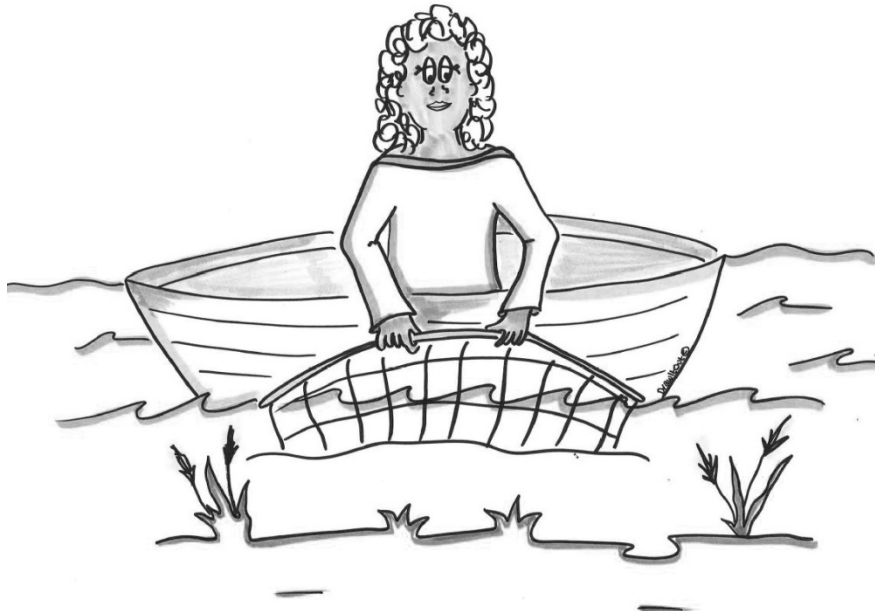

SYSTEMS THINKING

An introduction for Oxfam programme staff

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'Nothing is separate. Everything is connected'.

The Buddha

'Learn to dance with the system'.

Donella Meadows

Abstract

The major development and humanitarian challenges of the twenty-first century are highly complex and inter-related. Climate change, globalized markets and financial systems, and the evolution of networked forms of conflict are all examples of complex systems that underlie development problems. They are made up of a complex myriad of human and natural processes, institutions and relationships. 'Systems thinking' tries to take into account the interactions between different parts of a system and understand how together they are effecting change rather than simply trying to understand specific components in isolation. In doing so, systems thinking can be an important part of developing truly sustainable and transformative change. The adoption of systems thinking in practice requires a number of behaviours and practices that together provide the means to operate effectively within complex systems such as the ones we deal with. They include: a shift away from fixed, long-term planning to more iterative and adaptive planning based on learning and experimentation; a focus on multi-stakeholder approaches and co-creation with local stakeholders; the search for context-specific solutions rather than generic ones based on good practice elsewhere; a recognition that our paradigms and pre-concieved ideas often limit our ability to understand local contexts; and increased work across organizational boundaries, reducing differences in power, bringing in different ideas and perspectives and resulting in a deeper, less biased understanding of the systems we engage in.

This report introduces systems thinking for Oxfam staff and other development practitioners. It explains how a systems approach can be integrated within programmes and ways of working and provides tools and links to a range of useful resources for further learning. In doing so it builds on the experience and thought leadership on systems thinking that Oxfam and other organizations have already shown.

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1 INTRODUCTION: GOING BEYOND ‘TEACHING A MAN TO FISH’

Traditional thinking has encouraged us to focus on individual parts of a problem.¹ For instance, a logical framework (logframe) or a theory of change encourages us to consider a tidy sequence of change that will solve development problems. But is reality really like this?

Once upon a time, we were encouraged to think that ‘if you teach a man to fish, you can feed him forever’. Today, new challenges, such as the interaction of climate change and inequality, are making the future increasingly unpredictable and are forcing us to think in different ways. As a result, we can see that this seemingly obvious statement rarely applies in a simple way – and of course the fisherman may be a fisherwoman!

Figure 1: Why might teaching someone to fish be an inadequate response?

	<p>The stock of fish in the river may decline due to climate change.</p>
	<p>The water itself may be polluted, due to urban expansion in an upstream province.</p>
	<p>A rich landowner may take control of the riverbanks, stopping fishers from using the river. Powerful business people may start overfishing using illegal nets.</p>
	<p>The market for fish may crash. Cultural norms may limit who can actually fish. The materials needed to build a boat may be unaffordable.</p>
	<p>Alternatively, the market for fish may expand as urbanization accelerates. The government may prioritize investment in small-scale fishing infrastructure. Banks may see opportunities to invest in local fish processing.</p>

The reality is that any combination of these conditions could occur. Together, these factors would combine to create challenges that fishing communities would have to deal with, or opportunities they would have to respond to – and of course the exact combination of opportunities and challenges affecting the fisher could change, each and every year.

When we consider interventions that may assist the fisher in the example above, clearly they need to be informed by a deep understanding of the **bigger picture** of what is happening, of all the different components that they need to respond to. This big picture thinking is also called **systems thinking**.

The purpose of this short introduction is to clarify what we mean by terms such as ‘systems thinking’ and ‘systemic change’, and explain how they fit in with Oxfam’s other priorities and ways of working. This is not intended to be a piece of programme guidance. Instead, this paper and the [accompanying animation](#)² aim to stimulate readers to explore these topics further.

Resources such as the GEM Toolkit,³ the Oxfam Resilience Programme Policy Guidelines,⁴ the Raising Her Voice programme⁵ (excellent examples of the role of gender relationships in systems wide change) and Oxfam Influencing Guidelines,⁶ as well as external resources (see Annexe), provide opportunities to put some of these ideas into practice.

Box 1: What are systems?

We talk about social, environmental and political systems. These interact to form bigger market, governance and ecological systems. Each of these systems is made up of multiple inter-linked parts and actors that influence each other (e.g. formal and informal institutions, natural processes, people and behaviours). For instance, a market system is made up of companies, government agencies, rules and regulations and physical assets (such as infrastructure) as well as environmental, social and political factors that will influence how the market operates and who participates in it.

It is not possible to understand what is happening in any of these systems by looking at their individual parts. For instance, imagine trying to understand why there was no water in the river by looking at the riverbed. To understand what is happening we need to understand how the different parts of the system interact and affect each other, which actors are affecting the system and what motivates them. In the case of the river, we would need to understand the environmental factors – such as rainfall and percolation of water into the soil – as well as the different human activities that are having an impact on the water levels.

