ESPA guide to working with Theory of Change for research projects

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'Impact is at the heart of ESPA. ESPA's research will improve the lives of poor people in developing countries by filling knowledge gaps that currently limit the way that ecosystem services contribute to the alleviation of poverty. The ESPA programme will ensure that this new knowledge is used to deliver significant and sustainable development impact.' ESPA Website

1. Summary

This guide is for Ecosystem Services for Poverty Alleviation (ESPA) research projects. Its purpose is to support Principal Investigators and research teams who wish to work with a theory of change approach when developing their pathways to impact and impact strategies. It may also be of use to other research programmes with a similar approach to ESPA.

ESPA researchers need to achieve academic excellence and support development impact through their research. ESPA researchers face the additional question of how to define, plan for and track the impact of their research on the development context (ESPA 2012).

Theory of change is being used by some research funders as an approach to develop more detailed 'pathways to impact' for research projects. Theory of change can help to strengthen the planning, implementation and evaluation of impact strategies for an impact-oriented research project.

For ESPA and other research programmes, theory of change helps research teams to map out the anticipated links between their research project, the issues and context they are seeking to influence, and the longer-term social, development and environmental outcomes that are the purpose of the overall ESPA programme.

What is theory of change?

Theory of change is both a process and a product (Vogel 2012). At its simplest, theory of change is a dialogue-based process intended to generate a '*description of a sequence of events that is expected to lead to a particular desired outcome.*'[1] This description is captured in a diagram and narrative to provide a guiding framework for the project team and stakeholders.

Theory of change starts from a baseline analysis of the context and issues. It then maps out the logical sequence of changes that are anticipated as being necessary amongst stakeholders and in the contextual conditions to support the desired long-term change.

This sequence forms the 'pathway' towards impact. Making the links between a research project and development and environmental outcomes explicit and critically analysing them through a theory of change process helps to support more rigorous impact planning, implementation and impact assessment.

Theory of change is most effective when it is used throughout the project cycle, from the outset of the research design. The theory of change framework for the project can then help to guide stakeholder engagement approaches, communication, influencing and co-production strategies, and monitoring and tracking progress towards impact within the lifetime of the project.

The theory of change can also be used to support discussions and decision-making with funders, communities and other project stakeholders throughout the project cycle.

As it encourages on-going questioning of what might influence change in the research context and draws on evidence and learning during implementation, theory of change thinking helps the project team to respond changes in the context, as part of adaptive management.

[1] Rick Davies, April 2012: Blog post on the criteria for assessing the evaluability of a theory of change http://mandenews.blogspot.co.uk/2012/04/criteria-for-assessing-evaluablity-of.html

Developing a theory of change requires discussion between the research team and stakeholders of the following elements (in order):

1. the **context** for the initiative, including social, political and environmental conditions, the current state of the problem the project is seeking to influence and other actors able to influence change;
2. the **long-term change** that the initiative seeks to support and for whose ultimate benefit;
3. the **sequence of events** anticipated (or required) to lead to the desired long-term outcome;
4. the **assumptions** about how these changes might happen, and about contextual conditions that may affect whether the activities and outputs are appropriate for influencing the desired changes in this context;
5. a **diagram and narrative summary** that represents the sequence and captures the discussion.

The mapping of the sequence of events is strengthened by critical thinking about the contextual conditions that influence the project, the motivations and contributions of stakeholders and other actors, and the different interpretations (assumptions) about how and why that process of change might come about (Stern et al. 2012).

The main benefit of theory of change comes from making different views and assumptions about the change process explicit, especially seemingly obvious ones. The purpose of doing so is to check they are appropriate, debate them and enrich them to strengthen project design and implementation.

For this reason, theory of change as a process emphasises the importance of dialogue with stakeholders, acknowledging multiple viewpoints and recognition of power relations, as well as political, social and environmental realities in the context.

What does 'theory of change' mean for researchers?

ESPA is one of the new programme initiatives combining funding from the UK Research Councils and the Department for International Development. As such, they share a commitment to ensure that their joint research programmes deliver outcomes to help research on ecosystem services and poverty alleviation be used effectively to improve the lives of poor people in developing countries. This requires a very active role for ESPA-supported researchers, not only in producing high-quality evidence, but in helping to kick-start the process of getting research taken up and used in development processes that will help bring about change.

There are a number of reasons why researchers should consider working with theory of change. These include:

- Some large research projects will be required by funders to develop a theory of change to expand their plans articulated through the pathway to impact in their research application. This document outlines how to start this process.
- As the ESPA programme has an established theory of change, Principle Investigators are required to ensure that their pathway to impact considers how the project's research will contribute to the programme's overall achievement through its theory of change.
- Any research project can chose to develop their own theory of change (even if it is not a programme requirement) if researchers feel that this would aid in the implementation of their research and delivering impact.

This guide will explain what the theory of change approach is about, its benefits and uses. It will explain the key conceptual and practical points to consider for developing, working with and indeed challenging and testing the theory of change throughout the lifetime of a project. It will also outline

how to develop a theory of change that is of high-quality but is tailored to the context and needs of research projects.

Structure of the guide

The guide is divided into three sections. Sections A and B offer a tailored approach for ESPA research teams. Sections C and D present practical tips and resources for those wishing to learn more about theory of change.

A. Theory of change and research projects

B. Developing theories of change for research projects

C. Practical approaches to developing a theory of change

D. Tools, resources and sources

A. Theory of change and research projects

'*Theory of change is an on-going process of reflection to explore change and how it happens – and what that means for the part we play in a particular context, sector and/or group of people.*

- *It locates a programme or project within a wider analysis of how change comes about;*
- *it draws on external learning about development;*
- *it articulates our understanding of change – but also challenges us to explore it further;*
- *it acknowledges the complexity of change: the wider systems and actors that influence it;*
- *it is often presented in diagrammatic form with an accompanying narrative summary.*'

(James 2011)

Key points:

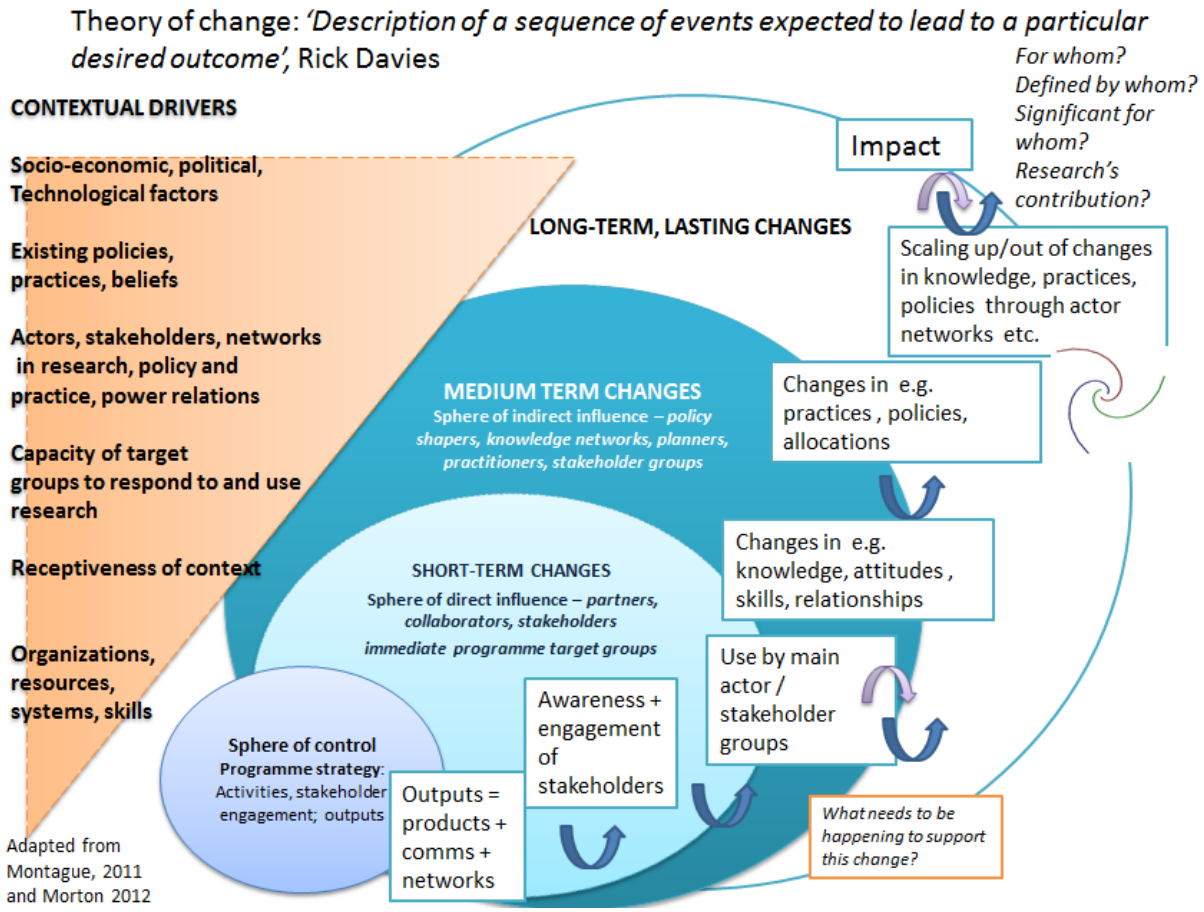
1. **'Theory of change' is a structured process to help develop a description of how research links to development outcomes.**
2. **Theory of change helps to build an impact-orientation to guide research design.**
3. **Theory of change draws on evaluation and social change traditions, combining logical process mapping with critical reflection on assumptions, interpretations and worldviews.**

A.1 What is 'theory of change'?

As previously mentioned, theory of change is both a process and a product. Theory of change is helpful for research projects because research influences impact through non-linear and iterative pathways. Thinking through from the outset how research evidence could potentially be translated, taken up and applied by networks of actors in different country contexts can strengthen the design of the whole research process, including the engagement and research-into-use activities that are required to enhance its chances of having influence and impact.

