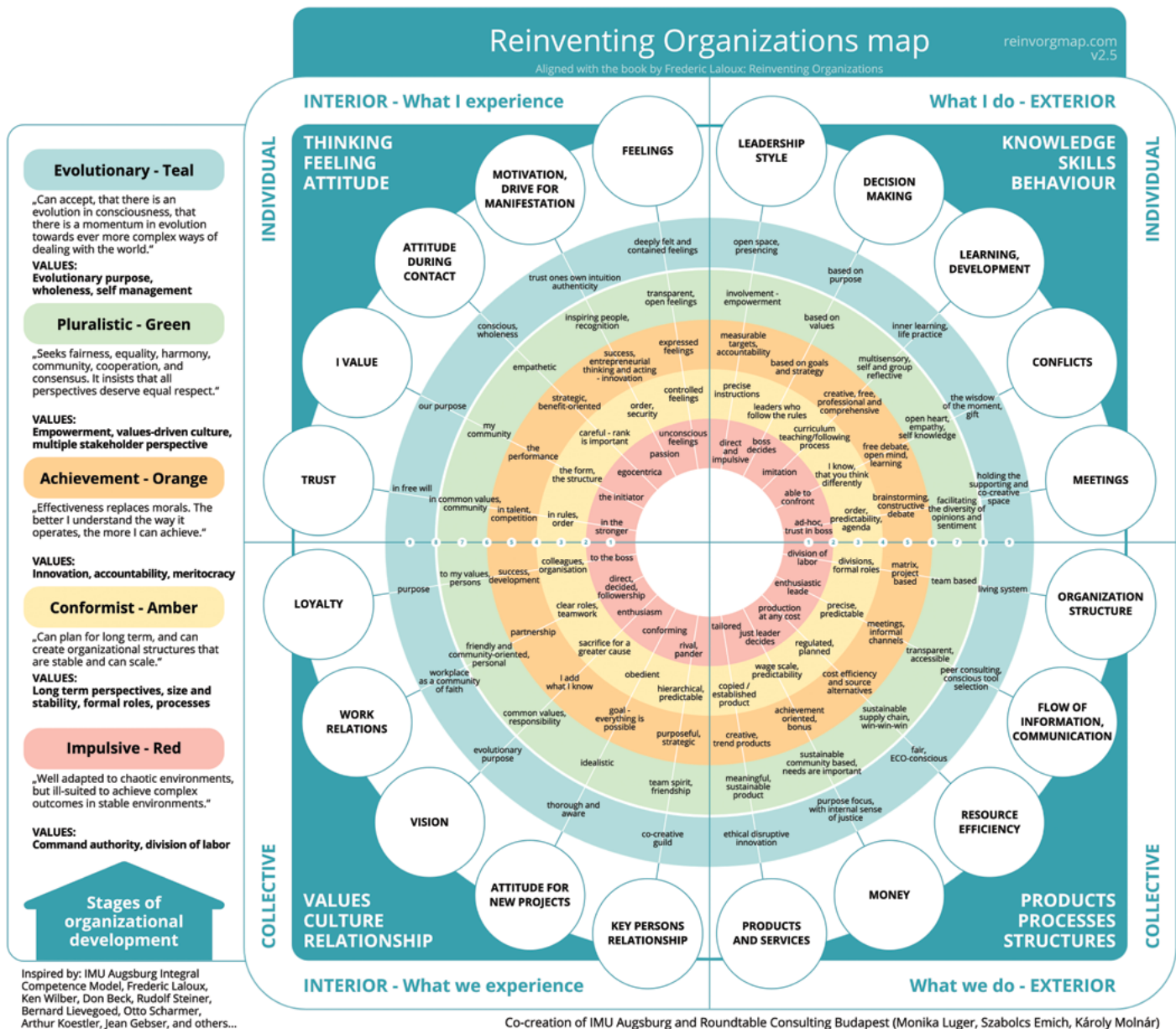


Organisational culture, policies, procedures and the type of skillsets and mindsets required by international development practitioners



Wider systemic incentives in how donors fund and think about impacts

According to a number of different theorists in the organisational development field, addressing complex systemic issues requires different approaches to leadership and organisational development.¹⁴ For example, the Reinventing Organizations map (below) draws from several of these theories (particularly Integral Theory) and offers a tool for assessing levels of organisational development. According to this approach, addressing complex systemic issues requires organisations to move towards “teal” levels of development that emphasise collaborative, adaptive and agile ways of working. However, many government, public sector, multilateral and larger non-profit sector organisations often have a strong weighting of “amber” values, such as hierarchical decision-making, strong adherence to following processes and procedures, a focus on the development and delivery of pre-defined plans, and so on.



Source: <https://reinvorgmap.com/>

14 Examples include: David Rooke & William R. Torbert, *Seven Transformations of Leadership*, Harvard Business Review, April 2005; Ronald A Heifetz, Marty Linsky, and Alexander Grashow, *The Practice of Adaptive Leadership: Tools and Tactics for Changing Your Organization and the World*, Harvard Business Press, 2009; Frederic Laloux, *Reinventing Organizations: A Guide to Creating Organizations Inspired by the Next Stage of Human Consciousness*, Nelson Parker, 2014.

Comments from co-inquiry participants around this issue included:

“Institutional structures are not designed to meet the challenges they are now addressing.”

“Most of our institutional practices get in the way. Starting from hiring everyone as ‘experts’. We’re expected to have answers, rather than questions.”

“Are our institutions fit for purpose? As many were set up a long time ago when issues/problems were different.... How can our institutions evolve at the pace needed to become fit for purpose?”

Requirements from donors and development organisations for transparency and accountability for how funds will be spent, and with what results, incentivise “rational engineering approaches” to systems change that are based on expert-led analysis and planning, centralisation of funding approvals and decision making, and upward accountability from recipients towards donors. International development agencies are accordingly organised around centralised planning and hierarchical decision making, placing a strong emphasis on robust project management (focused on the delivery of plans) and upward accountability.

“Organizational structure is often organized by discipline/ thematic area. Perhaps rooted also in how our formal training/academic institutions are traditionally structured, incentivizing thematic, siloed expertise.”

“Currently international organisations are heavy on technical, subject matter expertise, relatively light on expertise on facilitation, change, collaboration, innovation.”

In practice this means that projects are typically designed and implemented following these steps:



Expert analysis: the process starts off with expert-led analysis of what the problems are, the drivers and the proposed solutions.

Stakeholder consultation: the analysis and draft plans are developed and presented to stakeholders for input and suggestions. The way in which the problem and proposed solutions have been defined will significantly influence who is engaged.

Detailed planning: based on the expert analysis and stakeholder feedback, a detailed plan of activities is developed and budgets allocated accordingly.

Top-down approvals: plans are reviewed by donors, who will indicate what is in or out of scope and make the final approvals.

Implementation = delivery of plans: implementation has a strong project management orientation, focusing on the successful delivery of plans.

Adaptive management: is often superficial and only rarely leads to major course corrections. Significant adaptations have to be approved by donors.

Accountability: is primarily upwards towards donors, where the main focus is on whether the planned activities were delivered and intended outcomes achieved.

Monitoring, evaluation and learning: focuses on whether the plan was delivered and expected outcomes were achieved.

Although the above description is a simplification, most international development practitioners will recognise this process and understand the point being made, even if clearly in practice there is more nuance to what happens. The challenges with this traditional project approach include:

Simplistic understanding of the complex dynamics of food systems: expert-led analysis means that problems will be understood through a limited range of perspectives, depending on factors such as: the subject-matter expertise and functional roles of the individuals in the design team; the remit of the organisation they represent; the source of the funding and objectives of the donor; the framing of the problem being solved; and so on.

“Too often projects are simplistic in their analysis and over-optimistic in what can be achieved and when.”

“Lack of knowledge about the complexity of the issues, and a lack of willingness and time to shift mindsets.”

Projects will be funded to meet a particular set of objectives. Within agriculture and food systems these could be as diverse as: farmer livelihoods; local economic and community development; market access; access to finance; digitalisation; food security; food sovereignty; sustainable production; reducing deforestation; health and nutrition; and so on. The issue-lens applied will significantly impact how problems and solutions are defined. However, food systems challenges are multi-dimensional and need to be considered from multiple perspectives. All of the dimensions are inter-linked and involve multiple tensions, dilemmas and trade-offs that cannot be easily addressed by a typical logframe approach to programme design.

Emphasis on technocratic solutions: problem analysis and solution design tend to focus on more technocratic factors (e.g. governance mechanisms, policy reform, legal frameworks, standards, capacity building, financial instruments, public private partnerships, technology solutions) and are often too superficial in their consideration of local context, underestimating the impact of historical, cultural, social and political factors and power dynamics.

Food system analysis is often geared mainly towards understanding (parts of) the system and using this understanding to propose options in order to optimise the system through some kind of engineering logic. Such an optimisation approach reflects illusionary assumptions regarding the possibility of steering and controlling transformation, and largely ignores that transformation is – in actual practice – a contested, competitive and political process and not a matter of rational design.


Generating detailed knowledge and understanding about food system dynamics and the likely positive or negative consequences of alternative courses of intervention does not in itself bring about food system transformation.


“ Focus on technical solutions, ignores the political, behavioural and cultural aspects of change.¹⁵ ”

“Joint project governance decision-making is too slow or lacks the information to course correct and adapt to changing context and learning across partners.”

“Culture of ‘linear implementation’ and ‘experts’, is tied to failure to understand / embrace complexity.”

A similar bias towards technical analysis is also reflected in the academic literature:

- 

A study of 32 highly-cited international studies focused on food systems analysis and food systems transformation found that most studies focused their attention on technological solutions and very few gave any attention to “political economy and power struggles between organised and non-organised stakeholders” or to “the bargaining relationships between different stakeholders and the feedback loops that may hinder or support food system transformation.”¹⁶
- 

Another recent study found that most published analysis of the pathways to food system transformation “still focus essentially on what needs to be done – often from a technical perspective – not on how to do it. In sum, the contested dimension of food systems transformation is not yet fully recognized.”¹⁷



© Getty Images

15 Ibid, Leeuwis et al
 16 Brouwer, I. D., McDermott, J., & Ruben, R. (2020). *Food systems everywhere: Improving relevance in practice*. Global Food Security, 26, 100398
 17 Christophe Béné (2020), *Why the Great Food Transformation may not happen – A deep-dive into our food systems' political economy, controversies and politics of evidence*, World Development, Volume 154, 105881

Backward-looking: projects often focus on fixing yesterday's problems, and don't spend enough time anticipating what change is coming.