NO TECHNICAL FIXES FOR ADAPTIVE CHALLENGES

In the situation above, there is no quick or unique ‘technical fix’ that will help the fisher solve the problems experienced, or take advantage of the opportunities offered. The most successful livelihood strategy will not be one that is fixed in every way and set out in a tidy logframe, but one that can *adapt* to these changing conditions. Quick technical solutions may exist for some discrete problems, but most of the time we face an aggregation of different problems. We call these ‘adaptive challenges’.

Table 1: Comparing technical problems with adaptive challenges

Characteristics of technical problems	Characteristics of adaptive challenges
Problems are easy to identify.	It can be difficult to identify the causes and dimensions of the problem.
Problems are often suitable for quick and easy solutions.	Solutions may involve changes in beliefs, attitudes or approaches.
Problems can often be solved by an 'expert'.	The problem needs to be diagnosed and the solutions driven by the affected stakeholders.
Change is often only required in a limited number of places.	Solutions require change across numerous places, and across organizational and systems boundaries.
People are often receptive to technical solutions.	People are often resistant to acknowledging adaptive challenges.
Solutions can be deduced from generic best practice.	Solutions are context-specific, and cannot be derived from generic 'best practice'.
Solutions can be implemented quickly.	Solutions require experimentation and adaptation (which takes time).

Source: Adapted from Heifetz and Laurie (1997)⁷

The fishing example is an adaptive challenge because it highlights problems that involve multiple stakeholders and processes interacting together in a system (see Box 1).

Things get even more complicated when we are tackling problems that cut across multiple systems. Oxfam's Change Goals 1, 4 and 5 ('Right to be heard', 'Sustainable food' and 'Fair sharing of natural resources'),⁸ and cross-cutting themes such as resilience and gender justice, require us to engage with environmental, economic, social and political systems. These are all highly complex systems in their own right.

Box 2: Adaptive capacity

Adaptive capacity is the ability of a system to adjust, modify or change its characteristics and actions to moderate potential, future damage; take advantage of opportunities; and cope with the consequences of shock or stress. It represents a shift away from trying to solve a problem towards trying to develop the capacity to respond and deal with whatever problems arise. Given the uncertainty associated with adaptive challenges it is a potentially very useful concept. The [Africa Climate Change Resilience Alliance](#) has developed a Local Adaptive Capacity⁹ framework to guide the development of local institutional capacity to respond to the problem of climate change. The framework describes adaptive capacity as being a function of the following elements:

- **Asset base:** the type of physical, natural, political, human and social capital available;
- **Institutions and entitlements:** the degree to which institutions support equality, representation and participation;
- **Knowledge and information:** systems that generate and make relevant information accessible (e.g. on climate change);
- **Innovation:** the ability of the system to support innovation and risk taking;
- **Flexible, forward-looking governance:** decision making that is informed by up to date information, and that involves participation of those affected.

Although this framework has been developed for the context of climate change, it may be interesting to see how it could relate to other complex problems you are dealing with. For more information on the framework read this short and useful [introduction](#).¹⁰

Moreover, you will know from your programme work and from your own life experience that these systems interact with each other. You will know how livelihoods are as much a function of gender relations, climate, natural resources, power, representation and voice as they are of the attributes of the market system.

'There are no separate systems. The world is a continuum. Where to draw a boundary around a system depends on the purpose of the discussion'.

Donella Meadows¹¹

Box 3: Further reflection

Listen to Dr Ronald Heifetz [talk about adaptive challenges](#)¹² and then reflect on your work and these questions: Which of the issues you work with are technical problems, and which are adaptive challenges?

- Which do you see most of?
- How do you respond differently to them?
- Do you enjoy dealing with both? In what ways?

2 OXFAM WANTS TRANSFORMATIONAL CHANGE

In Oxfam we are interested in transformational change for people living in poverty. This means ensuring women and girls, as well as men and boys, have agency to make their own choices and exert their rights. It means a world in which poor people have voice and influence and can actively pursue productive education, social change and livelihood opportunities. We believe that most of the constraints that exist to the achievement of this sort of transformational change are adaptive challenges rather than purely technical problems. That does not mean that there are no technical problems in our work. However, if we are interested in achieving transformational change on a large scale, dealing with adaptive challenges is critical.

Systems thinking provides us with a way to understand adaptive challenges. Often, underlying problems are far removed from the initial symptoms we see. This means that we will not see them unless we dedicate reasonable resources and expertise to understanding the system. Systems thinking provides us with analytical tools and a way of seeing things that helps us do this. As such, it can make a significant contribution to problem identification and context assessment when designing programmes. The benefits and challenges of applying systems thinking to our work are set out in Table 2.

Systems thinking is not new to Oxfam. A number of programmes have been leading the way in developing thinking on how to put it into practice (see the Sri Lanka case study in section 3). In our campaigning and advocacy work, it is essential to have a high degree of understanding of how systems work and where power lies.

Table 2: Benefits and challenges of applying systems thinking to our work

Benefits of systems thinking		
<i>Ways of working</i>	<i>Programme design</i>	<i>Vision</i>
<ul style="list-style-type: none"> • Encourages us to break out of organizational and sector-based silos. It makes us recognize that we cannot solve problems on our own but need to be multi-disciplinary. • Encourages us to take an incremental approach, trying out interventions on a small scale, learning from them and then adapting them. • Encourages us to take a more facilitative role, embedding local ownership of problem solving. 	<ul style="list-style-type: none"> • Helps us to look beyond the immediate problem to the underlying causes. • Enables us to understand the roles and power of different actors. • Enables us to mobilize action from many different actors, across sectors and across all parts of the system. • Enables us to identify 'leverage points' that stimulate change across the system. Encourages fast feedback loops allowing adaptive management. 	<ul style="list-style-type: none"> • Encourages us to 'think big'. The goal is not only local-level change but system-wide change. This benefits many more people than those we can reach directly.
<p>Challenges of systems thinking</p> <ul style="list-style-type: none"> • <i>Where do you draw boundaries?</i> If everything is linked in systems, and different systems themselves are linked, does that mean our programmes have to engage with everything? There can be a tension between 'thinking big', and targeting resources and retaining focus. • <i>How do you prioritize what to do?</i> Systems thinking can lead to <i>analysis paralysis</i> as people research more and more deeply into the system, generating a mass of complex data that is difficult to interpret and come to conclusions about. It can make prioritization difficult. • <i>How can you be 'adaptive'?</i> Systems thinking encourages us be adaptive, to learn as we do it and to keep adapting our programme design in response. But in practice this is often constrained by slow learning cycles, by restrictive donors and by prevailing work cultures. 		