Section B will discuss these elements in turn, highlighting issues and suggesting key questions to guide research teams in their analysis when developing a theory of change. Section C offers advice on the practical aspects of developing and applying a theory of change.

Figure 1: visual illustration of the main elements to consider in a theory of change analysis



A2. Why is theory of change relevant for research projects?

Theory of change is not an add-on to the research design. It helps project teams to develop an integrated conceptual framework for impact that brings together the issue context, the research project, intended users and research-into-use strategies. This supports the focus of the research design on building the links to development outcomes and longer-term impact.

Theory of change is particularly useful for international development research projects that combine research generation with stakeholder engagement and research-into-use activities, like ESPA projects. In these projects, expected outputs are not only research findings and evidence products, but also the communications and networking activities that are needed to support the research being used by key stakeholders.

For research evidence to be considered in policy and programme decision-making, it needs to be supported by a range of research-into-use strategies and activities. Work on research impact by the UK Research Councils and other studies into evidence use[2] suggest that the influence of research outputs is strengthened if the research team:

- understand the priorities and challenges being faced by stakeholders in the geographical and issue context so that these considerations inform their research design;

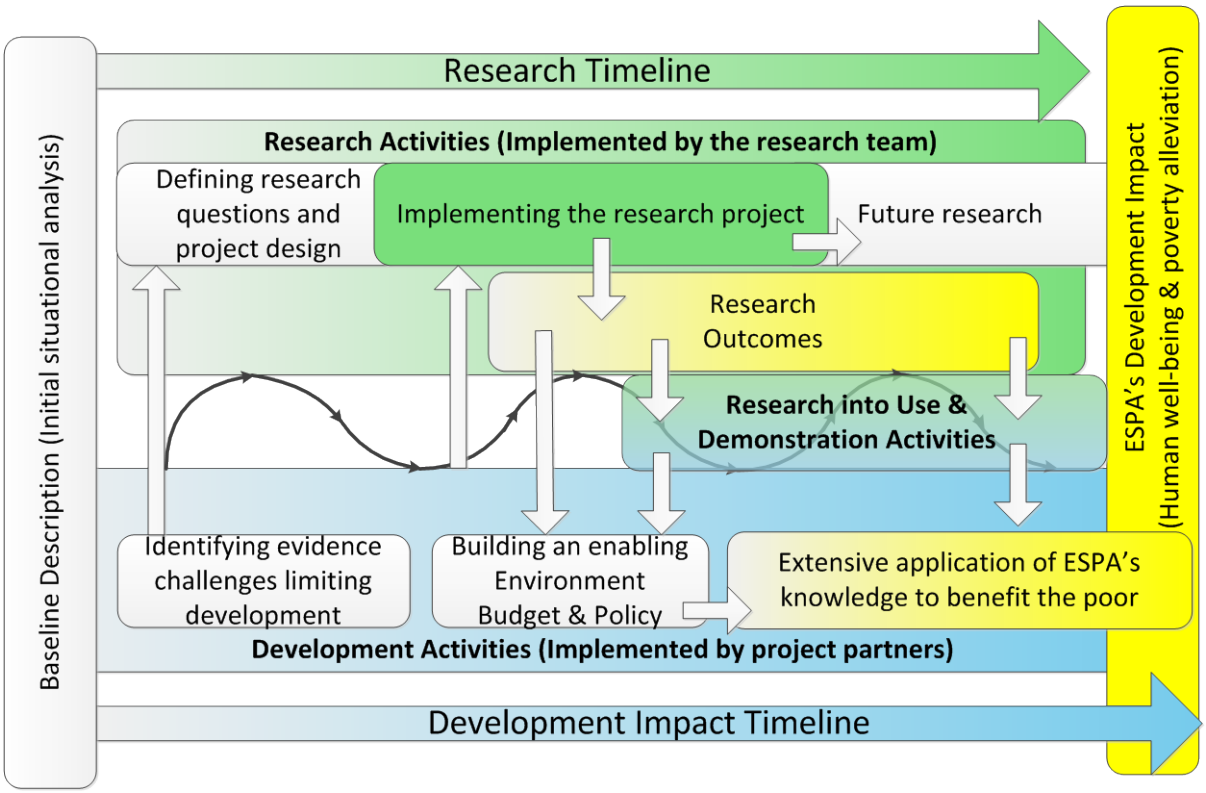
[2] ESRC Impact Toolkit; http://www.esrc.ac.uk/funding-and-guidance/tools-and-resources/impact-toolkit/index.aspx; Nutley et al. 2007; http://www.odi.org.uk/work/programmes/rapid/default.asp

- have established relationships and connection points to programmes, local communities or policy bodies, as appropriate;
- understand the opportunities for research to play a role, for example, at review points, strategy or policy development or the start of new phases; and
- can develop a broad set of engagement and influencing approaches that are appropriate to the context, for example, face-to-face learning workshops to support the development of applications of their research, briefing papers in local languages or collaborations with local research institutes to develop further models or applications of the evidence.

Many research teams already do these kinds of activities in the spare time around projects. Theory of change analysis encourages projects to make these activities a visible and integrated part of the research project and to allocate resources to ensure that this happens.

The ESPA Impact Strategy shows how the research impact process is intertwined with the development impact process. Research teams should include planning of activities to build the networks and partnerships for impact in their research design.

Figure 2: Timelines for research and development impact in a generic ESPA project



A3. Where does theory of change come from? A brief history

Theory of change, although perhaps new as a mainstream approach, is not new. The current evolution draws on two streams of development and social programme practice: evaluation and informed social action.

From the evaluation perspective, 'theory of change' is from the area that deals with programme theory. This is a long-standing area of evaluation thought, developed from 1960s onwards. Programme theory approaches urge a more explicit focus on the theoretical underpinnings of projects, clearer articulation of how programme planners view the linkages between inputs and outcomes, and how projects are intended to work (Funnell and Rogers 2011; Van der Knapp 2004;

Weiss 1995; Chen 1990). The Logical Framework approach, familiar to those working in international development, comes from the programme theory family.

The spread of the particular strand of programme theory that is known as 'theory of change' has been influenced by the seminal practical guidelines, '*The Community Builders' Approach to Theory Development'* that were developed by Anderson (2005) as part of the Aspen Institute's 1990s initiative that involved evaluators and community development programmers in applying programme theory concepts to the evaluation of complex community initiatives (Connell and Kubisch 1998).

These remain the best-known source of guidelines on how to approach the development of programme theory as a basis for design and evaluation of projects and programmes. In the late 1990s, the U.S based evaluation social enterprise ActKnowledge partnered with the Aspen Institute to establish a practical, theory of change-based evaluation service to social programmes and continues to be one of the leading providers, with a well-defined methodology.

James' review (2011) on the use of theory of change highlights the presence of another influence, equally long-standing. Since the 1960s, empowerment approaches for social change and participatory approaches have advocated a conscious reflection on different interpretations of development situations, especially the perspectives of poor and marginalised people themselves. In these approaches, reflecting on change is in itself an empowering process, building an awareness of how to influence change (see for example, Freire 2000).

At its most effective, theory of change combines the logical mapping of the sequence of change and a deeper reflection on the underlying assumptions, theories and worldviews informing the project. This may explain why such a wide range of organisations, from donor agencies to small civil society organisations, have found theory of change thinking a useful approach for exploring and clarifying their thinking about change and how they contribute to it in a particular context.

B. Developing theories of change for research projects

Key points:

1. Theory of change is most effective when used to frame the research design from the outset.

2. A four-stage process can be used to develop a project's theory of change.

3. Making assumptions explicit is the essence of theory of change, but accessing assumptions takes dialogue, critical reflection and time.

B1. When to develop a theory of change?

Theory of change is most effective when it is used right from the start of the research design process. In preliminary project design stages, theory of change can help to focus on the issue the project is seeking to influence, the context and the stakeholders involved.

Identifying and involving stakeholders in appropriate ways in the scoping and design of the project is essential to strengthen the impact potential of the research. Using theory of change can be a helpful way to structure discussions with stakeholders about their perspectives on the issues, their priorities and to develop an understanding of the opportunities for research to influence change in the context.

Understanding stakeholders' agendas, their networks and potential needs for evidence – both acknowledged and unacknowledged – provides an important foundation for research questions. Starting with an analysis of the context ensures that research questions are relevant for stakeholders and have the potential to generate evidence that can inform the issues.

Many theory of change practitioners recommend having a printed version of the theory of change diagram on display so that it can be referred to often in meetings. Some teams map research questions onto theory of change to help them ensure that the project is addressing all the relevant processes in the research strategy.

B2. How to develop a theory of change

The stages that should be followed as part of a theory of change analysis are outlined in the sections below. These elements should be addressed in order, as stages in the theory of change process:

Stage 1: Context for the initiative: analysis of the current state of the problem the project is seeking to influence, the social, political and environmental conditions, and other actors able to influence change.

Stage 2: Long-term change: a statement expressing the long-term change that the initiative seeks to support, from whose perspective it is significant and for whose ultimate benefit.

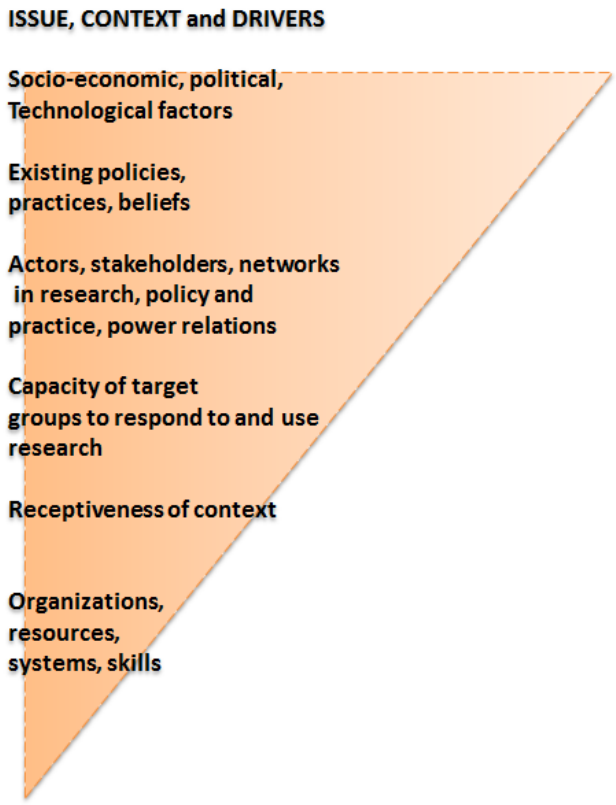
Stage 3: Sequence of events: mapping the sequence of changes that lead to the desired long-term outcome.