"We are solving yesterday's problems rather than anticipating the problems that are coming... Continual change will be the norm. And that is hard to accommodate within project planning, strategy and implementation."

"We are trying to solve today's problem but are instead solving yesterday's problems with yesterday's approach and tools."

Limited stakeholder buy-in and adoption: when the typical, expert-led project approach is used, it frequently proves challenging to secure meaningful stakeholder buy-in and support. Projects drive multiple meetings, workshops, working groups, conferences and so on; they generate ideas, reports, recommendations and policy proposals; and sometimes they also lead to the creation of national strategies and pathways, the announcement of commitments and the adoption of policies. But the adoption of recommendations and the implementation and follow through on commitments, pathways and policies is often partial or non-existent.

“

Although system analysis can generate detailed knowledge and understanding about food system dynamics and the likely positive or negative consequences and trade-offs of alternative courses of intervention, it will not result in mutually supported decisions. In the end, humans will make the decisions based on practical, political, economic, normative, and ethical considerations.¹⁸

”





Insufficient attention to trust and relationship building: when problems and solutions are primarily considered through a technocratic lens, the human side of change is often neglected or ignored. In reality most successful change efforts are driven by coalitions of passionate people working together to create the change they want to see. When this is not a key focus of projects, very little or no attention is paid to the important task of strengthening trust and relationships between stakeholders.

“Embed time for trust building and definition of ‘comparative advantages’ from the design phase.”

Limited attention to shifting mindsets: research on confirmation bias shows that the human brain is typically resistant to information that does not already fit within pre-existing ways of seeing the world ¹⁹ and that emotions are just as essential to decision-making as logical reasoning ²⁰. An essential aspect of the change process involves facilitating stakeholders in embracing diverse viewpoints, considering alternative possibilities, and helping them effectively process the accompanying emotions (such as feelings of overwhelm, anger, or grief) to foster constructive reactions. Some of this can happen through providing access to data and analysis, but most of it needs to happen through dialogue, different forms of experiential learning and skilful facilitation. These areas are often under-invested in within typical projects.

“Mindsets is a key impediment to change, especially among leadership.”

Difficulty in adapting to changing contexts: project plans can quickly become out of date and fail to keep up with evolving contexts. Additionally, they can be significantly derailed by events (e.g. COVID pandemic, food and fertiliser price shock from the Ukraine war, domestic political changes and changing political priorities, etc.) and struggle to pivot to more contextually relevant issues and strategies once this happens.

“Short funding cycles are optimized for accountability, control, due diligence etc. rather than speed, transformation, emergence, learning and flexibility.”

Learning is superficial: current project implementation and monitoring, evaluation and learning (MEL) approaches encourage implementing organisations to focus on demonstrating that they are delivering the activities set out in the project plan – and this is what accountability mechanisms tend to focus on. There is a fear that ‘failure’ will be penalised and therefore the incentives are to demonstrate success. This fear of admitting to ‘failure’ gets in the way of genuine learning, which should be much more focused on what is actually happening in the system and whether anything is changing or making a difference.

“Learning is not prioritized, both in terms of time and resources.”

Limited long-term project sustainability: once projects end, there may be insufficient local capacity, funding or support to continue the work. If proper local buy-in and ownership was never achieved – whether by government ministries, local civil society organisations, the private sector or farmers themselves – then when project funding ends, so does the work.

“Short-term project timelines limit room to explore new collaborations and the processes and procedures required to support them.”

“The funding environment is not fully enabling us to address complex system change. How can we achieve transformation in 4-5 year project timespans?”



3

RECOMMENDATIONS



Applying ‘cloudwork’ approaches to transforming food systems involves:



This shift from ‘clockwork’ to ‘cloudwork’ represents a fundamental mindset shift for many international development organisations and has far reaching implications for:

1. Funding, design, implementation, monitoring and evaluation of projects, programmes and portfolios;
2. Organisational culture, policies, procedures and the type of skillsets and mindsets required by international development practitioners;
3. Wider systemic incentives in how donors fund and think about impacts.

We unpack these three dimensions below.

3.1. Adopt collaborative and adaptive approaches to programme design and implementation

The implications for project, programme and portfolio design and implementation include the following:

Work with the local context and realities

Build stakeholder buy-in and mobilise collective action: the ultimate success of any systemic change initiative depends on whether a critical mass of key stakeholders is prepared to take action to drive that change, whether that be at the ministerial level, within government departments, companies, farmer organisations, down to specific communities and farmers.

“The actors within a system are the ones who have the greatest agency for change – so change needs to be an inside job and cannot be imposed from outside.”

Food systems are complex, diverse and self-organizing wholes in which relatively autonomous stakeholders have competing interests, values and perspectives, and where transformation depends to a considerable extent on the willingness and capacity of interdependent actors to accommodate and navigate differences and work towards a mutually acceptable future.

Because stakeholders are interdependent, meaningful change is likely to happen only if key players succeed in achieving a sufficient degree of agreement, accommodation and/or coordination to work towards a particular transformation, and in translating this towards new policies and institutional arrangements.²¹



For donors and development organisations the following is key:

Find local partners and collaborators who are suitable for leading the work.

Provide convening and facilitation support for stakeholders to shape the approach and direction for the work.

Ensure that stakeholder engagement is as inclusive as possible.

Ensure that less well-resourced stakeholders are supported in suitable ways to make meaningful participation possible.

Participatory approaches are not about trying to sell a preconceived plan to a group of stakeholders and engage them in a plan that was created by others – which characterises a lot of stakeholder engagement efforts currently.

“Take the onus of ‘solving’ out of the hands of institutions removed from the places where challenges emerge.”

Instead, projects should focus on convening and connecting stakeholders and supporting more effective collaborative action so that the stakeholders themselves can prioritise the problems they want to solve and design and implement their own solutions.

This can be done in ways that do not require all stakeholders to align around agreed problem definitions and solutions, as these will often be contested, and stakeholders will differ in what they wish to prioritise. Multi-stakeholder processes can help to create greater shared understanding between different stakeholder groups and potentially bridge some divides. Participatory processes can also support different groups of stakeholders to address the problems they care about in ways that make sense to them – accepting that full alignment between all stakeholders is not attainable and on-going differences and tensions are likely to endure. Inevitably stakeholders will continue to have different perspectives and priorities which will sometimes be at odds with each other.

Transformation requires the emergence of a strong coalition for change around promising initiatives, characterised by common goals, a shared discourse and joint strategy. More often than not, this involves the bringing together of parties and stakeholders who have not collaborated before, and who may have widely diverging interests and worldviews. Aligning interdependent stakeholders around an overlapping vision for the future is not an easy process. It requires that stakeholders learn about each other’s perspectives and about interdependencies in the system and develop conducive relations and trust. Facilitated interaction, articulation of knowledge demands and joint research and fact finding to address uncertainties and gaps in understanding are known to be important strategies for developing common ground. In addition, food system transformation (or synthesis) requires that interdependent stakeholders settle emerging tensions and diverging interests through integrative forms of negotiation. Such processes of negotiation, knowledge co-creation, and dialoguing between different stakeholders, may be facilitated by bringing stakeholders together in a multi-stakeholder platform – often referred to as innovation platforms.²²

Multi-stakeholder platforms can provide a space and a process for developing and testing a range of interventions that address levers of change at niche, regime and landscape levels. If a sufficiently broad range of key stakeholders is involved in the process, they will bring multiple different perspectives. Processes such as participatory systems mapping, participatory scenario planning and collective sensemaking can harvest the intelligence of the collective, which means that participants in the change process can better navigate and make sense of the multiple inter-related dimensions of transforming food systems, better than expert analysis could ever do on its own. Participatory processes also allow for different stakeholders to hold different understandings of what the problems are and what the solutions might be. Alignment around a single project plan is not required.

RESOURCES ON FACILITATING COLLABORATION

A Guide to Effective Collaborative Action – UNDP guide to facilitating multi-stakeholder collaboration in food and agricultural commodity systems.

Rethinking Our Food Systems: A Guide for Multi-Stakeholder Collaboration – UNEP, FAO, UNDP jointly created guide to consolidate learnings and tools gathered from within and beyond the three agencies to contribute to the growing canon of knowledge on how to improve multi-stakeholder collaboration for sustainable food systems transformation.

Collaborating, Learning, Adapting (CLA) – USAID course and toolkit to help improve development effectiveness.

Integrated Agri-food System Initiative (IASI) was developed by the International Maize and Wheat Improvement Center, a CGIAR research center. IASI applies a holistic, multi-sector methodology to cultivate stakeholder agreement on coordinated public and private sector actions to enhance national agri-food systems.

Adapt to context: programmes must adapt to the complexities of local history, culture and politics, including the evolving socio-political context. If programmes are owned and driven by local stakeholders this is much more likely to happen than if they are driven from outside.

Acknowledge the political nature of the issues: due to the political sensitivities of international development funding, programmes are often treated as if they are politically neutral, and therefore the political nature of the challenges is ignored in favour of technocratic approaches.

By acknowledging that change in food and agriculture systems is fundamentally a political process, international development projects can become more skilful in navigating the politics and, as a result, can be more effective. The perspective of donors and development organisations should shift towards how best to help stakeholders with competing interests move forward, negotiating a wide range of inter-connected social, environmental and economic tensions, dilemmas and trade-offs.

To do this effectively, excellent convening and facilitation capabilities are essential. This not only means a technical knowledge of collaborative innovation approaches but also includes the political and relationships skills needed to work with the realities of local politics, power dynamics, conflict, and so on – and the ability to build relationships and partnerships, along with the ability to mobilise alliances and coalitions.