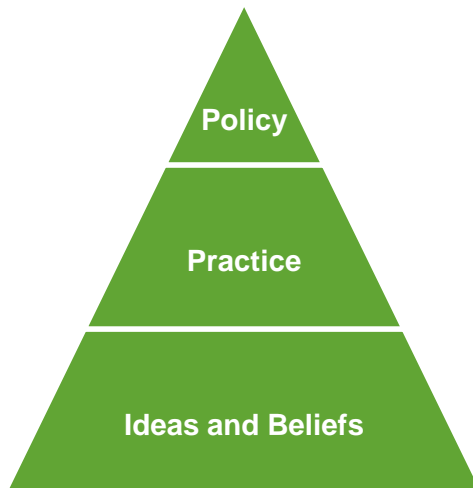
What is systemic change? A greater understanding of systems and how they behave will help us to design interventions that bring long-term change to how systems operate, or **systemic change**. A key part of systemic change for Oxfam is a change in the relationships between stakeholders so that poor women and men hold more of the power (including the power to influence the system) and benefits within the system.

ANALYSING SYSTEMS

We suggest that it is never possible to have a complete understanding of a system. Certainty is an illusion! However, a degree of understanding of what makes up a system and how different parts of a system interact can give us sufficient confidence to develop and test initial ideas. If you search online for 'systems analysis', you will find many bewildering approaches and tools. There is no 'one right way' to analyse systems, but there are some simple tools you can start exploring.

Policy, practices and beliefs can form a basis for analysing systems. The following checklist can be used to develop an understanding of the role of these components in a system, and the potential for change.

Figure 2: Who and what influences change?



- Which **individuals, groups and institutions** most influence change (negatively or positively)?
- Which **policies, practices, ideas and beliefs** influence change (negatively or positively)?
- What are the **pivotal moments or windows of opportunity** (e.g. new governments, changes of leadership, crises and scandals, elections)?
- What are the **key blockages to change**, whether political, social, economic or environmental?

Source: 'The reality of change: Strengthening our impact by reflecting on and applying our theory of change'. Internal Oxfam guidance, November 2013¹³

Mapping market systems

Market mapping provides a means to identify an holistic picture of a market system. This includes the identification of inter-relationships between market actors and with economic, social and environmental factors. See 'Participatory Market Mapping' guidance¹⁴ from Practical Action and the GEM (Gendered Enterprise and Markets) Toolkit¹⁵ – a publicly available Oxfam resource – to find out more.

Using a gender lens to analyse systems

The GEM approach also demonstrates how you can see different things when you analyse a system through the lens of gender. GEM programmes analyse where women are concentrated in markets – for example within certain products, occupations or trading locations. GEM analysis also highlights women's and men's roles in providing care, and the unequal distribution of household work and caring for relatives. It allows us to see the relationships between household and caring work, and women's roles in the market economy. It also reveals how household power dynamics influence the opportunities that women have, and the benefits they receive from market systems.

3 BREAKING OUT OF BUSINESS AS USUAL

'We can't solve problems by using the same kind of thinking that we used to get us into them'.

Albert Einstein

We all have preconceived ideas about problems and solutions. Often, our analysis of a particular system will reflect our own bias rather than the reality of what is happening. This can limit our understanding, and ultimately makes us less effective at tackling poverty. Box 3 provides an example of this.

Box 3: The potential of preconceived ideas to hinder our understanding

A food security programme in Zimbabwe (not an Oxfam example) was faced with a seasonal food shortage problem. Food was available all year round, but the prices that traders were charging during lean periods were excessive. This was limiting access to food for poor households. Many people assumed that traders were buying food at times when it was cheap and making large profits selling at higher prices in times of shortage. The programme solution that emerged from this thinking was to bypass the traders – a common assumption and reaction.

Contrary to this assumption, market development research showed that in fact the traders bought from larger dealers. They did not have enough working capital to buy food in bulk when it was cheap. Thus the traders were also forced to buy food when it was expensive, and this explained the higher prices they were charging.

The eventual solution that was proposed was to increase access to working capital for the traders so that they could buy cheaper food in bulk and help to reduce food price volatility. Part of the proposed solution was also to foster greater understanding and trust between the traders and the consumers. In this example, analysis of the market system helped identify what the actual problems were, but initial preconceived ideas almost stopped this analysis from even taking place.¹⁶

Question: We all have preconceived assumptions about the causes of problems or solutions. In your main areas of work, what are your preconceived assumptions? Try to analyse a situation at work without them and see if your conclusions change.

To see how preconceived notions of what you are looking for can influence what you see, watch a short and amusing [video](#) on the Selective Attention Test, created by Daniel Simons and Christopher Chabris.¹⁷

In order to ensure that our preconceived ideas do not limit our understanding of a particular situation, there are a number of strategies we can employ:

- Work more in inter-disciplinary teams that bring in people with different perspectives to yours.



- Deliberately bring in people with radical ideas. Who are the mavericks that you know?
- Deliberately change your view – describe the situation from the point of view of children or women, landless people, trading intermediaries or municipal officials.
- Undertake experiential learning. See what life is like for people in the system – especially for those living in poverty – but also try to understand the realities faced by other actors. Deliberately target those that you have strong negative feelings about (e.g. trading intermediaries) and see if this challenges your preconceived ideas.
- Use exercises such as scenario planning to consider different outcomes.
- Imagine what you would do if you had a totally blank slate. If you did not have a programme with some history behind it, if there were no constraints, if you did not have any financial restrictions on what you could do and you were not working for Oxfam, what would you do?