Stage 4: Assumptions: critical reflection on the change process, making explicit the analytical perspectives on change, the drivers of change and expressing the underlying hypotheses about how these changes could come about. The purpose of making these assumptions explicit is as a check on whether the activities and outputs are appropriate for influencing change in the desired direction in this context.

Stage 5: Diagram and narrative summary: creating a diagram and narrative that represents the sequence and captures the discussion.

Stage 1: Analysing the context

Figure 3: Issues to consider in a context analysis



The first stage in theory of change starts with an analysis of the context for the project and the issue which gives the project its rationale. This should include an overview of the current state of the problem or issue and how it affects local ecosystems and populations. Reviewing the available evidence on the context and issues is also helpful and can be integrated into the research design.

Figure 2 illustrates some of the issues to consider in a context analysis. There are many aspects of the context that the project team may wish to consider. Three major aspects of the context should be analysed as a minimum:

1. baseline analysis of the problem and issue;

2. mapping of actors, stakeholders and power relations in the context;

3. the receptiveness of stakeholders in the context to new evidence on the issues.

These are outlined below, and some examples of key questions to guide the analysis are given.

Context Step 1: Baseline analysis of the problem and issue the project seeks to influence

Developing a baseline analysis of the problem that gives rise to the project has two benefits. It builds a contextual rationale for the research design, ensuring that it is focused on the most relevant issues. It also strengthens monitoring and evaluation of impact by building in a baseline from the outset.

Key questions to consider in the baseline analysis include:

What are the issues? Which ecosystems are affected? Which communities are affected (individuals, households, groups, communities, geographical locations)? What are the key issues they face? What are the key ecosystem pressures? What are the relevant poverty indicators and trends in this context? What are the main social, political, economic and technological factors that influence the issue in this context?

Context Step 1 generates information on the following issues:

- the current situation, how issues currently affect people, communities, and ecosystems, existing evidence on the drivers and factors of problems in the issue area or geographical context;

- poverty status of affected groups, past and future trends;
- ecosystem service status in the study area, past and future trends; and
- potential baselines for macro-level contextual issues from which to track impact.

Context Step 2: Actors, stakeholders, networks and power relations in the context

One of the most significant aspects of the context is the array of institutions, actors and stakeholders active in it. The research team and project are also part of this landscape.

This step is important because research is also only one contributor to change. Others include stakeholder behaviours, political agendas, contextual and environmental conditions. As ESPA's Impact Strategy explains, a wider package of knowledge, skills and investment is required to put research into use.

The research project is likely to have its greatest potential for influence on the knowledge, attitudes, behaviours and relationships amongst key stakeholders. These changes may then indirectly influence changes at the macro level in the longer term.

It can be helpful to identify where a research team itself is located, as an actor in its own right in the context, in order to identify potential collaborators and influencing partners. For example, champions for change are important for extending the influence of the project beyond the immediate team. This is particularly relevant where disciplinary and geographical boundaries need to be bridged around ecosystems services issues (ESPA 2012).

Therefore, an analysis of the current configuration of stakeholders, networks and alliances, as well as current agendas and approaches to tackling the issue gives the project a strong basis for identifying champions. Such analysis can also contribute to a baseline from which to target and track important changes in stakeholders' attitude and behaviours in the short-term as precursors to longer-term change.

Vague terms such as 'policymaker' should be avoided. It is important to be specific in this analysis. Stakeholders are likely to be active in different sectors and settings, and might include research–policy networks, state institutions, business and enterprise, state and non-state implementers of initiatives, local communities and their organisations. An analysis of the stakeholders and actors relevant to the issue and context may need to cover, for example:

- identifying formal agencies involved in local environmental governance arrangements and understanding the role of regulatory bodies and oversight bodies;
- clarifying the influence and jurisdiction of different stakeholders (e.g. transnational management boards for multi-country river basin management);
- understanding the influence of community-led formal and informal practices and environmental governance arrangements;
- mapping the connections and networks between public and private sector stakeholders.

A key factor to analyse is the existing capacity for stakeholders to respond to and use research evidence. Bridging activities in which the research team collaborates with partners to build capacity to respond to and use research may be needed, for example co-production of applications of research with local stakeholder groups (see ESPA 2012). This analysis will inform the communication and relationship-building strategies that the project will need to consider.

To keep the stakeholder analysis manageable, research teams should aim to identify up to eight priority stakeholders.

Key questions to consider in the stakeholder mapping include:

What is the political and governance landscape like? Who can influence the key desired changes above? Who owns the decisions that really have an impact on the context? What are their incentives, drivers and agendas?

What are the current positions and alignments amongst key stakeholders and institutions? What are the existing policies, practices, attitudes and beliefs about the issue? What are the power relations (e.g. conflict, challenge and dissent from dominant views), and who are the active coalitions advocating for change? What relationships exist between stakeholders? What formal and informal networks link them?

What is the existing capacity to respond to and use research amongst target groups? Is there openness to considering evidence on the issues? To what extent is there scientific literacy in stakeholders' organisations? What evidence products (e.g. models) would support stakeholders' capacity to respond to and use research?

Context Step 2 generates information on:

- networks and links between local communities, institutions, governance and other relevant organisations, both formal and informal, who have power to influence the conditions around the issue;
- the extent to which there is capacity to respond and use to new knowledge;
- identification of up to eight stakeholder groups and how they relate to each other and the issues in the context.

Context Step 3: Analysing the receptiveness of context to new evidence on the issues

ESPA research projects are seeking to bring new evidence to bear on the issues of ecosystem services and poverty alleviation to support improvements in both environmental and development outcomes.

However, in many contexts, there may not be a clear recognition of the need for evidence. In some situations, there may be outright conflict between stakeholders around a particular issue, ecosystem or geographical area.

While it is important for research projects to address questions that are relevant to stakeholders, it is also the role of research to be independent, to challenge existing views and to bring new perspectives.

For these reasons, an extension of the baseline, establishing – at the start of the project – how receptive stakeholders are to new actors, ideas and initiatives is a vital step in setting realistic goals for influence and impact.

For example, if a research project is working in a conflicted area, the most realistic influence it could aim to support might be to change the receptiveness and willingness of some stakeholders to consider new evidence and possible alternative concepts or frameworks on the issue. Changes in actual behaviours and practices may simply not be feasible, but contributing to the acceptance of alternative approaches amongst key stakeholders would be a considerable achievement in this sort of situation.

In a context where there is a broad consensus amongst stakeholders, there may be much more opportunity for supporting changes in practice and strategy amongst stakeholders, for example through testing new approaches. In this situation, it may be realistic for the project team to aspire to influence changes in practice or policy.

Key questions to consider in analysing the receptiveness of the context include:

What is the political backdrop to the issue? Is there conflict, debate or consensus on the need/potential for change? How clear are the terms of the debate? What are the opportunities for challenge and bringing new evidence/perspectives? What are the areas of debate and gaps? What are the acknowledged and unacknowledged needs for evidence? Where are there promising innovations?

Context Step 3 generates information on:

- the extent to which actors in the issue area or sector recognise the need for change;
- where there is consensus, challenge or innovation around strategies to address issues;
- the extent to which there is potential demand for evidence amongst stakeholders;
- baselines and scope or the project to influence change in the context.

Stage 2: Defining the long-term change or development impact

After mapping the context, the next stage is defining the long-term impact.

Many researchers feel uncomfortable with developing a clear statement of the long-term impact they hope to support. Defining research impact at an early stage of the research design can be challenging as it is difficult to predict the findings of the research. In the long-term, multiple factors and stakeholder behaviours influence impact, and so expressing a statement of change often does not feel appropriate.

However, in theory of change, the statement of the anticipated long-term change is not intended to be a rigid prediction, although it should reflect the realities of the context identified in Stage 1. It is intended to provide conceptual clarity about the realistic long-term impact to guide the project team.

The statement should be realistic, specific and feasible, covering the intended benefits for specific stakeholder groups, and the potential contribution of research to that change. It should be expressed as an active statement, with actors and verbs, a high degree of specificity, and a timeframe. An example might be:

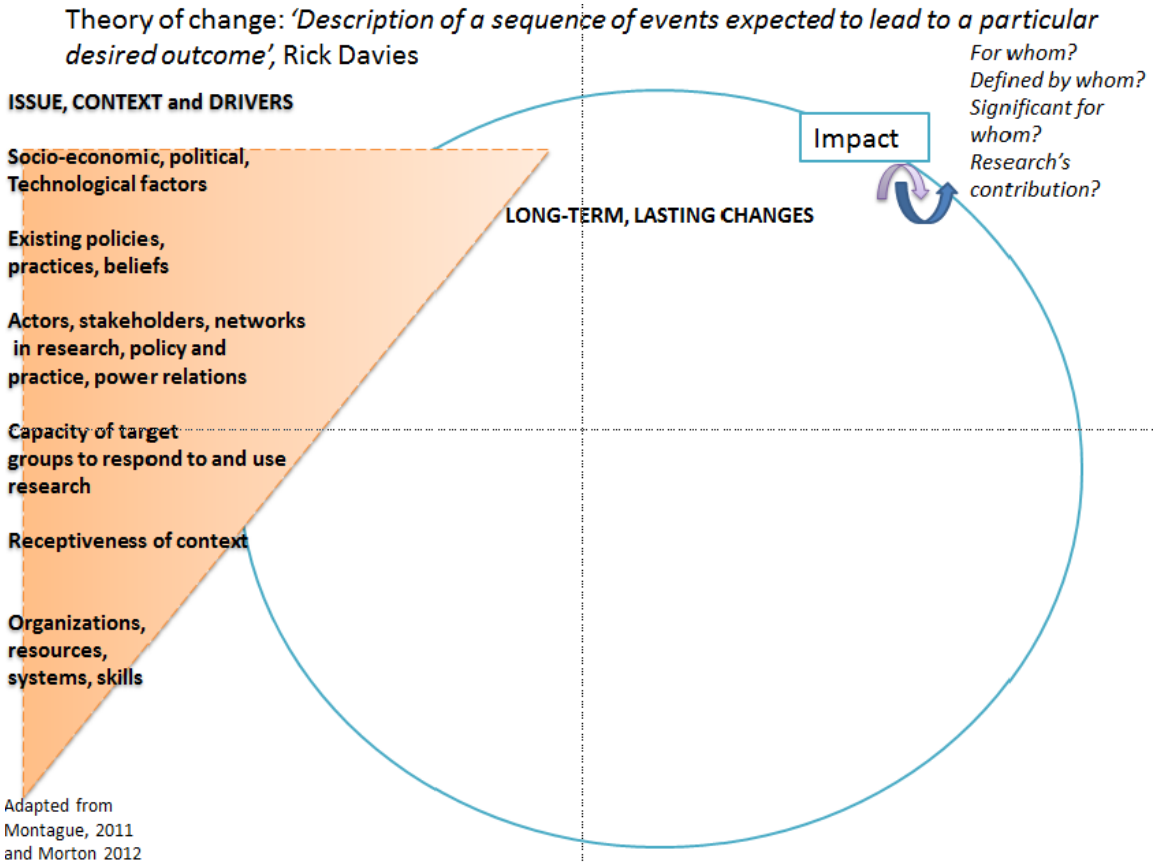
> By 2018, local communities in three river basins spanning three countries in East Africa are able to take a formally recognised role in managing their local ecosystem services as part of a new environmental management strategy, successfully negotiated with local governance authorities on the basis of evidence that shows that ecosystems services can be managed more sustainably if local communities are involved in river basin governance and management arrangements.

This statement should be as detailed as is helpful to the team and can be refined and focused as the project progresses.

As discussed earlier, theory of change requires both logical thinking and deeper reflection and dialogue amongst colleagues and stakeholders. Values, worldviews and philosophies of change all play a role in teams' and stakeholders' ideas about long-term impact. For example, the statement above is premised on the valuing of local communities specialised local knowledge alongside research evidence.

There are many potential changes that the project could support. Dialogue and discussion with stakeholders helps to broaden out the thinking about long-term change and identify the outcomes which are most significant from the perspective of stakeholders' lives and concerns rather than the research teams' perspective.

Figure 4: Long-term change



Key questions to consider when developing the statement of long-term change:

Taking the initial problem identification, how will the problem change if the research is successful in its influence? How will the baseline situation have changed (e.g. in terms of the ecosystem management, or with respect to poverty alleviation)? How will stakeholders' behaviour change? What changes in practice, new alliances, new capacities might be seen?

What is a feasible timeframe for the long-term change; is it 5–10 years after the project?

Which is the most important, bottom-line change that must be seen, without which the project has no meaning? Why is that the most important? How do stakeholders define it? For whom is it significant? How does the research project contribute?

This stage generates the following output:

- A positive and plausible statement of the impact that the project hopes to influence, expressed in terms of key changes in the baseline situation, for example, positive poverty alleviation outcomes and sustainable functioning of ecosystems.

Stage 3: Sequence of events anticipated to lead to the desired long-term outcome

This stage is where the change process is expressed as a sequence of events or changes in the context. Mapping out the change process is where the connections between a research project and development outcomes can be made, in a robust way.

This stage should be approached as a conceptual exercise about the steps that lead towards impact for this project in this context. It is not a literal prediction of the future.

The mapping should represent a hierarchy of changes from short term through medium to long-term, showing a logical, plausible progression from one set of changes to the next.

The logical sequencing aspect often means that people mistakenly interpret theory of change as a linear sequence of change. Building development impact is not a linear process.

When working with theory of change, teams should explicitly express the non-linear and iterative aspects of the change process, especially acknowledging where complex processes create major uncertainties that cannot be known until later stages, if at all. These can often provide useful points for review, learning and adaptation of the project strategy.

The sequence of change should ideally be mapped backwards from the long-term impact, so that the logical and conceptual links are made. In practice, it is often easier to work in both directions, asking simple, open questions to aid the process mapping, for example:

> What happens next? and What else needs to be happening to support this change?

It is usually easier to be more specific about short-term changes, but the discipline of clarity and specificity should be maintained when thinking through medium-term changes.

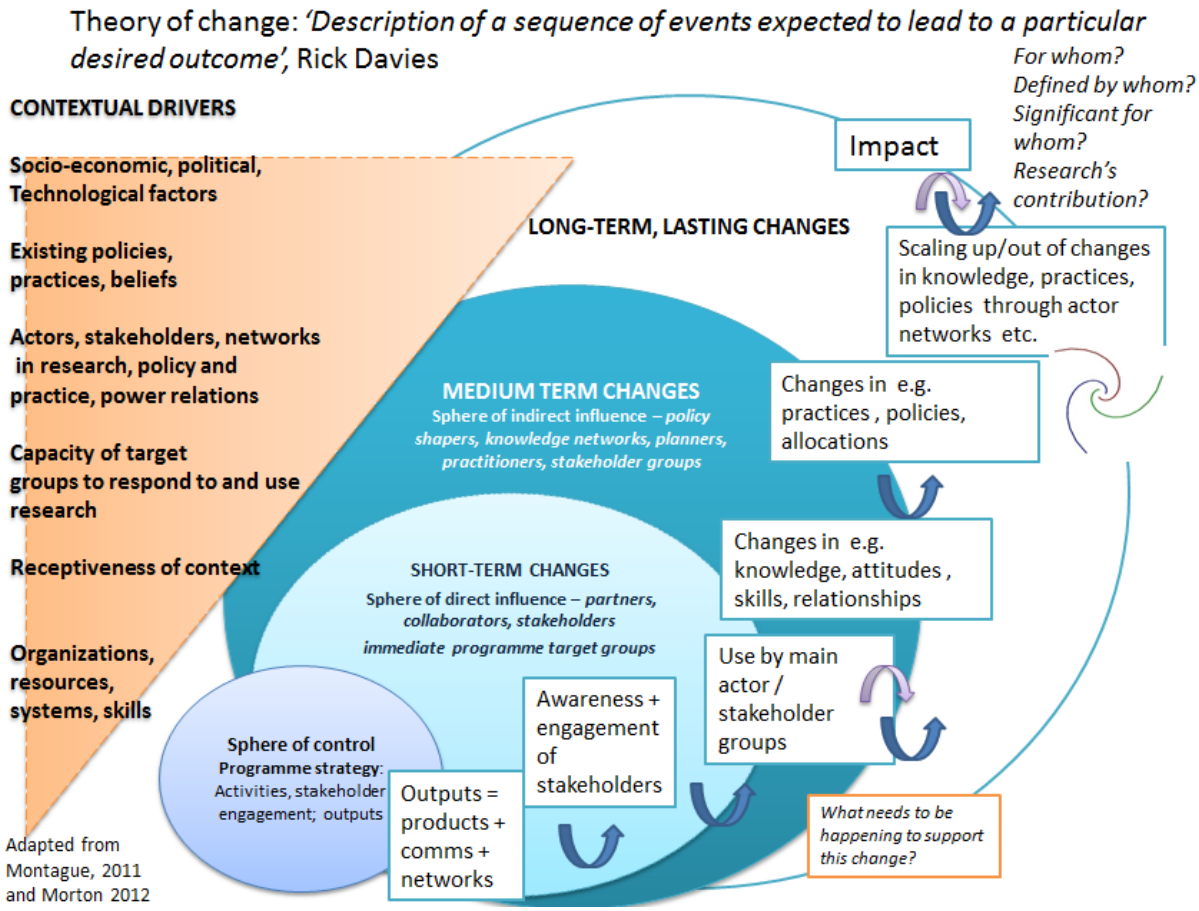
To keep the analysis manageable, the team and stakeholders should aim to identify 8–12 priority changes in the sequence. The progression from one change to the next should be logically robust and plausible, with no 'leaps of faith' such as the receipt of a briefing paper influences a change in practice.

Figure 5 suggests a generic sequence of changes that might be relevant for research teams to consider as an outline. Each research team should think about the specific changes that they hope to influence in the context of their project and stakeholders.

Changes should be expressed as active statements, with actors and verbs, a high degree of specificity, for example:

> Private sector managers in charge of environmental impact assessment involve local community leaders at the concept stage of a proposed venture because they value local perspectives on the negative impacts on ecosystems services and how these might be mitigated.

Figure 5: Example of a sequence of events leading to impact



Sequencing Step 1: Changes in the long term – scaling up and out of changes in knowledge, practice or policies

To support longer-term impact, new practices or policies that may have been tested in one or two locations will need to be disseminated and adopted at scale. This will depend on the enabling environment. For example, stakeholders in other locations could be supported to learn from test examples and develop their own adaptations in multiple locations, or approaches could be scaled upwards to support adoption at sector-wide, policy or institutional levels.

Research teams themselves are unlikely to be directly involved in these processes, which will involve multiple decision-makers and implementers within a wide range of organisations. However, research teams should hypothesise what changes or processes would be needed to support widespread adoption and which stakeholders would be involved. This can help to identify, engage and support potential partners who are able to work with decision-makers at the appropriate scale.

Conceptualising these processes helps research teams to strategically identify opportunities for influence and engagement to enhance research impact, which may arise at any point in the research process.

Key questions to consider include:

What are the main changes that are needed to support the desired impact? What institutional changes need to be seen in the sector or geographical area (e.g. in terms of new institutions, mandates, governance arrangements, capacities, processes or participation) in order to create the conditions to support the development impact? What evidence, relationship- or institution-building is required to support change?