“We as development practitioners need to see the political dimension (power & interests) in existing contexts, and as a starter accept that many key stakeholders don’t want to change the system.”

“Politics, power, even markets are not generally on the table except as parameters rather than part of a development process.”

RESOURCES ON WORKING WITH POWER AND POLITICS

Power Dynamics in 21st-Century Food Systems – paper that explores ‘policy inertia’ in food systems due to opposition from the commercial food sector, the reluctance of governments to regulate and tax, and the lack of demand for policy action from civil society. The paper recommends that civil society increases its role in demanding policy action and holding the main actors to account for their actions and inactions.

Conceptualizing Drivers of Policy Change in Agriculture, Nutrition, and Food Security: The Kaleidoscope Model identifies key leverage points and opportunities within national policymaking processes to generate policy change. The article analyzes drivers of change in the food security arena, with a specific emphasis on agriculture and nutrition policies, focusing on five key elements of the policy cycle—agenda setting, design, adoption, implementation, and evaluation and reform. Published by IFPRI.

The Kaleidoscope Model of policy change: Applications to food security policy in Zambia – research paper applying the Kaleidoscope Model to eight policy reform episodes related to agricultural input subsidies and vitamin in Zambia.

The Power to Shift a System: How we can think and act on power in systems to bring about a system shift – report by Jennie Winhall and Charles Leadbeater on the role that power plays in determining what happens in systems, and how system innovators can mobilise power to create new systems.

Working with Power in Multi-Stakeholder Processes – report from the power stream of the UNDP co-inquiry, including insights on how to design multistakeholder processes considering power considerations; managing group dynamics; and what are key mechanisms for shifting power dynamics to transform food systems.

Build trust and relationships: trust and relationships are the foundation of any effective collaboration. Many projects pay insufficient attention to how trust and relationships can be strengthened. Effective collaboration methodologies demonstrate that putting an emphasis on building trust and relationships can have many benefits for long-term project effectiveness and impact.

Acknowledge historic harms and build healthier relationships: a key part of shifting systems is the healing of relationships, historic inequities and destructive patterns. This can only be done by involving the people who are part of the system that needs healing. In multi-stakeholder processes it is important to create the conditions in which stakeholders feel able to have honest conversations about their experience and perspective. This can help build greater empathy and develop shared understanding, increasing the chances of aligning around a shared vision for the future and strengthening the relationships that will be necessary to collaborate effectively towards that shared vision. However, given the realities of power imbalances, and the very real tensions and conflicts that exist, this must be advanced with caution and sensitivity.

RESOURCES ON ‘STRETCH COLLABORATION’

Collaborating with the Enemy: How to Work with People You Don’t Agree with or Like or Trust – book by Adam Kahane of Reos Partners that advocates for embracing both conflict and connection within collaboration initiatives – and that rather than insisting on clear agreements about the problem, the solution, and the plan, it is possible instead for different perspectives and possibilities to co-exist.

Look to the future as well as the past: while understanding the past is critical for being able to work effectively with diverse groups of stakeholders, it is also important to have a perspective on possible futures in order to break out of a narrow ‘fixing’ mentality that only focuses on solving today’s problems but does not look at emerging issues and opportunities. Participatory scenario processes are particularly valuable for multi-stakeholder collaboration initiatives, as they help to build stakeholder understanding of different positions and perspectives. Scenarios that are co-created by stakeholders are much more likely to influence the subsequent thinking, behaviour and decision making of the stakeholders.

RESOURCES ON SCENARIOS AND FORESIGHT

Foresight4Food Initiative has developed a framework and process to guide foresight and scenario analysis for food systems change. It uses futures thinking and scenario analysis to help diverse food system actors (e.g., rural farmers, food manufacturers, small agri-food businesses, governments) imagine, together, how the future might unfold.

Stakeholder-designed scenarios for global food security assessments – a paper published in Global Food Security describing a participatory process to develop scenarios for global food security up to the year 2050.

Foresight Playbook – explores entry points for foresight approaches, methodologies, and tools into UNDP’s work to support the aim of building anticipatory capacities to better respond to risk, uncertainty, and opportunities in the future.

Inclusive Imaginaries: Catalysing Forward-looking Policy Making through Civic Imagination – an approach that utilises collective reflection and imagination to engage with citizens, towards building more just, equitable and inclusive futures. It seeks to infuse imagination as a key process to support gathering of community perspectives rooted in lived experience and local culture, towards developing more contextual visions for policy and programme development. Published by UNDP.

Transformative Scenarios Process: How stories of the future help to transform conflict in the present – report by Reos Partners on their transformative scenario planning (TSP) process that sets out to use participatory scenarios to shape the future, not just anticipate it. Also see this TSP **case study** from the Southern Africa Food Lab.

Three Horizons Framework from the International Futures Forum works back from a vision of a desirable future state to identify what can be done in the present to both address current challenges and nurture the seeds of the future.

Support more inclusive, collaborative processes

Inclusive governance and decision making: endeavour to make governance structures and decision-making processes as inclusive as possible, in order to ensure that different perspectives are included and so that decisions do not simply reinforce the existing system.

Food system synthesis emphasizes this governance aspect of food system transformation, in which explicit attention is paid to decision making processes and their legitimation in transformation processes, thus: how decisions are made, who decides, who is in- or excluded, what power inequalities are at play, and what – or whose – knowledge is in- and excluded.²³

If decisions are based on what the stakeholders themselves prioritise and are prepared to act on, then effective implementation and on-going stakeholder support is far more likely. In practice, sharing governance and decision-making will often face multiple hurdles. Many governments are not ready to devolve or share formal decision-making powers. However, even when this is the case, much can still be done to use more inclusive, collaborative approaches to come up with formal recommendations that reflect a more diverse range of stakeholder perspectives. If decision makers are involved in the process of reaching these recommendations, it will also influence their own thinking and increase the likelihood that decision makers and other stakeholders can be aligned. Donors and development agencies can certainly advocate for more inclusive governance processes within projects and programmes, arguing that it will lead to better decisions and more effective implementation.

RESOURCES ON INCLUSIVE GOVERNANCE AND DECISION-MAKING

10 Principles to guide the transition to Sustainable Food Systems – IPES-Food has identified 10 key principles to guide the urgently-needed transition to sustainable food systems – including the democratisation of decision making.

Resource collaboration properly: collaboration can be resource-intensive and requires meaningful investment into:



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Backbone organisation(s) who support the convening and facilitation of collaboration;

Facilitation expertise, particularly around collaborative innovation processes;

Funding collaborative activities, such as workshops, retreats, learning journeys and innovation labs;

Resourcing and supporting participation so that stakeholders have the necessary resources, capacities, skills and knowledge to engage in the process, which could involve training programs, technical assistance, as well as funding of costs;

Ensuring institutional engagement beyond individual representatives from organisations, but building deeper institutional buy-in (e.g. of government departments, industry associations, companies, civil society organisations, farmer associations, etc).

Find the most promising leverage points

Identify leverage points: identify promising leverage points is an important part of any systemic change process.

“Even if it is clear that – in order to create sufficient variation – a certain amount of redundancy is needed in terms of initiatives and interventions, limitations in funding and capacity usually necessitate selection of entry points that are supported. It is therefore important to think in terms of leverage points; that is, of entry points in the system (e.g. in the form of constraining or enabling policies, rules, meanings, technologies, communities, stakeholders) where change is most likely to catalyse subsequent self-organizing changes elsewhere in the system. Such catalytic capacity may be rooted in various mechanisms (e.g. power relations, interdependencies, causal links, stakeholder rationales, attractiveness, latent needs, connectedness, etc.) and there is no fixed recipe for finding them, even if there exist analytical strategies. In any case, identifying plausible leverage points then is likely to require a thorough interdisciplinary understanding of the way in which phenomena at the level of niche, regime and landscape interact with each other, as well as transdisciplinary deliberation with societal agents.”²⁴



In a traditional project design process, leverage points are identified in advance and the project focuses on acting on these pre-defined leverage points. When taking a complex, systems thinking approach, there is a far greater emphasis on (a) supporting stakeholders to identify for themselves the most promising leverage points and (b) on-going adaptation and course-correction to reflect new learning and changing contexts.

There are typically specific ‘windows of opportunity’ that projects need to be able to adapt and respond to. “These might arise with a political transition, a fiscal crisis, a shift in trade conditions for key commodities, or a new donor initiative. In essence, these are times when influential actors are re-evaluating their goals and the means to reach them and are, therefore, more willing to entertain new approaches and information sources.”²⁵ Projects and programmes that take a participatory, collaborative and adaptive approach are better placed to spot and exploit these windows of opportunity.

RESOURCES ON LEVERAGE POINTS

Future Food Systems: For people, our planet and prosperity – report from the Global Panel on Agriculture and Food Systems for Nutrition which offers policy solutions to improve the quality of diets using a food systems approach through promoting availability, accessibility, affordability, desirability, and sustainable, healthy diets for all.

Food Systems and Diets: a handbook of essential policies – handbook from the Global Panel on Agriculture and Food Systems for Nutrition providing a summary of the evidence and concrete policy recommendations for countries seeking to provide healthy diets to secure better health and nutrition, and social and economic prosperity for all.

Creating a Sustainable Food Future: A Menu of Solutions to Feed Nearly 10 Billion People by 2050 – WRI propose 22 solutions for ensuring that we can feed 10 billion people by 2050 without increasing emissions, fuelling deforestation or exacerbating poverty.

The Great Food Puzzle – a series of reports by WWF on how to transform global food systems, including one on **leverage points** and a **framework for innovation**.

Why, What, and How: A Framework for Transforming Food Systems – an article by Jim Woodhill of Foresight4Food where he outlines a framework for thinking about food systems transformation. It is based on why change is needed, what needs to change, and how change can be brought about.

How to transform food systems – report by the Global Alliance for the Future of Food, which proposes seven ‘calls to action’ (with examples) that are designed to further catalyse systems transformation.