Box 4: Experiential learning in practice

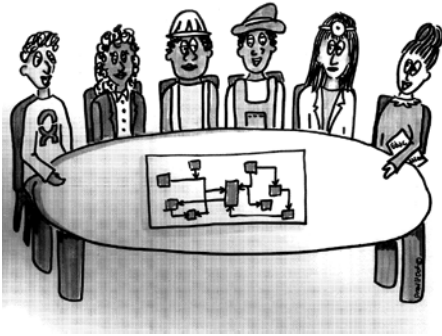
In Nicaragua, UNICEF sent public officials out to try to access the public services they were administering. They even made the men carry 30lb rucksacks to experience what it felt like to be pregnant.

Source: D. Green¹⁸

If you can do this you are more likely to gain a holistic understanding of a system. If this happens, it is more likely that you can identify opportunities for leverage – where an intervention will stimulate a multiplier effect, bringing benefits to many more people. Examples of leverage can be found in the Oxfam paper '[Unlocking Innovation: Enabling and blocking factors in developing innovative programmes](#)'.¹⁹

WORKING MORE WITH OTHERS

Where problems are caused by the interactions of a multitude of stakeholders, this suggests that deep systemic change will require the involvement of many of them. Oxfam already works with numerous other partners and stakeholders. However, to facilitate transformational change, we may need to go beyond our usual partners and allies. The more people from the system we involve, the greater the level of understanding that is possible and the greater the depth of change. This may well mean including stakeholders we would not necessarily work with or agree with. However, ignoring them would result in limiting the scale of the change we can bring about.



It is possible to consider different potential uses of **multi-stakeholder approaches**. These can be used to:

- ensure a holistic approach that limits negative or unexpected impacts – i.e. by allowing us to consider potential impacts in other parts of the systems that we would not necessarily think about otherwise;
- generate new thinking to solve difficult problems by bringing together stakeholders from a diverse range of environments;
- empower women and marginalized people to co-create solutions with more powerful actors;
- generate new types of partnership or bring together actors who do not normally engage;
- create momentum for change by building a constituency that includes a broad range of interests.

Different types of multi-stakeholder processes can be useful in different contexts and at different points in programme development. The role of Oxfam in such processes can also vary.

TACKLING POWER

The use of multi-stakeholder processes inevitably raises the issue of power. Multi-stakeholder processes can be 'power blind', but they do not have to be. There are a number of ways in which we can use a systems approach to create more equal power relations.

We can dedicate time and resources to strengthening the capacity of marginalized groups so that when they participate in multi-stakeholder processes their voices are heard. Women within these groups can be promoted as spokespeople; preparatory processes can focus on identifying women's strategic interests to ensure that women's issues and proposals are highlighted in events and documents. This can be supported by good facilitation. In this way, multi-stakeholder processes can actually help to equalize power relations.



Where power relationships are considered too difficult to involve all necessary stakeholders from the beginning, we can support an initial multi-stakeholder process with a smaller group of stakeholders. This may allow the development of a constituency of organizations that changes the power dynamics in the system, creating a more enabling environment for a broader multi-stakeholder process. Systems analysis can be used to identify power dynamics and strategies for tackling them. Traditional forms of campaigning and advocacy could be important strategies to equalize power relations in order to create a more enabling environment for subsequent multi-stakeholder processes.

A DIFFERENT ROLE FOR OXFAM

Ultimately, systemic change can only ever be driven by stakeholders who are part of the system – i.e. by people living in poverty themselves and the other actors in the system. Oxfam's role in helping this happen can vary.

Facilitation and brokering

Oxfam can play the role of a convenor or broker, by bringing together stakeholders and facilitating a process that generates collaborations and new solutions to the development challenges we face. Managing different stakeholder interests, power dynamics and potential conflicts – while still ensuring that everyone moves towards some common goals – requires significant skill. Meetings need to be facilitated by people who are skilled in managing complex group dynamics. This sort of approach is more likely to work where the problems are relatively narrow and where power imbalances can be managed (and improved). In such situations it is expected that stakeholders themselves will clarify the issues as they see them, identify solutions and commit resources to this. Oxfam may still have an ongoing role, using its resources to add value to what other stakeholders are doing and ensuring pro-poor impacts.

Facilitation in a project

In Tajikistan Oxfam has supported a forum that brings together stakeholders in the water sector to resolve problems and find new solutions.

Read about this facilitative approach in the paper 'Bringing Change to Troubled Waters: How Oxfam is facilitating change in Water and Sanitation Management in Tajikistan.'²⁰

It may not always be appropriate for Oxfam to facilitate this sort of activity directly. Where we lack the capacity to facilitate a process ourselves, we should consider bringing in conveners and facilitators who can do this. But we can also take steps to increase our capacity in facilitation through training and exposure. Section 7 provides some potentially useful organizations and links for readers who want to learn more about facilitation.

Case study: Sri Lanka – An Oxfam country programme that changed tack

The Oxfam Sri Lanka programme traditionally supported the provision of micro-credit. For over 20 years, capital and capacity building support were provided to NGOs in the country. In 2005, a decision was made to adopt a new approach. The traditional model was considered too expensive and there were serious questions about sustainability. In addition the external context had changed: the micro-credit market was saturated and there was little value added just from being another capital provider.

The programme decided to take a more facilitative approach. Since then the programme has been working with civil society, the private sector and government to facilitate links between the formal finance sector and people living in poverty. Oxfam takes a multi-tiered approach – working with civil society organizations to ensure that people living in poverty can be heard in multi-stakeholder processes, influencing private sector practice and supporting government reform of the sector. Multi-stakeholder platforms bring all parties together.

This approach has resulted in a wider range of products being developed for people living in poverty and a larger number of beneficiaries than was possible under the previous 'direct delivery' programme model.

However, time was required to develop buy-in and sufficient capacity among staff and partners. The expectations of 'beneficiary communities' and NGOs who had previously benefited from the old approach also had to be sensitively managed.

Stimulating multi-stakeholder interest

In parts of rural Africa where farmers lack access to the necessary inputs and services to develop productive agriculture, it may be impossible to start a multi-stakeholder process, simply because key stakeholders are not interested. In such situations Oxfam can try direct interventions to stimulate interest. For instance, we could support research that demonstrates the opportunities presented by small-scale agriculture to the private sector, government and other stakeholders. We could support pilot projects designed to help farmers develop more productive agriculture, which could then influence public and private sector actors. We can support participatory processes that stimulate interest across a spectrum of stakeholders (e.g. Vulnerability Rapid Appraisal,²¹ Participatory Market Mapping,²² Rapid Care Analysis²³). All of these approaches could be strategies to create an opportunity for subsequent multi-stakeholder processes. Opportunities to stimulate interest also occur after shocks or disruptions – for instance natural disasters. These can be 'game changers' that create a sudden interest from stakeholders that was difficult to generate beforehand.