This stage generates information on:

- macro-level changes (e.g. institutional change such as a new ministry, new patterns of investments, new programme areas, new sector-wide environmental management arrangements such as multi-country environmental coordination that support a lasting shift towards the long-term impact);
- identification of sign-posts towards long-term change, useful for suggesting indicator areas to investigate with monitoring and evaluation.

Sequencing Step 2: Changes in the medium term: shifts in practices, policies, strategies or budget allocations

In the medium term, research projects make a contribution to the efforts of other stakeholders actively seeking to influence change. Medium term changes are where research outcomes start to influence development outcomes, although the foundations are laid in the short-term.

Changes in the medium term identified by the research team should represent lasting shifts that help to support the conditions for the desired impact. Medium term changes might include for example, changes in practices, policies, management and implementation strategies, or budget allocations to support new approaches to the use of ecosystems services for poverty alleviation.

These changes should be linked to specific stakeholder groups (e.g. stakeholders in science and research communities, business and enterprise, policy, public management, programme implementation both state and non-state, local communities and their organisations).

The stakeholder mapping conducted in Stage 1 should provide a baseline description of current practices. This stage develops realistic propositions as how these should change to support the longer term impact sought.

Medium term change involves complex combinations of parallel shifts along different pathways. For example, there may be changes in individual behaviours and practices, alongside changes in informal and formal organisational practices, as well as changes in formal institutional and policy regimes (see Section D13 for some examples of changes that research can support).

Experience from other research programmes suggests that some typical pathways of medium term changes that might be influenced include:

- influencing policy and the enabling environment for development activities (e.g. policy budget allocations);
- influencing investments by development stakeholders into research-into-use activities, demonstration and scaling-up processes;
- influencing investments by development and science funding stakeholders into future research;
- influencing community-led collective approaches to managing ecosystems services to support livelihoods and well-being (adapted from ESPA 2012).

Research projects may only be able to influence the start of processes that build towards medium term changes. As in the analysis of longer term change, it is helpful for the research team to hypothesise medium term changes in order to help them identify opportunities to build relationships with champions and partners at the boundary of the research teams' influence.

As the full extent of changes are unlikely to be seen until after the end of the research project, research teams should consider what initial behaviour changes might be seen amongst stakeholders that could suggest the start of the medium term changes they seek.

For example, a medium term change that demonstrates that stakeholders are serious about their intention to apply ecosystems services approaches to local poverty alleviation might be putting

research into use as small scale pilot activities to generate evidence of impact that could act as a platform for wide scale application in the future. To support this, a prior behaviour change would be a request for a briefing, training or research staff secondment to the relevant department. As a precursor to this change, a champion on the 'inside' might need to advocate for the relevance of the ecosystems services approach to a poverty reduction strategy.

Thinking through what engagement strategies might help to influence this type of initial behaviour change can help a research team to focus more precisely on specific target groups to engage with a purposeful strategy.

Key questions to consider include:

What changes in the practices, policies, relationships and networks amongst key stakeholder groups are needed in the medium-term to support the long-term change?

What behaviour changes might suggest that stakeholders are willing to advocate for and promote a new evidence-based approach? What new mandates, relationships and coalitions across sectors might be needed?

This stage generates information on:

- intermediate level changes, such as policies, a new practice amongst key organisations, new sets of partnerships, different forms of consultation or negotiation of strategies;
- identification of sign-posts towards medium-term change, useful for suggesting indicator areas to investigate with monitoring and evaluation.

Sequencing Step 3: Changes in the short-term – knowledge, attitude and skills and uses of research

In order to support changes in practice in the short term, changes in knowledge, attitudes and skills around ecosystems services and poverty alleviation need to be supported. These types of changes are often influenced by the use of research outputs by the partners, collaborators and immediate stakeholders of the research project.

The ESPA Impact Strategy encourages researchers to think in advance how their research is likely to be used. Identifying the specific uses that would support the desired changes in knowledge, attitude, skills and relationships that in turn would support the behaviour and practice changes in the medium term is the focus of Step 3.

Research outputs and evidence influence behaviour change in multiple and indirect ways. The literature on evidence-based policy making suggests that, in reality, it is an iterative and non-linear process, where different uses may co-exist (Jones 2011; Carden 2010; Nutley et al. 2007). Examples of research use include:

- inclusion of a study in an evidence review by a government ministry or department;
- research is quoted in an international strategy declaration as a signal of an intention to change policy and its implementation;
- a research-based narrative offers a compelling re-framing of an issue and starts to feature in discussions amongst development agency staff and civil society professionals involved in the area;
- evidence is used by local people to better argue their own case in negotiations with state and business representatives.

All of these are valid uses of research. Some of them may be precursors to direct applications for the benefit of poor people, others may have an indirect influence. Many of these examples of research

use may fall outside of a project's remit to influence directly and so may need to be supported by other stakeholders in partnership with the research team.

The research team should identify which uses have the potential to support the desired changes in knowledge, attitudes or skills in the short term (Morton 2012; Carden 2010; Nutley et al. 2007).

Key questions to consider include:

What uses of the project research outputs, and by which stakeholders, would be significant in terms of the emerging theory of change? What changes are likely to be influenced in which settings? Why are these important?

What strategies are needed to support this (e.g. network-building, stakeholder engagement, co-production of applications, identifying champions of change and knowledge exchange)? What is within the remit of the project team to influence and where should the team seek strategic partnerships with influential stakeholders?

This stage generates information on:

- Examples of uses of research which are within reach of the project or its partners to influence, such as the examples given in the above, linked to behaviour changes which have plausible potential to support the mid-term changes already identified. An example might be a request for a briefing on ecosystems services at a policy review committee meeting, sponsored by a ministerial advisor.
- Identification of the knowledge, attitudes and skills that need to be supported to influence change, plus strategies for collaboration and co-production to support them.

Sequencing Step 4: Changes in the short-term – awareness and engagement of immediate stakeholders

A precursor to research use is achieving awareness and engagement amongst priority stakeholders in the short-term. Awareness of the research project and an active interest in its agenda and focus is a key building block for impact.

Early engagement with stakeholders and potential users of research is encouraged so that stakeholders are able to help define the research process and participate actively in it, to support and influence their attitudes toward the issues.

ESPA research projects work across a wide range of different regional and national contexts, often in more than one. Sub-nationally, nationally and internationally, ESPA research projects are expected to engage stakeholders and potential research users as appropriate to their project in:

- science and research communities;
- business, enterprise and innovation;
- policy and public management;
- programme implementation by both state and non-state actors; and
- local communities and their organisations.

'Engagement' is used here as a generic term to convey an active and influential role for stakeholders in the research process. Stakeholders who only receive briefings or research papers cannot be considered to be 'engaged'. Research teams need to define more specifically what represents engagement for their project and context.

Key questions to consider include:

Building on the stakeholder mapping completed in the context analysis, who are the immediate stakeholders to engage from the outset of the project? Which potential research users are priorities for the project because they can act as champions, sponsors or allies to reach wider stakeholder groups?

What do we want to change about their current awareness of the issues? How do we expect them to react to the project? Are they already aligned or are they hostile to the perspective of the research project?

How will we know that stakeholders are authentically engaged? What behaviour changes will be seen?

This stage generates information on:

- a prioritised list of stakeholders, with an understanding of how they might support or disrupt the aims of the project, and the changes in their views that the project hopes to influence;
- identification of research collaborators and peers within and outside normal disciplines, immediate research users and awareness/attitude /relationship changes (e.g. engaging champions, opinion-formers, introducing new ideas to a knowledge network).

Sequencing Step 5: Programme strategy and outputs – research outputs and products, plus communications and networks

Finally, after mapping the sequence of changes the project seeks to influence, the team can consider its research approach and strategies from an impact-oriented perspective.

By developing a theory of change for its project, the research team can consider the range of research and evidence products required to support the changes it has identified, as well as the communications, networking and relationship-building with stakeholders that are needed as outputs of the research process.

Without a theory of change approach to underpin the design of the project, the risk is that only traditional research activities will be planned. As the ESPA Impact Strategy emphasises, the majority of the project activity should relate to undertaking research to generate new knowledge, but a significant proportion of planning and implementation budgets and resources should cover activities for building development impact.

This is why, in an impact-oriented research project, the research process should deliver research outputs, plus communications, networks and relationships to support its theory of change.

Key questions to consider include:

What sorts of partnerships and collaboration does the project team need to build? What sorts of collaborative relationships do we need with stakeholders? What relationships with researchers from other disciplines are needed? What will these relationships bring to the project?

What strategies will generate the responses and behaviour changes needed to drive the theory of change? What will we see as a result of our engagement strategies? Why will that happen? What else needs to be in place to support the changes that are needed?

This stage generates information on:

- engagement strategies with clear change objectives, linked to target groups, sequenced over time
- identification of short-term audience responses that suggest emerging engagement – a behaviour change or action-response (e.g. requests for briefings).

Stage 4: Assumptions – making these explicit

> *'Every programme is packed with beliefs, assumptions and hypotheses about how change happens – about the way humans work, or organisations, or political systems, or ecosystems. Theory of change is about articulating these many underlying assumptions about how change will happen in a programme.'*
> (Rogers 2008).

Making assumptions explicit is perhaps the most important stage in a theory of change process and the most challenging. Assumptions are the 'theories' in a theory of change process. As the quote highlights, every project is packed with the assumptions that people bring to the project, unique to their individual perspective.

Assumptions are hard to make explicit because they are deeply held perceptions that have become 'rules of thumb' that are taken for granted. They can be thought of simply as 'things which we believe to be true' about the particular situation at hand.

Assumptions are informed by individual beliefs and values, professional experience, organisational values and influenced by particular intellectual traditions and analytical perspectives (Eyben et al. 2008; Van der Knapp 2004; Chen 1990).

For example, there are important differences between natural science and economic perspectives on knowledge and change, and some social and political science views. A key difference is the extent to which knowledge is considered to be independent of people and their social, political and geographical contexts (Douthwaite et al. 2003; Argryris and Schon 1974).