Take a whole system perspective and build on what exists: funders and designers need to take a “whole system” perspective: seeing their own projects, programmes and portfolios within the context of a wider ecosystem of actors and initiatives; and identifying gaps where they can bring a useful contribution in a collaborative, rather than competitive manner.

“Donors need to increase incentives for inter-organization work. This means sufficient funding to facilitate collaborative and systemic approach processes (e.g. collaborative system mapping to identify leverage points and co-design interventions together).”

“Creating space for good systems work tends to be about a donor providing institutional ‘cover’ to let an implementer minimally check the institutional boxes required while doing cool systems stuff as their main focus. But this balancing act is difficult.”

Systems change in food and agriculture – as with other sectors – is a complex and unpredictable process, which requires action at multiple levels, with uncertain results. Individual projects and individual organisations are highly unlikely to be successful at catalysing transformational change. Instead it is collective action by multiple stakeholders from within the system that has the greatest potential to create change. For the international development sector to support this process, a joined-up approach is needed, where donors and development organisations do not act in isolation from each other but connect and collaborate across organisational boundaries.

RESOURCES FOR TAKING A FOOD SYSTEMS APPROACH

The Food Systems Decision-Support Toolbox – tools and methods that can be used for food system analysis, based on systems thinking with the aim to formulate actionable recommendations that can bring about systemic change. Published by Royal Tropical Institute (KIT), Netherlands Food Partnership (NFP) and Wageningen University & Research.

Taking a Food Systems Guide to Policymaking: A Resource for Policymakers – a package of resources consisting of an evidence review and four technical briefs. These resources define a food systems approach, explore potential entry points in different sectors, present ways to identify and engage relevant stakeholders, and discuss the cost and financing considerations. Published by the Centre for Food Policy at City, University of London and Results for Development (R4D).

The Food Systems Approach in Practice: Our guide for sustainable transformation – an iterative, step-based sustainable food system approach to help practitioners and decision-makers develop more coherent, effective, and context-appropriate interventions. Published by the European Centre for Development Policy Management.

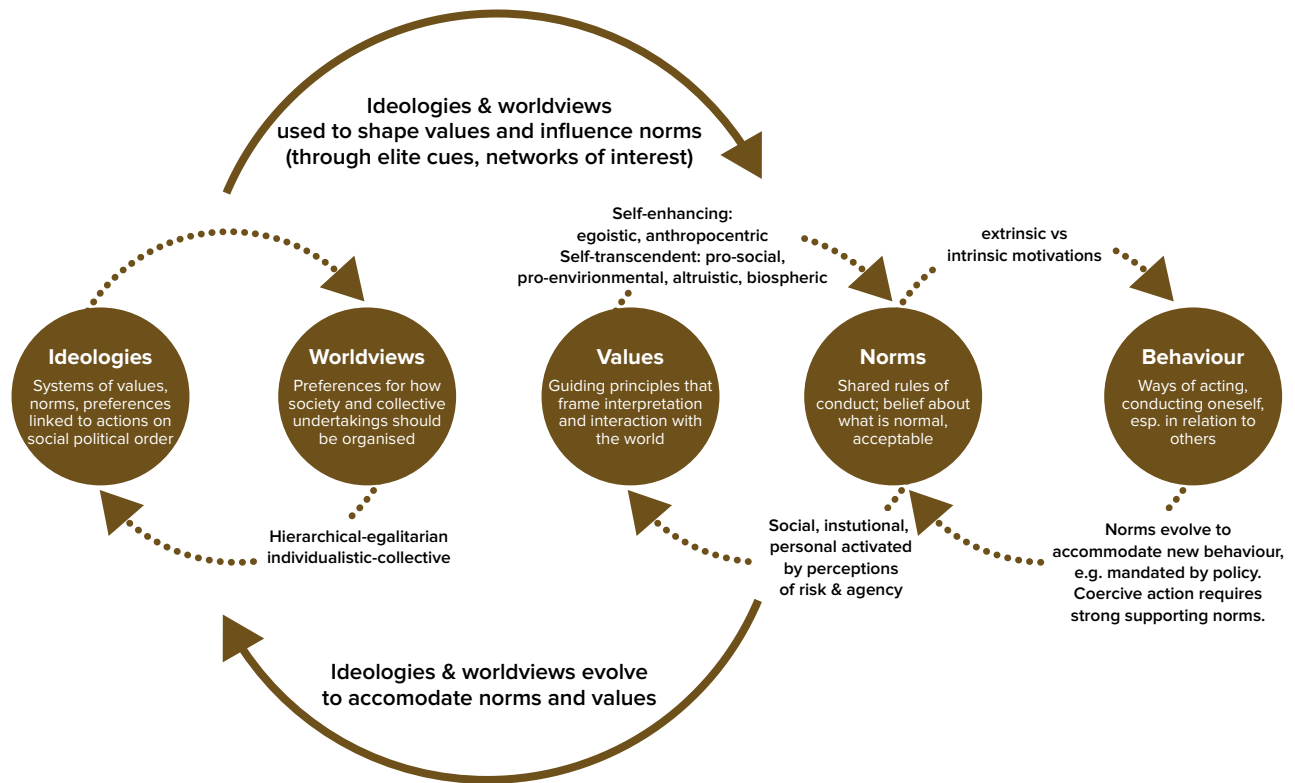
Collaborative Framework for Food Systems Transformation: A multi-stakeholder pathway for sustainable food systems – an approach for collaborative policymaking and governance improvement for sustainable food systems, includes a broad range of actions for better assessment, design, implementation, and monitoring of policies and programmes by policymakers and stakeholders, leading to better decisions and outcomes regarding livelihoods, health, nutrition, and the environment. Published by UN Environment as part of the One Planet Network Sustainable Food System Programme.

Attend to mindsets and narratives: as identified in Donella Meadows’ seminal paper [Leverage Points: Places to Intervene in a System](#), our economic, social and political structures are reflections of deeper beliefs, values and worldviews. Therefore, influencing mindsets and narratives can be one of the most powerful leverage points for change. The [Human Development Report](#) (2020) emphasizes that: “Nothing short of a wholesale shift in mindsets, translated into reality by policy, is needed to navigate the brave new world of the Anthropocene, to ensure that all people flourish while easing planetary pressures.”

“We need to get beyond surface-level focus on products and services to look at deeper issues, such as prioritization of resources, standards (risk, due diligences, contracting etc.) and core values.”

While external solutions have played a role in transforming food systems, the underlying mental models and values are often neglected. The cultivation of inner capacities (e.g. mindsets, beliefs, values, worldviews, and associated cognitive, emotional and relational qualities and skills) – through practices such as mindfulness, compassion trainings, nature connection and non-violent communication – can foster increased connection to self, others and nature that can activate food systems transformation and regeneration. Convenors and facilitators of collaboration processes should pay attention to the role of worldviews, mindsets, narratives and values in stakeholder dialogue and identify how these can shift and change through stakeholder interaction.

The relationships between norms, values, worldviews, ideologies and behaviour



Source: [Shifting norms and values for transitions to net zero](#), EIT Climate-KIC, Working Paper, November 2020

RESOURCES FOR SHIFTING MINDSETS

The **Conscious Food Systems Alliance** (CoFSA), convened by UNDP, is a movement of food, agriculture, and consciousness practitioners that aims to support the cultivation of the inner capacities that activate systemic change and regeneration. Notable publications include: **Cultivating Inner Capacities for Regenerative Food Systems: Rationale for Action** and the **Theoretical foundations report: Research and evidence for the potential of consciousness approaches and practices to unlock sustainability and systems transformation**.

Shifting Mindsets to Shift Development Systems – UNDP article on why we need to move inward so that we can move forward on the 2030 Agenda.

Shifting norms and values for transitions to net zero – report from EIT Climate-KIC highlights the importance of influencing intrinsic as well as extrinsic motivators, and influencing beliefs and values in order to effect behaviour change.

Support champions of change: change is typically driven by passionate, motivated individuals in positions of influence from within the system.²⁶ Programmes should do more to identify and support these champions of change and connect them with each other, across organisational boundaries.

Less is more: over-ambitious project goals and too many pre-planned activities have the effect of decreasing likely effectiveness and impact, by diluting efforts across multiple activities that are undertaken in too superficial a manner. Projects should set realistic objectives within the scope of the available budget and resources.

Put learning and adaptation at the heart of programmes

Test, learn, adapt: navigating complexity and uncertainty requires an approach of “learning through doing”, using on-going iterative cycles of design, test, learn and adapt which place robust participatory learning processes at the heart of the change process.

“Much more focus on learning being at the heart of what we do. Adaptive management is typically done in a relatively superficial manner. We need a much more rigorous, on-going process of learning and adaption. Assumptions need to be constantly tested and revised at all levels.”

Learning needs to be central to any initiative that aims to shift food systems, taking into account not just what happens within the project boundaries, but what is going on in the wider system. Learning is not an activity that belongs to a particular function – it should be central for everyone working on an initiative, particularly the stakeholders themselves, through collective sense-making and learning processes.

“Strategically place ‘pause and reflect’ moments to make sure the ‘so what’ and ‘now what’ work happens.”



Participatory processes – when supported by well-facilitated collective sense-making processes – can support stakeholders to make sense of the complexity of the situation and the change process. Increasing stakeholders’ collective awareness of what is happening in a system is, in itself, a critical lever of change and supports better informed decision making, individually and collectively.

“Value time for learning, multi-stakeholder, multi-perspective processes just as much as anything else (or more so).”

RESOURCES ON LEARNING AND ADAPTATION

Causality Assessment for Landscape Interventions (CALI) – a methodology for supporting adaptive management of landscape projects through continuous, participatory reflection on the effectiveness of project interventions. Published by UNDP.

Principles for Food Systems Transformation | A Framework for Action highlights seven principles that guide the Global Alliance for the Future of Food: renewability, resilience, health, equity, diversity, inclusion, and interconnectedness. Provides a guide for using the principles to inform decisions about how to act, reflect, and learn as we grapple with the future of food.

Sensemaking Protocol Process – UNDP developed Sensemaking Preparation Guide and Facilitator Guide to share knowledge with teams and organisations that are interested in using the Sensemaking process.