Ensuring the effective engagement of people living in poverty

The voices of people living in poverty can easily be lost when multi-stakeholder processes involve large numbers of stakeholders who hold more power and influence. A key and well-understood role for Oxfam can be to strengthen the voice of poor and marginalized groups so that they can engage with and influence the direction of such processes more effectively. This can build on previous empowerment work. It often involves significant capacity development as preparation for engagement with the process. A good example within Oxfam is the Sri Lanka case study featured above. For guidance on strategies to support the development of the capacity of marginalized groups to engage in multi-stakeholder processes, see the Practical Action [PMSD Roadmap](#).²⁴

Playing a direct role

In some cases it can also be appropriate for Oxfam to engage directly with multi-stakeholder processes. This can be particularly relevant when the processes are global or regional in scale; where they are bringing major stakeholders from government and the private sector together; and where Oxfam's strengths in private sector engagement and government influencing add value.

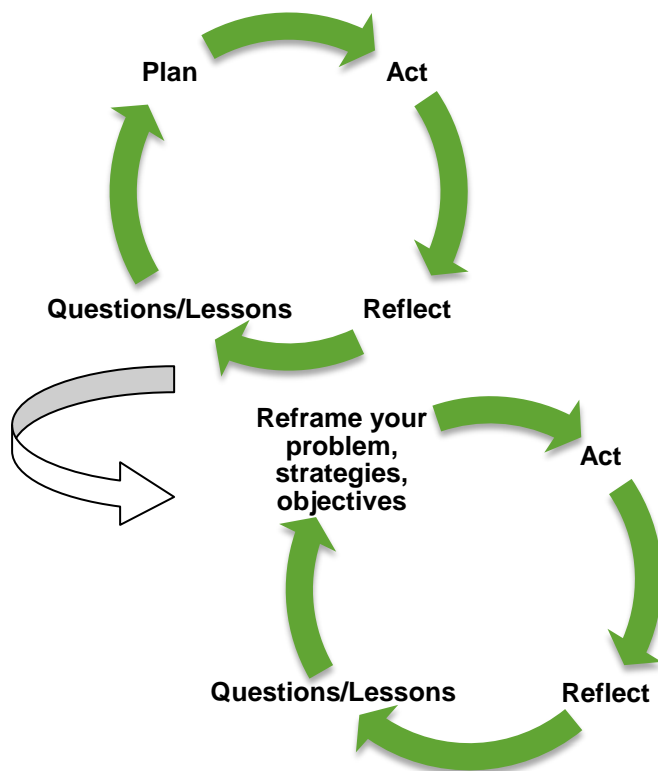
Box 5: Examples of stakeholder engagement

- Oxfam in Asia is a member of the steering committee of the Roundtable on Sustainable Palm Oil (RSPO). This enables Oxfam to influence the content of this multi-stakeholder process and create opportunities for more engagement by producer groups. Read more: <http://www.rspo.org/>
- At the global level Oxfam is a member of the Sustainable Food Lab, an NGO that takes a multi-stakeholder approach involving organizations across the food sector. Read more: <http://www.sustainablefoodlab.org/>

4 ADAPTING AS WE GO ALONG: BEYOND THE LOGFRAME

We are all used to logframes. Logframes encourage us to think that everything can be planned a long time in advance, with a linear set of causes and effects. This approach may be useful for some types of interventions. For instance, if you are building a bridge or a health centre, you can predict exactly what you will need to do at any one point. However, when we are dealing with complex social, economic, political and environmental systems we do not have such high levels of certainty. Complex systems will change in ways we cannot predict. To illustrate this point, think about your own life. Did you develop a big master plan when you were young that you have been following ever since? Did you predict all the things that have happened to you? Or have you instead followed some broad goals and then responded to opportunities and challenges as they have arisen? Alternatively, imagine that a car manufacturer developed a pre-programmed driverless car instead of one that responded to feedback and adapted. What would be the result?

Figure 3: Effective programmes develop through cycles of action and reflection



We believe that in most of our work, our knowledge about how change will take place is limited, and that in reality all we can ever provide is a broad hypothesis of how change may happen. We can use systems analysis to generate hypotheses about how change happens. We then need to find ways to test these hypotheses. This means that programmes need to take an experimental approach. We need to try out things on a small scale, learn from them and adapt and expand when appropriate. Programme development should thus be based on a series of learning cycles that are facilitated by rapid feedback.

An appropriate organizational culture is a key ingredient for this approach to work. We need humility to accept that we are not always right, curiosity to seek out regular feedback and the ability to reflect so we can analyse the implications of what we find out. It also means we have to change our attitude to 'failure'. We should accept that it is inevitable that many of our interventions will not work as planned (see Box 6).

Box 6: Examples of an adaptive approach

Read this [report](#) about a health programme in the northern Karamoja region of Uganda by Engineers Without Borders and MercyCorps, which presents an excellent and short description of adaptive management in practice.²⁵

Link: The Chukua Hatua programme in Tanzania is an Oxfam programme that took an iterative approach to design. The programme experimented with a variety of different approaches to promoting popular participation in governance. After a period, the pilots were reviewed and the most successful ones were provided with continued support. Others were adapted slightly in order to rectify issues and see if they might be more successful, while the less successful ones were stopped. This [case study](#) describes the programme.²⁶ It is also a good demonstration of how donors can be influenced to adopt a more flexible approach to programme design.

Part of being iterative is being opportunistic. In the systems we deal with, the multitude of interactions taking place result in the emergence of new ways of doing things, including new ways of organizing the system itself. Our interventions aim to stimulate the emergence of positive models, but we have to be prepared to accept and respond to unpredictable outcomes. These could be negative outcomes that we need to deal with (e.g. support to the cooperative movement leads to cartels becoming more aggressive; women's employment leads to daughters dropping out of school). Or they could be entirely unexpected outcomes that are positive but not in our plans (e.g. support to cooperatives leads to finance institutions expressing interest in developing collaborative products with them). This illustrates how engagement with a complex system will result in learning that changes our theory of change. We need to be able to respond to these sorts of opportunities and challenges.