It takes time and dialogue with others to be able to make assumptions explicit. The goal is to check and test assumptions through a theory of change process in order to improve them and inspire new ways of addressing issues.

The reality in most projects is that there are different theories of change actively influencing the approaches taken by the team. Organisational norms influence views on how a project 'should' work. These may be declared in project documents, but are not in fact how the project is implemented. Intended beneficiaries and stakeholders may also view the role of the project differently[3].

A disconnect between the 'espoused', unchallenged theory and the reality of implementation can lead to poor decision-making and weak strategy, limiting the effectiveness of the project in influencing change. In other situations, seeking one dominant or unifying theory can lead to tension and conflict in the organisation or project team. The presence of different, often unexplored, 'theories' leads to debates about strategic choices and decisions in organisations and programmes (Eyben et al. 2008).

Experienced practitioners emphasise that that the presence of different theories needs to be explicitly explored in order to challenge received wisdoms and enrich project strategies in the process. Contexts are dynamic and situations will change, so the point is not to try to reach consensus on a single view on research and change, but to work with a few to ensure that the team has access to a broad range of options.

It can be useful to deliberately choose a number of different 'theories' to explore, as they can suggest different pathways to influence outcomes (Vogel 2012). Developing two or three pathways and triangulating between them can become a point of learning and reflection to open up new strategic choices and innovations (Ortiz and Macedo 2010).

[3] In the evaluation literature, these different theories are referred to as 'espoused theory', 'theories-in-use' and 'preferred theory' (Funnell and Rogers 2011; Argryris and Schon 1974).

Having access to a wide range of engagement and research-into-use strategies will put the research team in a better position to respond to opportunities as they emerge. Strategies can be further strengthened through on-going dialogue with peers and stakeholder communities.

Starting a process of critical reflection

For EPSA researchers who need to work in an interdisciplinary way, a discussion about different analytical perspectives on the links between research and behaviour change or actions can be a useful first step to critically checking assumptions.

ESPA's analytical perspective is that people and their contexts are important. In ESPA's Impact Strategy, research-into-use and stakeholder engagement strategies are informed by the understanding that evidence and technologies are unlikely to be straightforwardly 'transferable' across different contexts.

ESPA's Impact Strategy anticipates that a key impact pathway is that people in science, business, policy and implementation domains, as well as local communities will test, modify and develop their own applications of ESPA-related evidence to suit their social and geographical context and needs. This is a key assumption in ESPA's theory of change.

The level of critical thinking and insight needed for a good theory of change process can sometimes be difficult to achieve without a facilitator. It may not need to necessarily be a specialist, but someone is required to take on the role seriously and sensitively to ensure that dialogue is open, to be alert to power relations in the group that might constrain challenge and ensure that alternative interpretations can be put forward. Project staff and stakeholders are more likely to be able to gain insight from comparing perspectives, and differences in assumptions and worldviews can be explored in a positive way.

The reflection on assumptions is most effective if it cross-cuts the other stages in the process. In some situations, it may be easier to reflect on assumptions once the process sequence has been mapped out. In other cases, opportunities to explore assumptions may present themselves as the group moves through the stages in the process.

Key questions to consider when critically reflecting on assumptions:

What is the worldview that is informing the understanding of the change process? What values and norms are influencing the perception of the change process? What seems obvious here but should be more explicit?

Which is the most important, bottom-line change which if it is not achieved, would mean the project has failed? Why is that the most important one? From whose perspective is it important and significant?

Why do the short-term changes seem to be the most important ones? Are there others that are missing? Are there trade-offs to consider? What else would need to be happening to support that change? What is the main mechanism for change? Is it social learning and co-production? Is it expert-led development of applications? Is it the influence of opinion-formers?

B3. Overview of theory of change structured process, with key questions as a guide

Theory of change stage		Key questions	Output	Stage 4: Assumptions
STAGE 1: Analysing the context	Context Step 1: Baseline analysis of the problem and issue the project seeks to influence	What are the issues? Which ecosystems are affected? Which communities are affected (individuals, households, groups, communities, geographical locations)? What are the key issues they face? What are the key ecosystem pressures? What are the relevant poverty indicators and trends in this context? What are the main social, political, economic and technological factors that influence the issue in this context?	Information on: • current situation in the issue context, how issues currently affect people, communities, and ecosystems; existing evidence on the drivers and factors of problems in the issue area or geographical context; • poverty status of affected groups, past and future trends; • ecosystem service status in the study area, past and future trends? • potential baselines for macro-level contextual issues from which to track impact.	What is believed to be true about the context? What are the 'received wisdoms'? What are the worldviews that inform the interpretations of the baseline situation? What sources of knowledge have been referred to? What analytical perspective do these represent? Are there other sources that offer a different interpretation? What are local people's views and interpretations of causes and consequences?

	Context Step 2: Actors, stakeholders, networks and power relations in the context	What is the political and governance landscape like? Who can influence the key desired changes above? Who owns the decisions that really have an impact on the context? What are their incentives, drivers and agendas? What are the current positions and alignments amongst key stakeholders and institutions? What are the existing policies, practices, attitudes and beliefs about the issue? What are the power relations (e.g. conflict, challenge and dissent from dominant views), and who are the active coalitions advocating for change? What relationships exist between stakeholders? What formal and informal networks link them? What is the existing capacity to respond to and use research amongst target groups? Is there openness to considering evidence on the issues? To what extent is there scientific literacy in stakeholders' organisations? What evidence products (e.g. models) would support stakeholders' capacity to respond to and use research?	Generates information on: • networks and links between local communities, institutions, governance and other relevant organisations, both formal and informal, who have power to influence the conditions around the issue; • the extent to which there is capacity to respond and use to new knowledge; • identification of up to eight stakeholder groups and how they relate to each other and the issues in the context.	What seems obvious here but should be more explicit? What could be defined more specifically (e.g. institutions, roles, relationships)? What are the time-frame and political cycle dynamics at play? How long will these configurations hold?
	Context Step 3: Receptiveness of context to new evidence on the issues	What is the political backdrop to the issue? Is there conflict, debate or consensus on the need/potential for change? How clear are the terms of the debate? What are the opportunities for challenge	Context Step 3 generates information on: • the extent to which actors in the issue area or sector recognise the need for	What are the current levers of influence? What are the blockers? What are the pathways for change (e.g. champions, opinion leaders, brokers, existing coalitions for change)?

		and bringing new evidence/perspectives? What are the areas of debate and gaps? What are the acknowledged and unacknowledged needs for evidence? Where are there promising innovations?	change; • where there is consensus, challenge or innovation around strategies to address issues; • the extent to which there is potential demand for evidence amongst stakeholders; • baselines and scope for the project to influence change in the context.	
STAGE 2: Defining the long-term change or development impact		Taking the initial problem identification, how will the problem change if the research is successful in its influence? How will the baseline situation have changed (e.g. in terms of the ecosystem management, or with respect to poverty alleviation)? How will stakeholders' behaviour change? What changes in practice, new alliances, new capacities might be seen? What is a feasible timeframe for the long-term change – 5–10 years after the project? Which is the most important, bottom-line change that must be seen in the context, without which the project has no meaning? Why is that the most important? How do stakeholders define it? For whom is it significant? How does the research project contribute?	Positive and plausible statement of the impact that the project hopes to influence, expressed in terms of key changes in the baseline situation, for example, positive outcomes in poverty indicators, people's lives and sustainable functioning of ecosystems.	Which is the most important, bottom-line change that we must see, without which the programme has no meaning? Why is that the most important? How do stakeholders define it? For whom is it significant? How does the research project contribute? What values and norms are influencing different interpretations of what the long-term change looks like?

STAGE 3: Sequencing of events	Sequencing Step 1: Changes in the long term – scaling up and out of changes in knowledge, practice or policies	What are the main changes that are needed to support the desired impact? What changes need to be seen in the sector or geographical area, institutionally, in terms of new institutions, mandates, governance arrangements, capacities, processes or participation in order to create the conditions to support the development impact? What evidence, relationship-building or institution-building is required to support change?	Identification of sign-posts towards long-term change, useful for suggesting indicator areas to investigate with monitoring and evaluation .	Why do these changes seem to be the most important ones? Are there others that are missing? Are there trade-offs to consider?
	Sequencing Step 2: Changes in the medium term – shifts in practices, policies, strategies or budget allocations	What changes in the practices, policies, relationships and networks amongst key stakeholder groups are needed in the medium-term to support the long-term change? What behaviour changes might suggest that stakeholders are willing to advocate for and promote a new evidence-based approach? What new mandates, relationships and coalitions across sectors might be needed?	Identification of sign-posts towards medium-term change, useful for suggesting indicator areas to investigate with monitoring and evaluation.	What else would need to be happening to support these changes?
	Sequencing Step 3: Changes in short-term – knowledge, attitude and skills and uses of research	What uses of the project's research outputs, and by which stakeholders, would be significant in terms of the emerging theory of change? What changes are likely to be influenced in which settings? Why are these important? What strategies are needed to support this (e.g. network-building, stakeholder engagement, co-production of applications,	Identification of the knowledge, attitudes and skills that need to be supported to influence change, plus strategies for collaboration and co-production to support them.	What is the main mechanism for change? Is it social learning and co-production? Is it expert-led development of applications? Is it the influence of opinion-formers? Are there other causal mechanisms that could play a role here?

		identifying champions of change and knowledge exchange)? What is within the remit of the project team to influence and where should the team seek strategic partnerships with influential stakeholders?		
	Sequencing Step 4: Changes in short-term – awareness and engagement of stakeholders	Who are the immediate stakeholders to engage from the outset of the project? Which potential research users are priorities for the project because they can act as champions, sponsors or allies to reach wider stakeholder groups whose use of research is significant (see Step 3 above)? What do we want to change about their current awareness of the issues? How do we expect them to react to the project?	Identification of research collaborators and peers within and outside normal disciplines; immediate research users and awareness/attitude /relationship changes (e.g. engage champions, opinion-formers, introduce new ideas to a knowledge network).	Who are the obvious stakeholders? Who are the stakeholders we would not normally work with? Could they play a role? Are stakeholders already aligned or are they hostile to the perspective of the research project? How will we know that stakeholders are authentically engaged? What behaviour changes will be seen?
	Sequencing Step 5: Programme strategy and outputs: research outputs and products, plus communications and networks	What sorts of partnerships and collaboration does the project team need to build? What sorts of collaborative relationships do we need with stakeholders? What relationships with researchers from other disciplines are needed? What will these relationships bring to the project? What strategies will generate the responses and behaviour changes needed to drive the theory of change? What will we see as a result of our engagement strategies? Why will that happen?	Engagement strategies with clear change objectives, linked to target groups, sequenced over time. Identification of short-term audience responses that suggest emerging engagement – a behaviour change or action-response (e.g. requests for briefings).	What role is the research evidence playing here – challenging, building consensus, supporting coalitions? Why?