Early Signals of Change Self-Assessment Tool – exercise to support participants in multi-stakeholder initiatives to identify and track early signals of change related to their individual and collective journey of transformation. Published by UNDP.

Human Learning Systems – guide from the Center for Public Impact on the “human learning systems” approach to public management which focuses on learning and relationships.

Single, Double and Triple Loop Learning Tool – short overview of a learning tool that can support deeper learning. Published by the Tamarack Institute.

Learn from failure: some of the richest and most important learning opportunities lie in paying attention to obstacles and ‘failures’, which is where flawed assumptions can be revealed and where there is the greatest chance that effective change strategies might be discovered. This greatly enhances the likelihood that a process can make a useful contribution to change, rather than a misguided or ineffectual one.

“There is no trust between donor & partners, so partners play it ‘safe’ or refrain from telling the donor about challenges or programmatic alterations.”

Donors and development organisations need to prioritise and incentivise all aspects of learning and make sure that ‘learning from failure’ is encouraged, rather than penalised.

RESOURCES ON LEARNING FROM FAILURE

Failure, the “F” Word in International Development – video of Wayan Vota on the importance of recognising and learning from failure in international development.

Admitting Failure – website started by Engineers without Borders Canada to share stories and resources for admitting failure.

Put learning at the heart of monitoring and evaluation, including: changing the way success is measured and evaluated by complementing quantitative metrics with a more holistic, systemic perspective that considers the wider context and interconnections of different issues and qualitative indicators of change; and embedding MLE as a core, on-going practice for all project and programme staff, integrated into regular learning reviews rather than something that is the responsibility of a separate team member or unit.

“Reinvent the use of M&E to improve learning within our institutions to stop repeating ‘mistakes.’”

“Let go of micro-managing and activity and output based KPIs, focus on ultimate direction of travel.”

“Explore principles of trust-based philanthropy for investment decisions.”

“We need to change the notion of the ‘client’ being served – currently the most power is held by the donor and accountability flows upward to the donor, which means that development organisations listen more to the donor than to the stakeholders on the ground – this is antithetical to systems change approaches.”



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Donors should focus on the intention and objectives of the systems change projects they fund, while placing less emphasis on the exact details of project activities and deliverables, which should rather be developed and iterated through an on-going ‘learning through doing’ approach. The most critical question for donors to consider is whether plans have been created through participatory processes, and if is there a robust on-going multi-stakeholder process for learning from what happens and making necessary course corrections? Stakeholders are in the best position to define more detailed success metrics and self-evaluate progress towards them – a robust process of learning and reflection is central to this process.

RESOURCES ON SYSTEMS MONITORING AND EVALUATION

UNDP is collaborating with the Bill & Melinda Gates Foundation to develop approaches to monitoring, learning and evaluation for systems change. See [How do we use M&E as a vehicle for learning?](#) and [How do we know the systems change we work for is happening?](#)

The [TEEB AgriFood](#) project applies whole systems thinking to the economics of agriculture. The project produced the [Scientific and Economic Foundations](#) report and a shorter synthesis report [Measuring what matters in agriculture and food systems: a synthesis of the results and recommendations of TEEB for Agriculture and Food’s Scientific and Economic Foundations](#), including the [TEEBAgriFood Evaluation Framework](#). The project aims to bring a systems thinking approaches to evaluating eco-agri food systems.

[Supporting Adaptive Management: Monitoring and evaluation tools and approaches](#) – working paper that discusses a set of monitoring and evaluation (M&E) tools and approaches for supporting adaptive management in development and humanitarian programmes. Published by ODI.

Managing for Sustainable Development Impact – [book](#) and [website](#) published by Wageningen University & Research offering an integrated approach to planning, monitoring and evaluation.

[Complexity-Aware Monitoring](#) - USAID discussion note.

[Blue Marble Evaluation](#) offers a framework of principles designed to guide the evaluation of complex system transformations. See also a [case study](#) on application of the principles for evaluating a portfolio of agricultural systems change projects.

[Implementing Developmental Evaluation: A Practical Guide for Evaluators and Administrators](#) – guide produced by USAID, Social Impact. Search for Common Ground and the William Davidson Institute at the University of Michigan.

Flexible planning and budgeting: given that systems approaches require high levels of flexibility and adaptation, pre-planned activities and budgeting decisions should focus on the design and resourcing of multi-stakeholder collaboration processes, leaving a significant percentage of the budget available for investments in supporting activities and interventions that will only be identified once the project is under way.

“Better facilitation skills and process expertise can go a long way to improving systemic working, but we need to relax the pre-planning orientation to projects.”

This might include the provision of seed funding to test a portfolio of innovative solutions, with the option to scale up the most successful initiatives based on their impact and outcomes.

“The practice of planning and budgets are a fundamental obstacle – we need to plan for adaptation.”

“Plan some flexibility and adaptability into the initial planning of the program/project.”

Conversely, attempts to increase accountability and control by donors and development agencies are likely to be counterproductive. Given that change in complex systems is supported by more participatory, bottom up and adaptive approaches, exerting tight top-down control over programmes and initiatives risks reducing their effectiveness and impact.

Think big picture and long term

Invest for the long term: attempting to shift systems is a long-term process and therefore development organisations are likely to achieve better results by thinking beyond short-term project cycles and taking a longer-term perspective.

“Donors and development agencies should take a longer term, systemic perspective on their portfolio.”

When stakeholders drive the process, and prioritise the areas for action, the probability of long-term viability of the work is much higher, since they are more likely to invest the necessary time and resources to maintain the process.

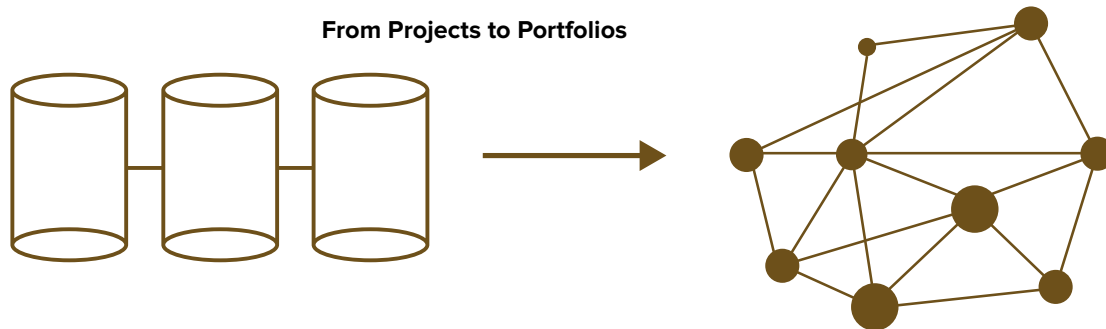
Move from projects to portfolios: Improving the design and implementation of individual projects and programmes is a necessary step in the right direction, yet donors and development organisations also need to think more broadly at the portfolio level.

It is clear that one cannot change a complex system by intervening at a single point in the system (i.e. through a specific policy or technology intervention) since there are too many interdependencies and dimensions involved that cannot be tackled by a single intervention.

At the same time, it is neither realistic to approach a complex system in its entirety, and intervene at every possible level, dimension and location at the same time. Such an approach would be practically unfeasible and paralyzing (in terms of resources, funds and knowledge required) and also ignore the insight that systems cannot be designed, engineered and controlled in any detail.²⁷

Many projects are designed with either an explicit or implicit assumption that it might be possible to shift the system through the project interventions. In doing so, they can become overloaded with objectives and activities across a range of areas. Instead of thinking about ‘single point solutions’, development actors should think about a portfolio of multiple interventions at different points within the system. Through portfolio approaches, development organisations can develop a broader portfolio of interventions operating at different levels. Through improved development cooperation, a range of development organisations can take a more joined up and coordinated approach towards collectively contributing towards change across a variety of intervention areas.

“Building a stronger portfolio of complementary projects used strategic planning alongside longer project cycles.”



Source: [Portfolio Development & Management – INNOV \(undp.org\)](#)

UNDP has been working with Country Offices to use [portfolio-based approaches to change](#), where a range of interventions are developed to address issues across a system. This approach allows for a greater diversity of interventions and assumes that some will have greater impact and others less – but that collectively they can make a difference. This orientation can increase the appetite for innovation and risk taking within individual projects.

RESOURCES ON PORTFOLIO METHODOLOGIES

[System Change: A Guidebook for Adopting Portfolio Approaches](#) – a UNDP guidebook that presents an approach to prepare for, engage in, and manage systems transformation using a portfolio approach in complex development spaces.

[UNDP Compendium of Portfolio Country Case](#) – case studies from over 50 countries in leveraging portfolio approaches for new ways of engaging with complex development challenges.

[Tackling Policy Challenges Through Public Sector Innovation: A Strategic Portfolio Approach](#) – OECD report that describes how portfolio approaches can be applied by public sector organizations to reap a variety of benefits, including avoiding innovation fragmentation and single-point solutionism; tackling risk aversion and learning at the portfolio level; identifying synergies among projects and activities; identifying synergies and interconnections between different projects and programs; and layering activities connected to complex reforms.

[Radical uncertainty requires radical collaboration: Stepping stones towards systems transformation with innovation portfolios](#) – report and [website](#) from Sitra explaining the portfolio approach and looking at the nature of global and societal problems and why they require transformation capacity; not only in the development of solutions, but also at the level of operating methods and structures.

3.2. Accelerate organisational change

The dominant structures, policies and procedures within international development organisations can be collectively considered as a “regime” in the terms of the Geels and Schot multi-level perspective (MLP) model described above (see page 24). They are designed to deliver: strategic alignment with organisational priorities; assurance of programme consistency and quality; consistency and quality of messaging and communications; reliable and consistent implementation of projects; sound and responsible financial management; effective management of risk; adherence to legal and regulatory requirements; systematic evaluation of outcomes and impacts; and so on.

However, while these established structures and processes all clearly exist for good reason, many of them tend to reinforce the existing ways of working outlined in section 2.2 above. As such, they can present significant potential obstacles to more systemic, collaborative, agile and adaptive ways of working. While many practitioners in international development organisations are aware of the need to change organisational cultures, there remains a significance gap between aspirations to be catalysts of ‘systems transformation’ and the reality of current practice.