Box 7: Failing for the right reasons

Failure can happen for different reasons. It can be caused by poor programme design – for example, when we do not fully understand the system. It can be caused by poor programme implementation – perhaps because of a lack of capacity to deliver effectively. However, an element of failure is also inevitable if we are testing hypotheses, as in the Chakua Hatua case study described in Box 6. In such examples, failure is a critical part of learning and of improving programme design. For this to happen it is important that we:

- are failing because we are testing hypotheses, not because of poor design or delivery;
- fail quickly – i.e. we do not wait a long time to learn and adapt, and we move on before too many resources have been wasted;
- fail safely – i.e. the programme is designed so that this failure does not jeopardize anything or anyone.

Getting senior management buy-in for this new attitude will be critical, as well as influencing the donors we work with. However, the Chakua Hatua example shows that both can be achieved.

Independently of our interventions, contextual changes can provide an opportunity that we can take advantage of to 'shake up' the system. These could include technological change (e.g. the rapid rise in mobile phone use, which has led to applications such as 'mobile money'), social movements, natural disasters and new business models of large firms. There are examples where tragic situations – such as the spate of farmer suicides in India linked to increasing indebtedness – have created transformational opportunities to mobilize a diverse range of actors.

Box 8: Further reflection

Reflect on your programme: do you see unexpected opportunities arising as a result of your interventions? Do you see transformational opportunities not related to your programme? Are you able to take advantage of these? If not, what is holding you back and what can you do to change this?

Watch this [short video](#) by 24 Reasons Consulting on single-, double- and triple-loop learning.²⁷

5 IMPROVING HOW WE THINK ABOUT AND MONITOR CHANGE

'Before you disturb the system in any way, watch how it behaves. Learn its history. Ask people who've been around a long time to tell you what has happened....learn to dance with the system'.

Donella Meadows²⁸

A number of models or ways of thinking about systemic change can help us to think through our own theories of change and our MEAL (monitoring, evaluation, accountability and learning) processes.

There are different levels of systemic change, or 'systems-level' change. A change in policy can represent a systemic change, but a change in government will represent a much deeper systemic change, and a change in the values of society an even deeper change again. The level of change that an intervention can realistically target may vary with location. The deepest form of systemic change occurs when change pervades all parts of the system, and the inter-relationships and dependencies between actors reinforce that change. If change takes part in one bit of the system but not in others, then it is a more shallow change. It may be less transformational, smaller-scale and more short-term as a result – although it may still be a realistic level of change in the circumstances.

For example, changing the skills of local extension agents may be a realistic level of change for an agricultural support programme to achieve. However, this achievement can be undermined by change in another part of the system. A change in national government priorities may result in the same extension agents reducing their support to the small-scale farmers your programme was intended to help.

A useful model that explores these issues is the AAER (Adopt Adapt Expand Respond) model.²⁹ This has been used to explore the nature of change within market systems and in initiatives involving the spread of community climate change innovations. It can be used to support MEAL processes that aim to assess progress in changing systems. It also helps us to consider different levels of change. It articulates the following typology:

- **Adopt:** Stakeholders you are working with adopt the model. For instance, the extension agency you partner with implements a new package on organic agriculture that was developed in the programme.
- **Adapt:** Stakeholders demonstrate ownership by developing the initiative further, independently of you. The extension agency adds elements to the curriculum and tries it out in new areas.
- **Expand:** Other stakeholders copy the model. Other extension agencies introduce the organic agriculture package.
- **Respond:** Other stakeholders in the system respond with changes that reinforce the position of the original change. The government introduces a policy to promote organic agriculture. Finance providers respond with products specifically for organic agriculture. Research institutes develop a new agenda looking at organic agriculture.

Box 9: Consider an intervention in your programme that aims for systemic change

- Where is your intervention situated within the AAER typology?
- Which types of change have you seen?
- What can you do to encourage a shift to the Expand stage or to the Respond stage?

6 CONCLUSIONS AND RECOMMENDATIONS

'Systems thinking is an important discipline for Oxfam. If we can think and act systemically we can tackle deep underlying causes of poverty and have a transformational and long-term impact. The advent of systems thinking as a discipline in mainstream development practice provides new opportunities (e.g. tools, approaches, thinking) to increase our understanding of the systems in which we operate and the role of power within them'.

Oxfam response to Reos Partners review of systems thinking in Oxfam's economic justice work, March 2014³⁰

Systems thinking is not a magical solution that will solve every problem we are faced with. In many situations, simple, technical and even small-scale solutions will be appropriate. However, the nature of poverty in an increasingly complex world means that the application of systems thinking across much of our work will provide Oxfam with an opportunity to increase the scale and the depth of our impact.

Oxfam has been developing systems analysis and its approach for some time. Although some programme examples represent excellent cutting-edge work, more can be done to ensure that systems thinking underpins our work everywhere. For this to happen, we need to foster changes in our mindsets, work culture, partnerships and skills. Changes are needed both at the level of programmes and at multiple levels across the organization. Oxfam will only become a cutting-edge leader of systems thinking approaches when the organization itself creates an environment and culture that are conducive to this. To achieve this change, actions are needed from a number of different groups of staff.

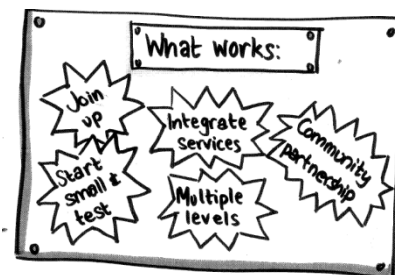
RECOMMENDATIONS FOR PROGRAMME STAFF

1. Find ways to challenge your pre-existing ideas, deepen your understanding of the system and see the perspective of others. A key way to do this will be to consult with other stakeholders when you are exploring a system or designing a programme. Make sure that women's organizations are involved and women's perspectives are visible. Don't just focus on the 'usual suspects' – the organizations and individuals you usually talk to. Go out of your way to consult with stakeholders you disagree with or who you do not usually involve. Bring groups of stakeholders together and see what ideas or perceptions emerge.
2. Put in place resources, time and mechanisms to obtain feedback, stop, reflect, discuss, express doubts, share insights, acknowledge failures and successes, and in so doing, learn. Use this learning regularly to challenge your programme logic chains and, if necessary, to change course. This is the basis of adaptive management. Adaptive management allows your programme design to evolve as you learn more about what is happening in the system.