		What else needs to be in place to support the changes that are needed?
STAGE 4: Making assumptions explicit	Check assumptions at each stage, as appropriate in the process	

C. Practical approaches to developing a theory of change

Key points:

1. **Workshop processes are useful but theories of change can be developed through iterative feedback.**
2. **Rigour in a theory of change involves expressing specific, clear and realistic changes, relevant to the context.**
3. **Theories of change should be represented with a diagram and narrative summary.**

C1. What process should be followed?

Developing a theory of change is a collaborative process. Comparing different perceptions on the change process and involving people with local knowledge is a key part of the approach.

Developing a theory of change as a desk-based exercise without consultation will fall short of the desired critical exploration of views and assumptions about the change process. It is widely agreed that theory of change analysis should be a group process (Vogel 2012). Some people find that involving stakeholders as well as the programme team is helpful, as it provides a useful triangulation and reality-check (James 2011).

Some practical considerations when starting a theory of change analysis are outlined in the next sections.

How much time should it take?

Elaborating and exploring theories of change for the first time can take time. However, investing the time to take a step back from the day-to-day running of a project to really explore the context and assumptions is an important aspect of the process.

It is important to remember that theory of change is both a product and an on-going learning process. A workshop discussion may generate the initial momentum but the theory of change needs to keep evolving and be used as a learning framework on a day-to-day basis.

How much time to spend on developing a theory of change depends on the size and complexity of the project, the stage of project development and the feasibility of participation of stakeholders and local community representatives.

A one-day workshop with an appropriate representation and number of participants can be held to generate the initial group discussion and participatory reflection on the theory of change elements.

Some information can be prepared in advance, for example, evidence papers and an outline situational analysis can be prepared. The research team can prepare a generic theory of change in advance to give a starting point for discussions with stakeholders.

The greater the number of participants, the more need for facilitation, preparatory work before and follow-on work after the workshop (see the Participatory Impact Pathway Analysis website for some practical ideas on a theory of change workshop process).

The workshop process should work through each theory of change element in turn and structure the process accordingly.

Additional activities to reflect on beliefs, values and philosophies about change may also be of value, especially if there is a wide range of perspectives in the room. Using active visual and graphical approaches, such as drawing and mapping, cards and 'sticky walls' can be very helpful. Section D provides a list of further tools and resources to inform the workshop process.

Workshops are not always necessary. Some projects develop an outline theory of change which is developed over email or through existing organisational processes such as team meetings. Colleagues and stakeholders are invited to contribute and feedback. This approach is less effective at building buy-in to the theory of change and the deeper critical reflection may be missed. As long as the theory of change is actively used in the day-to-day life of the project and used as a foil for learning and reflection in the team and with stakeholders, then deeper insights will emerge over time.

Enabling factors

Some of the factors that have been identified as contributing to the effective development of theories of change include the understanding that:

- **Theory of change is both process and a product**. It should be seen as an on-going process of discussion-based analysis and learning to support project design, implementation, evaluation and impact assessment, communicated through diagrams and narratives which are updated at regular intervals.
- **The quality of a theory of change process rests on 'making assumptions explicit'**. Practical experience highlights that this is not straightforward to do. It takes time and discussion to be able to challenge assumptions
- **The time and resources needed to work effectively with theory of change need to be taken seriously**. Project staff and stakeholders are all under time pressures – pragmatic approaches can get theory of change habits started, but institutional and funding support for theory of change processes is needed to get the benefits in terms of better design and implementation of projects.
- **Working with theory of change thinking can be challenging but it can create a strong organising framework to improve programme design, implementation, evaluation and learning if some of the following enabling factors can be achieved**:
    - People are able to discuss and exchange their personal, organisational and analytical assumptions with an open, learning approach.
    - Theory of change thinking is used to explain rationales and how things are intended to work, but also to explore new possibilities through critical thinking, discussion and challenging of dominant narratives for the benefit of stakeholders.
    - Critical thinking is cross-checked with evidence from research (qualitative and quantitative) and wider learning that brings other analytical perspectives, referenced to stakeholders', partners' and beneficiaries' contextual knowledge.
    - A number of theories of change are identified as relevant 'pathways' to impact for any given initiative, rather than a single pathway, with acknowledgement of the non-linearity and emergent nature of these.
    - Documented theories of change and visual diagrams are acknowledged as subjective interpretations of the change process and used as evolving 'organising frameworks' to guide the project.
    - Theory of change frameworks and visuals are used to support a more dynamic exchange between funders, research project staff and stakeholders, to help open up new possibilities.

- Funders and grant-makers are able to find ways to support justified adaptation and refocusing of programme strategies during implementation, while there is time to deliver improvements to stakeholders and communities (Vogel 2012; James 2011).

C2. What makes for a rigorous theory of change?

Rigour in theory of change is achieved through the following factors:

- thorough analysis of context and the baseline analysis of the issues, including gathering appropriate sources of knowledge;
- specificity and realism in defining impact and the sequence of changes anticipated;
- making assumptions explicit and critically examining these appropriately against available evidence, stakeholder perspectives and alternative analytical perspectives;
- testing the impact potential of the project strategies against the behaviour changes sought from actors and stakeholders, looking at available evidence on the cause–effect mechanisms embedded within strategies;
- using, reviewing and revising the theory of change with stakeholders to support on-going learning to guide project implementation.

It is important to remember that the theory of change is only a conceptual map, it is not the territory. Bumps in the road, twists and turns are inevitable. The value of the approach lies in balancing:

- validity with simplicity – recognising the limits of representations of complex change but aiming to capture key non-linear aspects;
- a flexible, emergent model with enough definition for decision-making;
- a focus on impact with responsiveness to adjusting pathways and strategies;
- a plausible yet stretching impact statement;
- non-linearity with sense of progress towards goal; and
- accountability with learning (adapted from James 2011).

C3. How should the theory of change be represented?

There are many different ways to represent a programme's theory of change. Because it is a tool to communicate with others, it should be represented in an accessible way. Most theories of change are represented with a diagram that provides an overview of the theory of change, linked to a narrative that explains it. The diagram should represent the most important aspects of the theory of change, including:

- main features of the context;
- statement of long-term impact;
- sequence of events leading to the expected change;
- key actors and their behaviour changes;
- iterations and learning cycles, scales and relevant pathways to impact;
- important assumptions.

Creating diagrams

Diagrams can be created through any appropriate means. There is bespoke software available for theories of change, but standard software offers easy-to-use diagram tools. Theories of change can also be hand drawn and photocopied, although this could make revisions time-consuming.

Funnell and Rogers (2011) provide many examples, including programme theory archetypes that can be adapted. Other resources are given in Section D. The ESPA Theory of Change also provides a model to draw on.

Concluding thoughts

This guide provides an introduction to theory of change for ESPA research projects, its principles and some practical steps.

The key message is that making explicit how researchers hope and intend their projects to contribute to change and engaging stakeholders and partners at an early stage in the research process should enhance the potential for ESPA research to make a real difference to poor people and communities in developing countries, especially those in low-income countries.

This is, of course, a theory of change in itself – one that can be reflected on and tested as researchers learn-by-doing in projects and with stakeholders.

D. Tools, resources and sources

1. Original 'Theory of Change' guidelines for facilitators:

The Community Builder's Approach to Theory of Change: A Practical Guide to Theory Development, by Andrea A. Anderson. Washington, D.C.: The Aspen Institute, 2005

Available for use online or download.

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2. ActKnowledge and related community site Theory of Change Online:

Theory of Change Online Community.

Theory of Change online software tool.

Available for use online or download.

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3. Sue Funnell and Patricia Rogers' comprehensive source book on working with programme theory

Thorough overview of conceptual, methodological and practical issues, including quality and rigour, and archetypal theories of change, coverage of particular issues affecting research-based change initiatives:

Funnell, S. and Rogers, P. (2011) *Purposeful Programme Theory. Effective use of theories of change and logic models*, San Francisco: Jossey-Bass

Available to buy through major online book retailers.

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4. HIVOS Resource Portal on Theory of Change

The aim of the Resource Portal on Theory of Change is to make resources available to HIVOS staff and other actors interested. On the portal, there is information on the background, objectives, principles and methodology of this theory of change initiative. The Resources part consists of different type of resources on a selected number of topics, framed as Questions. E-dialogues include discussion papers and the results of e-discussions to share views and experiences on topics and questions around theory of change and its application in practice.

Available for use online or download.

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5. HIVOS/UNDP: Method and Facilitation Guide: 'Theory of Change. A thinking-action approach to navigate in the complexity of social change processes', Iñigo Retolaza, 2011

This guide is jointly published by HIVOS and UNDP, and is aimed at actors linked to processes of social development and change: bilateral donors, community leaders, political and social leaders, NGO's representatives, community-base organizations, social movements, public decision makers, and other actors related to social change processes.

The first part of the Guide describes some theoretical elements to consider when designing a Theory of Change applied to social change processes. The second part describes the basic methodological steps to develop in every design of a Theory of Change. For reinforcing this practical part, a workshop route is included, illustrating the dynamics in a workshop of this kind.

Available for use online or download.

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6. Systemic theory of change guidance from Keystone Foundation, as part of Keystone's Impact, Planning and Learning approach

Available for use online or download.