Some of the key areas for international development organisations to consider include:

Build the capacity of staff

Build staff capacity for complex systems thinking approaches: systems thinking approaches can seem counter-intuitive to those used to approaches which assume that increased levels of planning, control and accountability are the best ways to deliver impact – particularly when many of the organisational policies and procedures still require these processes. Therefore, it is critical to build greater understanding among staff, as well as partners and stakeholders, of how traditional ‘clockwork’ approaches to problem solving do not work when working with complex systemic issues, and the implications of ‘cloudwork’ for programme design and implementation and for internal organisational structures, policies and procedures. This needs to include outward-facing, programme staff, but also staff from ‘back office’ (e.g. procurement, legal, human resources, risk, compliance) since it is many of the back-office functions that need to change.



Building the leadership competencies for working on systemic issues, includes how to: lead in conditions of uncertainty; work with power and conflict; work with inclusion, diversity and difference; build trust and create conditions of psychological safety in diverse groups; facilitate co-creative processes; manage in ways that are agile and adaptive; facilitate deep learning; and so on.

RESOURCES ON SYSTEMS THINKING AND SYSTEMS LEADERSHIP IN INTERNATIONAL DEVELOPMENT

Navigating Complexity in International Development: Facilitating Sustainable Change at Scale – international development interventions often fail because development experts assume that our world is linear and straightforward when in reality it is complex, highly dynamic and unpredictable. Authors Danny Burns and Stuart Worsley describe three processes for more systemic, participatory approaches to change.

Collaborating, Learning and Adapting (CLA) website from USAID provides a suite of resources and **tools** on how to improve development effectiveness, including resources on organisational culture and processes.

Building Better Systems: A Green Paper on Systems Innovation – paper by Jennie Winhall and Charles Leadbeater on how systems can be changed deliberately and how new systems can be brought into being.

International Development Innovation Alliance (IDIA) Systems Innovation Working Group aims to investigate the context, need, and capacity of IDIA members and other humanitarian and development practitioners for systems innovation and includes a **library** of resources.

Systems and Complexity White Paper – report from USAID, Global Obesity Prevention Center at Johns Hopkins, Global Knowledge Initiative, LINC and ResilientAfrica Network, providing an overview of systems and complexity practice, its current state of application (as at 2016) and relevance to international development practice.

The Dawn of System Leadership – article in the Stanford Social Innovation Review (by Peter Senge, Hal Hamilton and John Kania) which explores the core capabilities for systems leadership, including how to foster collective leadership within and across organisations.

Systems Leadership for Sustainable Development: Strategies for Achieving Systemic Change – report published by the Harvard Kennedy School (written by Lisa Dreier, David Nabarro and Jane Nelson) outlining the skills and capacities that individuals and organisations can use to catalyze, enable and support the process of systems-level change.

Cultivating Inner Capacities for Regenerative Food Systems: Rationale for Action Report – report from the **Conscious Food Systems Alliance** which sets out the evidence that the cultivation of inner capacities supports systemic change and regeneration. Practices include contemplative mind-body practices, as well as psychological and cognitive behavioural based practices, transformative spaces and communication practices, and transformative education and leadership practices.

Inner Development Goals is an initiative focusing on how we can build the inner capacity for dealing with complex environment and for delivering the Sustainable Development Goals. Includes a report **Inner Development Goals: Background, method and the IDG framework** – 5 dimensions and 23 skills and qualities.

Global Learning for Adaptive Management (GLAM) Library – library of resources on adaptive management for the international development sector.

Diversify recruitment: hiring more people with skills and experience in facilitation and collaboration methodologies; ensuring that there is more diversity of skills and perspectives within the organisation that are more reflective of the multiple dimensions of the problems we are tackling.

RESOURCES ON RECRUITMENT

USAID Collaborating, Learning, Adapting (CLA) guide to **hiring adaptive employees** identifies some of the key behaviours, mindsets and competencies of adaptive employees, including traits such as: self-awareness, humility, ability to listen, flexibility, comfort with ambiguity, critical and reflective thinking, systems thinking, political acumen.

Break down silos and strengthen internal and external collaboration

Create multi-disciplinary teams: changing ways of working so that teams are multi-disciplinary (including expertise on technical aspects of food and agricultural systems transformation, but also expertise in collaboration and systems innovation processes, working with inner change, and supporting organisational change) and cut across thematic silos (e.g. agriculture, forests, climate, biodiversity, inclusion, gender, trade, and so on).

“Encourage cross inter-disciplinary dialogues and collaboration.”

Increase inter-departmental collaboration: breaking silos by, for example: creating inter-departmental sense-making processes; creating working groups to collaborate on cross-cutting issues across departmental boundaries; identifying opportunities for joint projects; using portfolio design processes to develop integrated systems change strategies, bridging across project and programme boundaries; investing in building greater trust and relationships across teams; and so on.

Increase partnerships and collaboration: putting partnerships and collaborative approaches at the heart of ‘the way we do things’, working to transcend the factors that tend to encourage competition for resources within and between organisations and instead taking an ecosystem view to identify the comparative strengths of different teams and institutions to create strategic relationships that create genuine synergies.

“Embed time for trust building and definition of ‘comparative advantages’ from the design phase.”

Strengthen organisational culture and learning

Organisational culture: “culture eats strategy for breakfast” (in the well-known words of management consultant Peter Drucker) so underlying all of the above points, international development organisations need to shift towards cultures founded on: strong trust and relationships, which is the foundation for effective internal and external collaboration; deep learning; flexibility, agility and adaptation; combining aspirations for transformational change with a spirit of humility and realism.

RESOURCES ON ORGANISATIONAL CULTURE

USAID Collaborating, Learning, Adapting (CLA) provides links to resources on **organisational culture** recognising that the health of the culture shapes the team and organization’s capacity to solve problems and innovate, engage in practices for collaborating, learning and adapting.

Learning: building a culture of organisational learning, underpinned by robust processes for enabling, capturing and sharing learning, covering projects and portfolios, as well as learning around organisational effectiveness and strategy.

“Explore easy wins – e.g. incorporate 1-2 days for any consultant’s terms of reference to reflect, share and capture learning in a systemic way.”

“Collective staff reflection and in individual staff performance reviews, value ‘what did you learn’ more than ‘what did you achieve’ – what’s working/not working.”

“Be specific about learning mechanisms and questions at different levels of the organization (strategy, portfolio, investment level).”

Within most development organisations there are limited opportunities for deep learning across project boundaries, between functional silos and teams; and there are even fewer opportunities for deep learning across organisational boundaries or for taking a multi-disciplinary perspective on changes across a whole system. By ‘deep learning’ we are referring to processes that critically examine the assumptions behind theories of change, what is happening in practice, how the assumptions may need to be revised and what changes in strategies are necessary as a result, using methodologies such as triple loop learning.

Given the complexity of catalysing systemic change, a critical part of international development change processes needs to be the facilitation of collective, participatory sense-making that can connect learning across different dimensions (project, portfolio, system; niche, regime, landscape, etc.) – this means bringing together practitioners between different projects, programs and initiatives, different teams and related issue areas, and also supporting inter-institutional learning.

Streamline organisational procedures to be more agile and adaptive

Procurement: adapting procurement (and other back office) procedures to be more agile and adaptive. For example:

- Using rosters of pre-approved providers in order to speed up procurement processes;
- Raising financial thresholds for competitive processes;
- Streamlining procurement procedures, particularly for lower value contracts;
- Include a feedback round into bidding for major contracts, so that the eventual terms of reference involves co-creation and integrates the collective intelligence of potential bidders;
- Approach procurement with a ‘portfolio’ mindset, so that consultants and delivery partners can be recruited to address related activities and deliverables across more than one project;
- Build flexibility into activities and deliverables within contracts and budgets and embed cycles of action, reflection and adaptation into workplans.

RESOURCES ON PROCUREMENT

USAID Collaborating, Learning, Adapting (CLA) guidelines on integrating CLA into **procurement**, working with **implementing partners** and **integrating CLA throughout the project cycle**.

Empower staff to catalyse organisational change from within

Use participatory processes to catalyse change: change in large institutions is notoriously hard to deliver. However, the insights from complex systems thinking approaches for catalysing change (as outlined in this document) can also be applied to the question of how to drive organisational change. Lessons from complex systems approaches would suggest an emphasis on:

- Convening participatory processes within the organisation and with key external stakeholders for collective sense-making;
- Invest in building trust and relationships and shared understanding across silos and between different levels of the organisation;
- Use participatory processes to identify key challenges and underlying drivers (root causes);
- Ensure that conversations are inter-disciplinary and connected across different functional and thematic silos;
- Build internal coalitions for change, driven by key champions from across different parts of the organisation;
- Develop and test hypotheses for catalysing organisational change, using cycles of learning and reflection to adapt and iterate.

RESOURCES ON ORGANISATIONAL CHANGE

Making Good on Donors' Desire to Do Development Differently – paper by Dan Honig and Nilima Gulrajani which argues that donors' desire to “do development differently” (with greater knowledge of local contextual realities, appropriate adaptation to context, and greater flexibility to respond to changing circumstances) will only be achieved through a focus on the ‘nuts and bolts’ of internal changes within development organizations.

Doing Development Differently at the World Bank: updating the plumbing to fit the architecture – report on efforts to adopt more adaptive, locally owned, problem-solving approaches to tackling chronic development challenges in the World Bank's country portfolio in Nigeria.

Innovation for Development Impact: Lessons from the OECD Development Assistance Committee – the report synthesises lessons on how innovation efforts can be strengthened, individually and collectively, through (1) strategy, management and culture (2) organisation and collaboration and (3) the innovation process.

On the road to Agenda 2030 together in a complex alliance of Swedish public authorities – research on the use of dialogical organisational development as a method for increasing innovation capacity in public sector organisations, which identifies that need for a dynamic relationship between the formal and the informal in organisations—between top-down administrative forces and complex, adaptive and emergent forces.

