# Theory of Change Supplement: A short literature review and annotated bibliography

A STAP Background Document
November 2020

## STAP
### SCIENTIFIC AND TECHNICAL ADVISORY PANEL
*An independent group of scientists that advises the Global Environment Facility*

gef

UN environment programme

ABOUT STAP:
The Scientific and Technical Advisory Panel (STAP) provides independent scientific and technical advice to the GEF on its strategies, programs and projects. https://stapgef.org

ABOUT GEF:
The Global Environment Facility (GEF) was established on the eve of the 1992 Rio Earth Summit to help tackle our planet's most pressing environmental problems. Since then, the GEF has provided close to $20.5 billion in grants and mobilized an additional $112 billion in co-financing for more than 4,800 projects in 170 countries. Through its Small Grants Programme, the GEF has provided support to nearly 24,000 civil society and community initiatives in 133 countries. http://www.thegef.org

# Theory of Change Supplement: A short literature review and annotated bibliography

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# LIST OF ABBREVIATIONS

| | |
|---|---|
| DFID | U.K. Department for International Development |
| FAO | Food and Agriculture Organization of the United Nations |
| GEF | Global Environment Facility |
| IUCN | International Union for the Conservation of Nature |
| OFP | Office of Food for Peace |
| RAPTA | Resilience, Adaptation Pathways and Transformation Assessment |
| STAP | Scientific and Technical Advisory Panel |
| ToC | Theory of Change |
| TOCO | Theory of Change Online |
| UNDG | United Nations Development Group |
| UNDP | United Nations Development Programme |
| UNEP | United Nations Environment Programme |
| UNHCR | Office of the United Nations High Commissioner for Refugees |
| USAID | U.S. Agency for International Development |

# INTRODUCTION

The *Theory of Change Primer* responds to the Resilience, Adaptation Pathways and Transformation Assessment (RAPTA) framework[1] for Theory of Change (ToC). This supplement collates some grey and reviewed literature as context and to confirm that the RAPTA framework is up to date.

Sources were obtained through:

- Reasonably systematic searches of Web of Science for refereed papers. The search term was "theory of change", and the results were filtered for review-style papers in the last 5 years.

- Literature accessed for the *Achieving Enduring Outcomes from GEF Investment* document.[2]

- Google for online sites and sources. The search term was "theory of change", both generally and in conjunction with key international organization names (e.g. World Bank, Food and Agriculture Organization of the United Nations, United Nations Environment Programme, United Nations Development Programme, United Nations Sustainable Development Group).

- Additional material supplied by reviewers.

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1      O'Connell et al. (2016, 2019).
2      GEF STAP (2019).

# S1. GENERAL DEVELOPMENTS

As many sources indicate, Weiss (1995), among others, popularized the term "Theory of Change" as a way to describe the set of assumptions that explain both the mini-steps that lead to the long-term goal and the connections between programme activities and outcomes that occur on each step of the way. While understanding the causal links was important from the start, early presentations tended to be (i) simple illustrations of what outputs were expected to lead to what outcomes and longer-term impacts (e.g. using a simple planning triangle or logic models, where causality is implicit) or (ii) outcome chains (which encourage more thinking about how and why change occurs), nicely outlined by Harries, Hodgson and Noble (2014). In parallel, increasing emphasis has been placed on the process of developing a ToC and its value in building a common team, partner and stakeholder understanding of what is to be achieved, thus contributing to the durability of outcomes.[3] Today, the Center for Theory of Change website,[4] supported by the social enterprise ActKnowledge, provides a valuable consolidation of ToC approaches and documentation that many other organizations draw on, though there are many other sources of information on ToC, as this supplement will show.

A U.K. Department for International Development (DFID) review found in 2012 that among ToC professionals the constituent parts of and approaches to "best practice" ToC were quite consistent.[5] But another 2012 study found that there remained diverse reasons for carrying out ToCs and consequent divergence in many detailed aspects of approaches.[6] Echoing this more recently, from survey responses and the literature, Maru et al. (2018b) found four challenges to the widespread use of ToC: (i) different interpretations of ToC, (ii) incoherence in relationships among the constituent concepts of ToC, (iii) confused relationships between ToC and project logframes, and (iv) limitations in the skills and commitment necessary for enacting

ToC. These challenges have been echoed at times in informal discussions about ToC within the Global Environment Facility (GEF) partnership.

## DEFINITIONS

Definitions of ToC are surprisingly diverse, although they all indicate that a ToC makes explicit the logic of how an intervention is expected to produce results. For example, Scriven (1991) defines ToC as "the description of a sequence of events that is expected to lead to a particular desired outcome", and Dhillon and Vaca (2018) talk of "the hypothesis about the way that a program brings about its effects…essentially the logic behind an intervention".