3. Look for routes to system change from the outset. Use a deep understanding of the system to identify leverage points that will enable you to stimulate change on a large scale. Recognize that you don't need to start with large-scale change. Programmes that start small, that allow learning and that bring together stakeholders from across the system can leverage change at scale.
4. Don't be dogmatic. If stakeholders in the system move things in a direction different to your plans, don't resist this. Go with the flow, and build on this locally-owned change. Be pragmatic.

RECOMMENDATIONS FOR MANAGERS

1. Recruit staff with stakeholder management and adaptive skills – do not base recruitment simply on technical ability.
2. Create space for innovation and adaptability. Systems thinking will not thrive if front line programme staff are not empowered to influence decisions about programme design. Rigid hierarchies and dogmatic positions will prevent this.
3. Ensure that other parts of the organization understand the significance of these issues and do not undermine this enabling environment. For instance, ensure that the voices of front-line programme staff are heard in management forums. Work with funding teams to ensure that they integrate adaptive programme design into proposals and involve programme and advisory teams at early stages in programme development.
4. Ensure that when new programmes are designed, they contain built-in opportunities to integrate systems thinking approaches. Ensure that women's rights are at the heart of the change process. Use new programmes or new funding as an opportunity to develop new experience and capacity.
5. Encourage a culture that recognizes that an element of 'failure' is inevitable, but ensure that teams develop programmes in which failure happens quickly and safely.
6. Influence your donors and other influential organizations to understand and support this approach.



RECOMMENDATIONS FOR ADVISERS

1. Help programme staff understand basic concepts and language so that ideas can be shared and joint discussion can be facilitated.
2. Work with staff to collate relevant case studies that showcase learning related to the use of systems thinking. Disseminate these. Do not simply focus on 'good practice' examples – also identify learning from initiatives that have not succeeded. Make sure that risks for women and marginalized people are identified and addressed in the design of the process.

3. Work with MEAL staff to support the development of approaches that facilitate adaptive programming. Ensure that learning about adaptive programming, including on how to support programme staff, is carried out systematically and informs how you operate.
4. Support programme staff to develop the capacities they need to do systems thinking. Introduce them to relevant tools and learning opportunities. Ensure they have access to the experiences of processes that brought about women's leadership and participation. Directly support staff skills development where appropriate, but also help staff to find locally available technical support when necessary (e.g. facilitation services). Connect them with other Oxfam staff with relevant experience.

7 ANNEXE: USEFUL RESOURCES

General – overviews of systems thinking

- A short article by Daniel Aronson:
http://www.thinking.net/Systems_Thinking/OverviewSTarticle.pdf
- Watch this Open University (UK) introduction to systems thinking:
<http://www.open.edu/openlearn/science-maths-technology/computing-and-ict/systems-computer/systems-thinking-and-practice/content-section-0>
- If you have more time, read *Thinking in Systems: A Primer*, by Donella Meadows (2008, Chelsea Green Publishing): <http://www.chelseagreen.com/thinking-in-systems>
- Oxfam's From Poverty to Power blog includes numerous articles about systems thinking. Here are two examples:
 'Systems thinking and the role of INGOs', April 2015: <http://oxfamblogs.org/fp2p/fit-for-the-future-systems-thinking-and-the-role-of-international-ngos/>
 'Review of Donella Meadows', August 2013: <http://oxfamblogs.org/fp2p/how-to-think-in-systems-great-and-accessible-and-short-book/>

Tools for understanding systems

- **Problem tree analysis:** This helps you go beyond symptoms and get to the root causes of problems. It forces you to consider what other factors or parts of the system will influence the problem. It helps you to dig deeper, although it does not give you a picture of the whole system. Details can be found here: <http://www.odi.org/publications/5258-problem-tree-analysis>.
- **Power analysis:** This helps you understand who the different actors in a system are and how they relate to each other. It helps you identify interventions with potential to change power relationships. For example, see Oxfam's quick guide to power analysis: <http://policy-practice.oxfam.org.uk/publications/quick-guide-to-power-analysis-313950>.
- **GEM Toolkit:** This Oxfam resource provides a means to develop a big picture understanding of household, farm and market systems. The gendered market mapping process within GEM enables you to analyse market systems from the perspective of women and identify opportunities to increase women's influence and benefits within the system. See <http://growsellthrive.org/group/gem-toolkit>.
- Other tools you can explore include these analyses of social networks, stakeholders and political economies: 'Planning Tools: Stakeholder Analysis' (ODI, 2009) and 'How Politics

and Economics Intersect: A simple guide to conducting political economy and context analysis' (Oxfam, 2014).

Facilitation resources

- Practical Action has developed resources to support the facilitation of participatory market mapping: <http://www.pmsdroadmap.org/step-6-participatory-market-mapping.html>.
- The Market Facilitation Initiative (MaFI) is a network of practitioners involved in market development facilitation. MaFI provides a range of resources and discussions and also hosts a good forum for posting challenges and promoting learning: <http://www.seepnetwork.org/mafi--the-market-facilitation-initiative--pages-10037.php>.
- Meeting guidance: There are numerous resources available on the Art of Hosting website: <http://www.artofhosting.org/what-is-aoh/methods/>.

Measuring change in systems

- Business, Enterprise and Markets (BEAM) is a platform supporting learning and development of market systems approaches. The following BEAM webinar provides some examples of systems change in market systems: http://www.beamexchange.org/en/webinar/systemic_change_webinar/.
- 'Making sense of messiness' is a very readable description of how measuring systemic change has been approached in a programme in Nepal: <http://www.seepnetwork.org/making-sense-of--messiness---monitoring-and-measuring-change-in-market-systems--a-practitioner-s-perspective-resources-495.php>.
- The Donor Committee for Enterprise Development (DCED) Standard (see also below) is another useful resource: <http://www.enterprise-development.org/page/measuring-and-reporting-results>.