Evidence Base for Collaborating, Learning and Adapting: A Summary of the Literature Review Update March 2020 – a USAID literature review to explore the evidence base for whether and how an intentional, systematic, and resourced approach to collaborating, learning, and adapting (CLA) contributes to organizational effectiveness and/or development outcomes.

FCDO RECOMMENDATIONS FOR PUTTING SYSTEMS THINKING INTO PRACTICE

According to the recent **Systems Thinking and Practice** report written for the UK's FCDO, critical organisational behaviours for putting systems thinking into practice include:

- 1. Viewing situations holistically:** the starting point for systems thinking is to step back and take a 'helicopter' view of the situation you are dealing with. Try to explore, examine and tackle underlying causes of problems not just symptoms. This means working across different sectors and disciplines, and paying attention to the wider context in which your specific concerns or responsibilities are set. Given the types of issues and contexts in which FCDO engages, developing a good political economic understanding is usually a critical starting point.
- 2. Bringing multiple perspectives to the table:** by definition, we are all limited by our experiences, training, interests and mindsets. A key to systems thinking is opening dialogue between people with different perspectives and insights. How do they see the issues they face? What are their views on how systems are functioning or not? What would constitute an improvement for them? Such dialogue includes bringing in people with different disciplinary and sector expertise, and enabling engagement between players from across government, business, civil society and science.
- 3. Considering alternative future scenarios:** explore how trends, uncertainties and shocks might create radically different futures, and what the implications would be for different stakeholders' interests. Engage stakeholders in assessing what would be effective strategies for their interests, and for the system as a whole in different future scenarios. Scenario approaches are valuable in helping to understand the resilience of systems to future pressures and shocks.
- 4. Strengthening networks, feedback and relationships:** systems evolve and adapt based on networks and feedback between system components. A basic principle of systems practice is to increase communication and understanding between actors. Think about how relationships between different parts of a system can be improved, including through building trust between actors.
- 5. Designing interventions around system dynamics:** 'engineering' top-down change in human systems is largely impossible – so don't try! Instead, explore how systems can be 'nudged' towards more desirable states. Look at how desirable behaviours can be amplified and less desirable ones can be dampened, and the roles that normative and punitive incentives might play. Accept that change often requires many contributing factors to align. How and when this will occur can't be easily predicted, so patience is often needed while working on enabling conditions. Systems have stability and tipping points – try to understand these and how they can be used to support rather than block desired changes.
- 6. Experimenting, valuing failure and learning:** fundamental to bringing about change in complex systems is experimentation and rapid learning. This requires an appetite for risk and valuing the learning that can come from failure. As with investments, this implies that development organisations need to take risks and assess performance across the whole portfolio, rather than expecting every project or intervention to succeed.
- 7. Managing adaptively:** ultimately, responding to the complexity and uncertainty of how complex systems behave requires a highly adaptive approach to management and decision-making. This calls for good communication up and down management hierarchies, decentralised responsibility, and empowering those on the 'front line' to be responsive and questioning as situations change.'

3.3. Change the wider system incentives

Finally, donors and development organisations need to consider how to change the wider system incentives that keep current ways of working in place. Using the language of Geels and Schot’s multi-level perspective (MSP) model:



There are **‘regime’ factors** that maintain: linear approaches to project design and implementation; top-down control and accountability mechanisms; overly simplistic metrics and KPIs; a funding environment that encourages competition rather than collaboration; and so on.

In turn these are held in place by **‘landscape’ level factors**, including expectations from donor governments that decision making power is held by donors and accountability flows from recipients to donors.

‘Niche’ innovations (including the systems thinking and collaborative approaches outlined in this document) are attempting to disrupt this system by challenging some of the underlying assumptions and by seeking to demonstrate alternative approaches to programme funding, design, implementation and evaluation – but, as yet, have not been mainstreamed across the sector.

In order to move *complex systems thinking* approaches from ‘niche’ to ‘regime’ level within the international development sector, large international donors and development organisations need to work together to change the ‘rules of the game’.

“Changing donor requirements can be one of the most significant leverage points for change to encourage systems thinking approaches and incentivise greater collaboration and co-creation.”

In the absence of this, the pressures of the existing international development ‘regime’ will mean that systemic ways of working continue to fail to break out of innovation units and a few islands of good practice.

These ideas and approaches have been around for years, and yet adoption continues to be at the level of niches. Mainstreaming these approaches can only be achieved through a much larger scale, collective effort of multiple champions from across different development organisations working together to learn from each other, to share and develop good practice and to help mobilise allies and key decision makers within their own institutions who can deliver both the internal organisational changes and the system-level changes that are required.

RESOURCES ON SHIFTING THE WIDER SYSTEM

The Global Partnership for Effective Development Co-operation (the Global Partnership) – multi-stakeholder vehicle for driving development effectiveness. Supports practical implementation of effective development co-operation principles, promotes mutual accountability, and works to sustain political momentum for more effective co-operation and partnerships. Published **Space for Change: Partner perspectives on an effective multilateral system** – report looking at what an ‘effective’ multilateral system should look like, taking as a lens the four principles of effective development cooperation: country ownership, inclusive partnerships, a focus on results, and mutual accountability and transparency.

SDG Leadership Labs – the UN Development Coordination Office (UNDCO) initiative with the Presencing Institute to build capabilities in systems leadership and cross-agency collaboration for senior leaders in UN country teams.

Global Alliance for the Future of Food – a strategic alliance of philanthropic foundations collaborating on bold action across the planet to transform food systems and their impacts on climate change and food security.

How Change Happens – book by Duncan Green of Oxfam exploring how change happens and how governments, organizations, businesses, leaders, campaigners, employees, and ordinary citizens can make a difference.

Rising to meet new tides of change, by building our systems change practice – article by Forum for the Future that dives into how the world is responding to today’s multifaceted challenges, explores some of the biggest questions proliferating across the sustainability movement right now and considers what pivots may be needed if we are to drive change at scale and pace.

Co-Impact – a collaboration of philanthropists, foundations, and private sector partners to pool funding to drive systems change in health, education and economic opportunity. Together with locally-rooted program partners and advisors, focused on advancing inclusive systems change, gender equality, and women’s leadership, with a strong emphasis on addressing power imbalances.

Joint SDG Fund – an international multi-donor and multi-agency development mechanism created in 2014 by the United Nations to support sustainable development activities through integrated and multidimensional joint programmes.



4

INVITATION TO COLLABORATE



UNDP invites governments, donors, development agencies, researchers and academics, civil society organisations and the private sector to join us in re-shaping how the international development sector addresses complex environmental challenges.

We are developing a series of Collaboration Labs to be convened at both country and global levels. Each Lab will focus on a specific environmental challenge (initially focused on issues relating to the food-climate-biodiversity nexus) and bring together a cohort of leaders from across different organisations to:



Build leadership capacity

for working more collaboratively and more systemically



Build trust and relationships

between participants as the foundation for greater collaboration



Develop and strengthen collaborations

between different institutions and programmes working on related issues



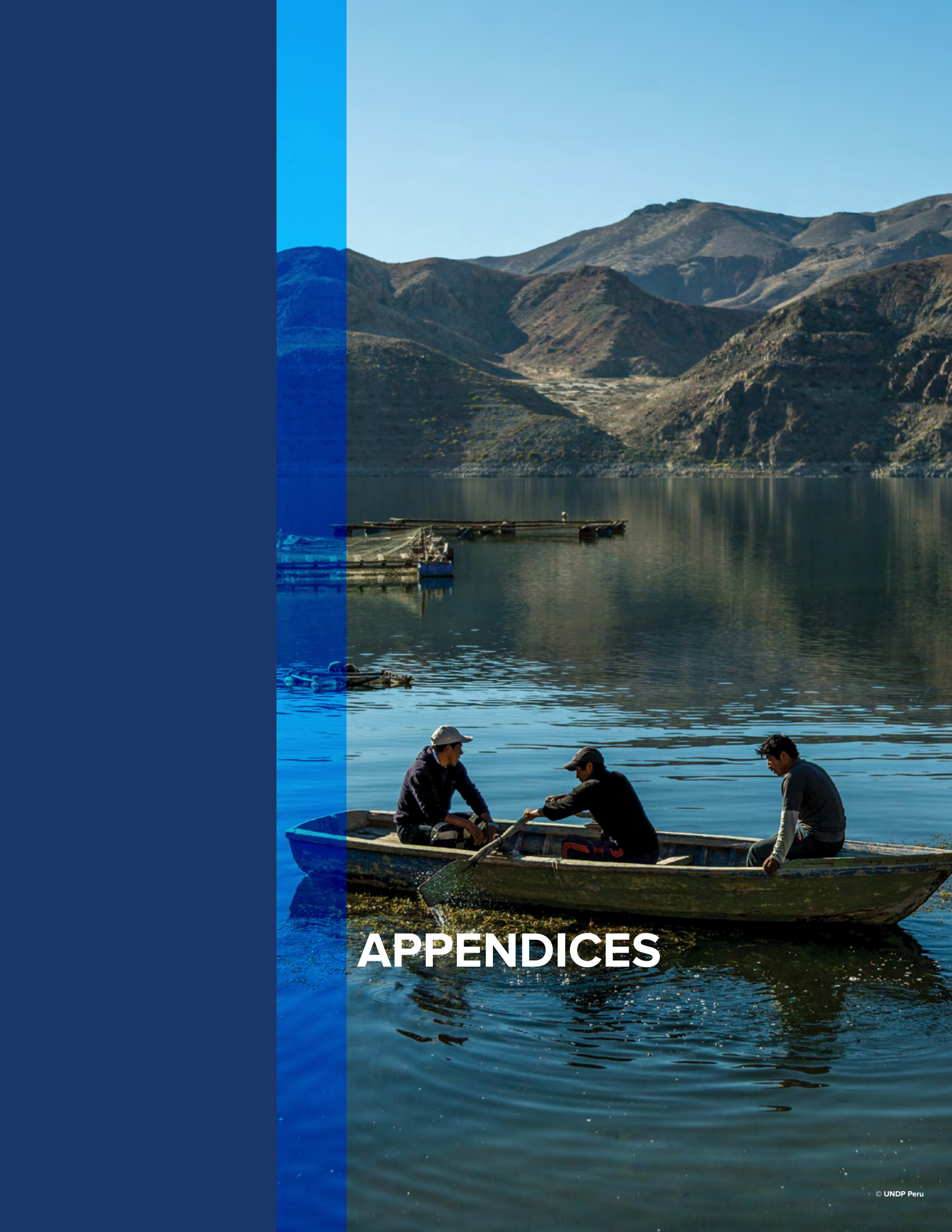
Catalyse organisational and wider systemic change

by addressing institutional barriers and disincentives to collaboration and strengthening the enabling environment

If you want to partner with UNDP in this collective endeavour, please get in touch with

charles.omalley@undp.org.