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7. MANDE News: Theories of Change resources

Modular Theories of change: Covers some ideas about nesting theories of change

Criteria for assessing the evaluability of a theory of change.

Available for use online or download.

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8. Participatory Impact Pathways Analysis Wiki!

Participatory Impact Pathways Analysis (PIPA) is a project planning and monitoring and evaluation (M&E) approach. The approach that draws from program theory evaluation, social network analysis and research to understand and foster innovation.

It contains practical guidance and tools on running theory of change workshops for research-based projects and developing M&E frameworks from the outputs.

Available for use online or download.

The PIPA Wiki is a resource of the Water and Food Challenge Fund, CGIAR, which also has resources on developing a theory of change-based M&E system.

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9. RAPID Programme, Overseas Development Institute

ODI's Research and Development programme (RAPID) has been working for almost ten years to understand the relationship between research, policy and practice and promoting evidence-informed policy-making. Insights from RAPID's research is used to provide practical expertise, to help develop skills and competencies for policy influence.

Working with different policy actors and in diverse political contexts, RAPID has collected a range of resources, case studies and widely recognised tools to help infuse research in policy and practice. In addition to the RAPID framework for analysing political context, they have developed the RAPID Outcome Mapping Approach (ROMA) to policy influence. The programme has seen its approaches field-tested and refined at hundreds of workshops around the world: from Zambia and the Philippines, to Peru and Denmark.

Resources include:

- Understanding the links between policy and practice
- Practical tools to improve skills and capacities
- Research into research, policy and practice linkages
- Think tanks and policy research institutions
- Networks and partnerships
- Policy engagement
- Research communications and knowledge management

- Monitoring, evaluation and learning
- Project management

Available for use online or download.

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10. Research to Action: Resources on Theory of Change for Research Programmes

Offers a list of guidance and resources for those researchers and organisations looking to develop a 'theory of change' for their work.

Available for use online or download.

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11. University of Wisconsin, Evaluation Extension Service

Comprehensive set of evaluation resources, including an online course on developing context-based logic models and M&E systems, all freely available online or to download.

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12. World Wildlife Fund, Programme Standards and Tools

Comprehensive overview of theory of change-based programme design, evaluation and learning. Scroll down the page for specific tools and approaches, including developing a conceptual model of impact, results chains, stakeholder analysis, context analysis, and much more. Also, the online tool MIRADI is accessible form here.

Available for use online or download.

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13. Examples of types of short to medium term changes that research can influence

Examples of types of change influenced by research and stakeholder engagement, collated by the Evidence-Based Policy in Development Network

Hierarchy of changes, from conceptual through to policy and practice change	*Adapted from Lindquist (2001)*	*Adapted from Steven (2007)*	*Adapted from Weyrauch (2012 – unpublished)*	*Adapted from the RAPID typology, Jones (2011)*
	Examples of changes in attitudes, behaviours, practices and capacities			
Broadening research, policy, implementation and enterprise horizons 	Providing opportunities for networking/learning within the domain or with colleagues elsewhere. Introducing new concepts to frame debates, putting ideas on the agenda, or stimulating debate. Educating researchers and others who take up new positions with broader understanding of issues. Stimulating dialogue among decision- makers.	Changing perceptions and public opinion. Setting an agenda by reframing the way an issue is debated and creating pressure for change.	Promote and support access to public information.	Framing debates and getting issues on to the political agenda: attitudinal change, drawing attention to new issues and affecting the awareness, attitudes or perceptions of key stakeholders. Encouraging discursive commitments from states and other policy actors: affecting language and rhetoric is important to, for example, promote recognition of specific groups or endorsements of international declarations.
Expanding research, policy, implementation and enterprise capacities	Improving the knowledge/ data of certain actors. Supporting research users to develop innovative ideas. Improving capabilities to communicate ideas. Developing new talent and	Building networks that support delivery of change. Developing capacity within organisations to allow them to understand and respond to an issue.	**Citizen engagement** Enlarging or strengthening democratic spaces. Supporting people-centred policy making. Empowering traditionally excluded groups.	Influencing behaviour change in key actors: policy change requires changes in behaviour and implementation at various levels in order to be meaningful and sustainable.

	institutional arrangements for research and analysis.		Enhancing collaboration and alignment within networks. Developing CSOs' capacity to monitor and evaluate policies, programme management and implementation. Increasing civil society participation in relevant policy and implementation processes. Strengthening state agencies' capacity to interact with citizens, communities and their representatives.	
Affecting research, policy, implementation and enterprise regimes	Modification of existing programmes or policies. Fundamental re-design of programmes, policies, strategies and initiatives.	Changing institutions, such as influencing strategy and resource allocations within organisations, institutions, departments.		Securing procedural change at domestic or international level: changes in the process whereby policy decisions are made, such as opening new spaces for policy dialogue. Affecting policy content: while legislative change is not the sum total of policy change, it is an important element.

Bibliography

Anderson, A. (2005): *The Community Builder's Approach to Theory of Change: A Practical Guide to Theory Development*, New York: Aspen Institute Roundtable on Community Change. Available at: http://www.aspeninstitute.org/sites/default/files/content/docs/roundtable%20on%20community%20change/rcccommbuildersapproach.pdf

Argryris, C. and Schon, D. (1974): *Theory in Practice: Increasing Personal Effectiveness,* San Francisco: Jossey-Bass.

Carden, F. (2009): *Knowledge to Policy, Making the Most of Development Research*, Sage, IDRC. Available at: http://www.idrc.ca/EN/Resources/Publications/Pages/IDRCBookDetails.aspx?PublicationID=70

Chen, H.-T. (1990): *Theory-Driven Evaluations* Newbury Park, California: Sage Publications.

Connell, J. P. and Kubisch, A. C. (1998): "Applying a theory of change approach to the evaluation of comprehensive community initiatives". In: K. Fulbright-Anderson, A.C. Kubisch & J.P. Connell (eds.). *New Approaches to Evaluating Community Initiatives. Volume 2: Theory, measurement and analysis*. Queenstown: The Aspen Institute.

Douthwaite, B., Kuby, T., van der Fliert E., and Schultz S. (2003): "Impact Pathway Evaluation: an Approach for Achieving and Attributing Impact in Complex Systems", *Agricultural Systems,* vol. 78, no. 2, pp.243–65.

ESPA (2012) *ESPA impact strategy*, ESPA: http://www.espa.ac.uk/files/espa/ESPA%20Impact%20Strategy.pdf

Eyben R., Bronstein, A., Kidder, T. and Rowlands, J. (2008): 'Thinking about change for development practice: a case study from Oxfam GB', *Development in Practice*, vol. 18, no. 2 pp.201–12.

Freire (2000), *Pedagogy of the Oppressed,* London, New York: Continuum Publishing.

Funnell, S. and Rogers, P. (2011) *Purposeful Programme Theory. Effective use of theories of change and logic models*, San Francisco: Jossey-Bass.

James, C. (2011): *Theory of Change Review. A report commissioned by Comic Relief*, Comic Relief. Available at: http://mande.co.uk/2012/uncategorized/comic-relief-theory-of-change-review/

Jones, H. (2011), 'A guide to monitoring and evaluating policy influence', Background Paper, Overseas Development Institute. Available at: http://www.odi.org.uk/resources/docs/6453.pdf

Lindquist, E. (2001) Discerning Policy Influence: Framework for a Strategic Evaluation of IDRC-Supported Research, Working Paper, School of Public Administration, University of Victoria. Available at: http://www.ghri.gc.ca/uploads/user-S/10359907080discerning_policy.pdf

Montague, S., Porteus, N. and Sridharan, S. (2011), 'The Need to Build Reach into Results Logic and Performance Frameworks'. Presentation, January 24, 2011 Performance Management Network. Available at: http://www.pmn.net/wp-content/uploads/Build-Reach-into-Results-Logic.pdf

Morton, S. (2012) 'Exploring and Assessing Research Impact', Unpublished Thesis, University of Edinburgh.

Nutley, S., Walter, I., Davies, H. (2007), *Using Evidence. How research can inform public services,* Bristol: Policy Press.

Ortiz, A. and Macedo, J.C. (2010) "A 'Systemic Theories of Change' Approach for Purposeful Capacity Development", *IDS Bulletin*, vol. 41, no. 3, pp.87–9.

Rogers, P.J. (2008) "Using Programme Theory for Complicated and Complex Programmes", *Evaluation*, vol. 14, no. 1, pp.29–48

Stern, E., Stame, N., Mayne, J., Forss, K., Davies, R. and B. Befani (2012), 'Broadening the range of designs and methods for impact evaluations. Report of a study commissioned by the Department for International Development', DFID Working Paper 38, London: DFID.

Steven D. (2007), Evaluation and the New Public Diplomacy, presentation to the Future of Public Diplomacy. 842nd Wilton Park Conference, River Path Associates. Available at: http://globaldashboard.org/wp-content/uploads/2007/03/public-diplomacy-and-evaluation-wilton-park-020307.pdf

Van der Knaap, P. (2004) "Theory-based evaluation and learning: possibilities and challenges". *Evaluation*, vol. 10, no. 1, pp.16–34.

Vogel, I. (2012) "Review of the Use of 'theory of change' in International Development", Review Report, Department for International Development. Available at: http://www.dfid.gov.uk/r4d/pdf/outputs/mis_spc/DFID_ToC_Review_VogelV7.pdf

Weiss, C. (1995) 'Nothing as Practical as Good Theory: Exploring Theory-Based Evaluation for Comprehensive Community Initiatives for Children and Families', *New Approaches to Evaluating Community Initiatives Volume 1 Concepts, Methods, and Contexts*, Washington DC: The Aspen Institute.

Weyrauch, V. and Díaz Langou, G.L. (2011) "Sound expectations: from impact evaluations to policy change", Working Paper No. 12, Delhi: 3ie and the Centre for the Implementation of Public Policies Promoting Equity and Growth. Available at: http://www.3ieimpact.org/media/filer/2012/05/07/Working_Paper_12.pdf

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