Adaptive management

- BEAM webinar on adaptive management in aid programmes: http://www.beamexchange.org/en/webinar/adapt_webinar/.
- Sir Ken Robinson's TED Talk on creativity in schools explores the role of adaptive management and the importance of failure: http://www.ted.com/talks/ken_robinson_says_schools_kill_creativity?language=en#t-856853.
- For a longer, articulate description of the importance of failure, read Tim Harford's excellent book: *Adapt: Why Success Always Starts with Failure* (2008, Farrar, Straus and Giroux). <http://timharford.com/books/adapt/>.
- To see what adaptive management might look like in practice, read this report by Engineers Without Borders and MercyCorps: 'Navigating Complexity: Adaptive Management at the Northern Karamoja Growth, Health and Governance Program'. http://beamexchange.org/uploads/filer_public/87/64/876420f8-2871-4417-89be-53c6de06db0e/navigatingcomplexity2014.pdf.

NOTES

- ¹ See Aronson, D. (1996) 'Overview of systems thinking' http://www.thinking.net/Systems_Thinking/OverviewSTarticle.pdf and Barder, O. Complexity and Development blog: <http://www.owen.org/blog/5723>
- ² Oxfam (2015a) 'Systems Thinking' <https://www.youtube.com/watch?v=WfyWgp95kgA&feature=youtu.be>
- ³ Oxfam GEM Toolkit <http://growsellthrive.org/group/gem-toolkit>
- ⁴ Oxfam 'Resilience Programme Policy Guidelines'. Internal document.
- ⁵ Oxfam Raising Her Voice programme <http://policy-practice.oxfam.org.uk/our-work/citizen-states/raising-her-voice>
- ⁶ Oxfam (2014) 'National Influencing Guidelines'. Internal document.
- ⁷ Heifetz, R. A. and Laurie, D. L. (1997) 'The work of leadership', *Harvard Business Review*, January–February. Available at: <http://www.groupsmith.com/uploads/file/technical%20problems%20vs%20%20adaptive%20challenges.pdf> Last viewed, 27/08/2015
- ⁸ Oxfam 'Our goals and values' <http://www.oxfam.org.uk/what-we-do/about-us/how-we-work/our-goals-and-values>
- ⁹ Africa Climate Change Resilience Alliance, 'The ACCRA Local Adaptive Capacity framework' http://community.eldis.org/.59d669a7/ACCRA%20Local_Adaptive%20Policy_new.pdf
- ¹⁰ Ibid.
- ¹¹ Meadows, D. (2008) *Thinking in Systems: A Primer*, Thinking in Systems: A Primer, Vermont: Chelsea Green Publishing. <http://www.chelseagreen.com/thinking-in-systems>
- ¹² In this podcast, Harvard professor Ronald Heifetz urges heads of state to think less like surgeons, more like psychiatrists: 'Lessons in leadership: It's not about you. (It's about them)', available at <http://www.npr.org/player/v2/mediaPlayer.html?action=1&t=1&islist=false&id=230841224&m=244452973>
- ¹³ Oxfam (2013a) 'The reality of change: Strengthening our impact by reflecting on and applying our theory of change'. Internal Oxfam guidance, November 2013
- ¹⁴ Practical Action, 'PMSD Roadmap Step 6: Participatory Market Mapping', <http://www.pmsdroadmap.org/step-6-participatory-market-mapping.html>
- ¹⁵ Oxfam GEM Toolkit, op. cit.
- ¹⁶ Details of this experience are available in an e-discussion of the Market Facilitation Initiative (MaFI). This is a closed group so you will only be able to see this if you are a member of MaFI. Discussion here: https://www.linkedin.com/groupItem?view=&gid=2441757&type=member&item=5874234905533100036&trk=groups_items_see_more-0-b-ttl
- ¹⁷ Simons, D. and Chabris, C. (1999) 'Selective Attention Test' <https://www.youtube.com/watch?v=vJG698U2Mvo>
- ¹⁸ Green, D. (2015) personal communication
- ¹⁹ Oxfam (2015b) 'Unlocking Innovation: Enabling and blocking factors in developing innovative programmes in Oxfam GB' <http://policy-practice.oxfam.org.uk/publications/unlocking-innovation-enabling-and-blocking-factors-in-developing-innovative-pro-558453>
- ²⁰ Oxfam (2013b) 'Bringing Change to Troubled Waters: How Oxfam is Facilitating Change in Water and Sanitation Management in Tajikistan' <http://policy-practice.oxfam.org.uk/publications/bringing-clarity-to-troubled-waters-how-oxfam-is-facilitating-change-in-water-a-302430>
- ²¹ Oxfam 'Vulnerability and Risk Assessment (VRA)', part of Oxfam's GROW campaign. <http://growsellthrive.org/page/vulnerability-and-risk-assessment-vra>
- ²² Practical Action, op. cit.
- ²³ Oxfam (2013c) 'Participatory Methodology: Rapid Care Analysis' <http://policy-practice.oxfam.org.uk/publications/participatory-methodology-rapid-care-analysis-302415>
- ²⁴ The PMSD Roadmap is a structured sequence of steps designed and maintained by Practical Action to inspire, guide and train practitioners on how to facilitate Participatory Market System Development (PMSD) on the ground. <http://www.pmsdroadmap.org/>
- ²⁵ Engineers Without Borders and MercyCorps (No date) 'Navigating Complexity: Adaptive Management at the Northern Karamoja Growth, Health and Governance Program' http://beamexchange.org/uploads/filer_public/87/64/876420f8-2871-4417-89be-53c6de06db0e/navigatingcomplexity2014.pdf
- ²⁶ Oxfam (2015c) 'The Chukua Hatua Accountability Programme, Tanzania' <http://publications.dlprog.org/cs-tanzania-accountability-160115-en.pdf>
- ²⁷ 24 Reasons Consulting (2008) 'Single, Double & Triple Loop Learning' <https://www.youtube.com/watch?v=Nn3NqvStekY>
- ²⁸ Meadows, D. (2008), op. cit.

- ²⁹ Nippard, D., Hitchins, R., and Elliott, D. (2014) 'Adopt-Adapt-Expand-Respond: a framework for managing and measuring systemic change processes' <http://www.springfieldcentre.com/wp-content/uploads/2014/06/2014-03-Adopt-Adapt-Expand-Respond-Briefing-Paper1.pdf>
- ³⁰ Oxfam (2014) Leverage and systems: current status of practice and thought: An assessment to support the development of guidance and resources for practitioners in Oxfam. Internal document.

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