APPENDICES

A. Overview of Previous Co-Inquiry Cycles

Cycle 1

Cycle 1 of the co-inquiry took place over four sessions in 2020, with participation from more than 40 international development practitioners, including many who have been pioneering the application of systems thinking in an international development context over the past couple of decades. The sessions were:

1. What's the “secret sauce” for working more effectively on whole systems change in sustainable food and agricultural production?
2. What gets in the way of more effective multi-stakeholder collaboration to catalyse systems change?
3. As international agents of change, how can we work more systemically, even within current limiting conditions?
4. How can we change the constraints for systemic ways of working in the longer term?

The report from Cycle 1 is available [here](#).

Cycle 2

This was followed by a second cycle of the co-inquiry in 2021 with more than 70 participants. We facilitated three parallel inquiry streams:

1. **Systems Change in Practice:** “How can we apply systems change in practice in the field of food, agriculture and commodities? What do we identify as the enablers and scale factors from positive experiences of systems change?”
2. **Systems Leadership:** “How can we support the emergence of systems leadership in the field? How can we identify, engage and uplift change agents, local to global?”
3. **Documenting Systems Change:** “How can we capture and share the results and impact of systems change approaches?”

A full report summarising the key insights and recommendations is available [here](#). The following is a summary of the recommendations 10 steps included in the report to move away from largely ‘top down’ approaches that attempt to design and deliver change towards much more participatory, ‘emergent’ approaches that focus on enabling and facilitating stakeholders to co-create and implement solutions together. These recommendations have major implications for the design of future programmes that seek to catalyse food systems transformation, as explored further in the third cycle of the co-inquiry and the *Rethinking Programme Design* stream, as outlined in this report.

		CURRENT REALITY	WHAT'S NEEDED
1	PROGRAMME DESIGN	Activities and outcomes are pre-planned, assuming a linear logic of cause and effect.	Use adaptive and participatory processes that are more effective in conditions of complexity and uncertainty.
2	STAKEHOLDER PARTICIPATION	Stakeholders are consulted to provide input into pre-planned activities, but they typically do not drive the process.	Shift from telling to listening, using collaborative approaches for stakeholders to design and implement solutions.
3	TRUST AND RELATIONSHIPS	Limited attention is paid to actively building trust and relationships - it is assumed that they will build over time.	More active focus on building stronger trust and relationships as the foundation of effective collaboration.
4	HEARTS AS WELL AS MINDS	Activities focus on expert-led technical interventions (e.g. tools, reports, policy recommendations).	Play greater attention to the psychological and behavioural dimensions of change.
5	POWER, POLITICS AND CONFLICT	Processes attempt to be neutral and the realities of power and conflict are not fully acknowledged or addressed.	Acknowledge and work with the realities of power, politics and conflicting perspectives.
6	INSTITUTIONAL CHANGE	Institutional policies, structures, procedures, cultures and habits maintain existing ways of working.	Identify and remove institutional barriers to systemic ways of working.
7	SYSTEMS LEADERSHIP	The identification and support of leaders and champions of change is piecemeal rather than systematic.	Identify, connect and build the leadership capacity of leaders and champions from across the system.
8	LEARNING	Learning focuses on technical topics (the 'what' of change) and less attention is paid to improving the 'how' of change.	Put deep learning at the heart of programmes to enable improved sensemaking and adaptation.
9	FACILITATION	The vital importance of high quality facilitation is not always well understood.	Build and strengthen local facilitation capacity to support effective collaborative action in the longer term.
10	MEASUREMENT	The focus of measurement is on quantitative performance in terms of the delivery of pre-planned activities and outcomes.	Measure the indicators and enablers of systemic change and engage stakeholders in participatory evaluation processes.

B. Participants

The participants in the co-inquiry into *Rethinking Programme Design* focused on representatives from multilateral and bilateral donor organisations, UN agencies and other large international development organisations, as well as some academics and consultants working in the sector. In total 40 people joined one or more of the four sessions of the co-inquiry, with typically 20-30 participants in each session. Although each session was only two hours long, much of the discussions happened in breakout groups, so that in total we captured more than 20 hours of discussions. We are grateful to all who participated and shared their knowledge and experience.

Name	Organisation (at time of the co-inquiry)	Name	Organisation (at time of the co-inquiry)
Tom Mitchell	Climate KIC	Christian Seelos	Stanford University
Ian McClland	Elrha	Aditi Ramdorai	Systemiq
Paul Kiernan	Embassy of Ireland (Rome)	Morten Rosse	Systemiq
Adrian Barrance	FAO	Gulda Keng	UNDP
Patrick Kalas	FAO	Jose Luis Chicoma	UNDP
Sameer Karki	FAO	Pascale Bonzom	UNDP
Siobhan Kelly	FAO	Alfonso Buxens	UNDP
Peter Umunay	GEF	Andrew Bovarnick	UNDP
Mohamed Bakarr	GEF	Ashwin Digambar Bhouraskar	UNDP
Seema Patel	GKI	Charles O'Malley	UNDP
Hyeone Park	Global Affairs Canada	Henriette Friling	UNDP
Jill Guerra	Global Affairs Canada	Jaimie Grant	UNDP
Dieter Fischer	IFC	James Leslie	UNDP
Zenda Ofir	International Development Evaluation Society	Nicolas Petit	UNDP
Sabine Miltner	Gordon and Betty Moore Foundation	Soren Vester Haldrup	UNDP
Bruce Cabarle	Partnerships for Forests at The Palladium Group	Kristin O'Planick	USAID
Morag Neill-Johnson	Results for Development	Cees Leeuwis	Wageningen University
Amanda Rose	RTI Innovation Advisors	Lindsay Knowles Larson	World Bank
Elisabeth Simelton	SIDA	Timothy Brown	World Bank
Nina Strandberg	SIDA	Jason Clay	WWF



C. Overview of the Co-Inquiry Sessions

For the *Rethinking Programme Design* co-inquiry stream, we hosted the following sessions:

Session 1

Over the first session, we explored the following sub-questions:

1. “What institutional practices get in the way of working more systemically?”
2. “How we can address the institutional obstacles to working more systemically?”

Cees Leeuwis presented some of the key ideas from his paper [How food systems change \(or not\): governance implications for system transformation processes](#).

Session 2

In the second session, we worked with the output of the first session around the following questions:

1. What gets in the way of donors and implementing agencies to...
 - a) ...support bottom-up, collaborative, participatory approaches?
 - b) ...embed learning at the heart of our work?
 - c) ...ensure that projects are agile and adaptive?
 - d) ...ensure that projects are inter-disciplinary and cross-silo?
 - e) ...strengthen inter-institutional alignment, coordination and collaboration with a shared view of the whole system?
2. What changes to programme design and implementation procedures should donors and implementing agencies take to... [address the same list of issues listed above]

Session 3

Given that typically individual champions are critical for driving change, in the third session we created a space for individual reflection and discussion between participants about their own energy for supporting change towards more systemic approaches:

1. Where is my energy for making change?
2. What would success look like?
3. How could I make this happen?

Session 4

In the final session, we did a deep dive discussing “What does this mean in practical and specific terms for work to transform food and agricultural systems?”



D. About UNDP's Food and Agricultural Commodity Systems Practice

UNDP's Food and Agricultural Commodity Systems (FACS) practice works to address critical challenges in food and agriculture, supporting UNDP Country Offices to support more effective collaborative action between stakeholders. During the last decade UNDP has joined forces with over 40 international organizations and NGOs to tackle challenges at the roots of unsustainable food and agricultural commodity systems. Covering more than 100 countries, and supporting close to 500 landscapes, the FACS portfolio includes initiatives that focus on increasing the resilience of agricultural systems and food security for more than 3.7 million people in more than 1,000 smallholder farming communities.

Working with FAO, UNEP and other specialist partners, UNDP aims to catalyse a shift away from business-as-usual land use and agricultural systems towards practices that restore long-term productivity, bolster livelihoods, safeguard biodiversity and ecosystem services and provide climate solutions.

UNDP's strategy for addressing these challenges is to:



Strengthen the participatory and inclusive governance of food systems, build stakeholder alignment around a common vision, and strengthen collective action at national and sub-national levels.

Bring systemic practices, tools, metrics and ways of working that can navigate and measure complexity.

Work towards changing mindsets, behaviours, policies and practices, improving the enabling environment that supports sustainable production.

Work with power and conflict.

Promote gender balance.

Promote transparency, accountability and good governance as drivers of success.

In this regard UNDP FACS published in 2021 the [Guide to Effective Collaborative Action](#), a methodology built on the foundation of 10 years' experience in transforming agricultural commodity systems by UNDP's Green Commodities Programme. Over the decade our work has evolved from dialogue and collective action (and our methodology on National Commodity Platforms) to what we now call 'Changing Systems through Collaborative Action'. We are broadening the application from support for sustainable commodity production towards the wider transformation of food systems.

In this critical decade for action, we welcome collaboration with other like-minded partners seeking to catalyse more effective systemic change across global food and agriculture systems. Contact charles.omalley@undp.org to explore opportunities to work together.



1 NO POVERTY



2 ZERO HUNGER



4 QUALITY EDUCATION



5 GENDER EQUALITY



7 AFFORDABLE AND CLEAN ENERGY

8 DECENT WORK AND ECONOMIC GROWTH