Many sources indicate that the term ToC is used both for the product (the chain of logic) and the process (collectively identifying the logic). Importantly, most sources go on to emphasize that this is not all that is covered by the term. For example, Harries, Hodgson and Noble (2014) say:

> A theory of change is a tool to help you describe the need you are trying to address, the changes you want to make (your outcomes), and what you plan to do (your activities)….
>
> A theory of change is often represented in a diagram or chart, but a full theory of change process involves more than this. It should help you consider and articulate the assumptions and enablers that surround your work and explain why you think your activities will lead to the outcomes you want. It should also challenge you to develop clear aims and strategies and explore whether your plans are supported by evidence. By the end of a theory of change process, you should have a clear idea of what your organisation or project wants to achieve and a strategy to do this.

Similarly, White (2018) argues that a ToC is a unifying framework to address "not just the question of what

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3    For example, Rogers and Coates (2015).
4    https://www.theoryofchange.org.
5    Vogel (2012).
6    Stein and Valters (2012).

works, but also how, where, for whom and at what cost?" All practical guides also emphasize the role of ToC in helping define success indicators, which may then drive monitoring.

Rehfuess et al. (2018) provide a more formal taxonomy of ToC approaches, distinguishing (i) approaches undertaken before an intervention from those intended to support adaptive learning through an intervention, more or less iteratively, and (ii) approaches based more on describing the system in which the interaction between participants, the intervention and its context takes place, as opposed to those focused on the causal pathways leading from the intervention to multiple outcomes.

Dhillon and Vaca (2018) provide a good recent review of ToC, noting that its key distinctive elements from other approaches are to identify specific causal links among outputs and outcomes, describe the causal pathways by which interventions are expected to have effect, and be explicit about assumptions, which includes an analysis of risks (or "barriers", here) to success.[7] They argue that good ToCs need to evolve to include more meaningful causal strands, clarity about the area of accountability (especially outcomes needed for success but for which the intervention agency does not hold itself accountable), and consideration of unintended effects. Many of these points are taken up in the RAPTA framework. Dhillon and Vaca (2018) and Davies (2018) also provide some guidelines for presentation options and a list of online tools available to assist with presentation.

## PURPOSES

Harries, Hodgson and Noble (2014) (following Stein and Valters [2012]) usefully summarize reasons for developing a ToC that can be found scattered through many other sources:

- **Strategy:** Help teams work together to achieve a shared understanding of a project and its aims; make projects more effective;

help identify and open up "black boxes" in thinking.

- **Measurement:** Help determine what needs to be measured (and what does not) so you can plan your evaluation activities; encourage teams to engage with the existing evidence base; act as the basis for claims about attribution.

- **Communication:** Quickly communicate a project's aims; bring the process of change to the forefront.

- **Partnerships:** Help with partnership working.

The Annie E. Casey Foundation in the United States of America provides a more general call to arms:[8]

> Some stakeholders may react in frustration to the theory of change development process because they view it as "taking time to think" which takes time away from "doing the work." However, the thinking involved in building a theory of change does not in any way preclude doing the work.… it is almost impossible to determine whether progress has occurred in a community change initiative if you have not explicitly identified the steps to progress. Communities have too much at stake to engage in work without a clearly defined purpose.

The World Bank's Independent Evaluation Group adds to this from an evaluation perspective:[9]

> Notwithstanding the differences between [intervention design and evaluation], the two are closely linked. In an ideal world, evaluators build on the espoused theories of development practitioners (and related stakeholders), which are articulated during the intervention design phase and are informed by past experience and existing knowledge about what works and under what circumstances. The circle of knowledge accumulation is complete when evaluations

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7   See Dhillon and Vaca (2018, figure 4, p. 69); figure 6, p. 71, in the same publication shows how theory of change elements go beyond other methods.

8   Organizational Research Services (2004, p. 39).

9   Vaessen (2016).

feed into the knowledge repositories that inform intervention design.

This key aspect of ToC – its contribution to structuring the meaningful measurement of success – has also been highlighted since the early literature.[10] Measuring success not only involves post hoc evaluation but also emphasizes the role of ToC as a learning aid through the life of a programme, helping to identify early when it becomes apparent that an intervention cannot meet its goals because assumptions are not being met. Most recently, this has led to ToC reviews providing a structured approach to flexible adjustments during the life of an intervention.[11] In this way, the ToC can become a boundary object that helps ensure that adaptive flexibility is bounded within a logical structure, rather than abused to cover up project failings.

Reviewing many DFID projects, Vogel (2012) concluded more generally that (i) the benefits of ToC approaches are that they require both logical thinking and deeper critical reflection; (ii) ToC processes ensure that consensus exists on the basic elements of the ToC; (iii) ToC is best kept flexible, not prescribed (i.e. approaches are best regarded as "ToC thinking" rather than overly prescriptive steps); (iv) ToC should inspire and support innovation and improvement in programmes; and (v) working with ToC requires performance management approaches to accommodate uncertainty and flexibility and, in fact, ToC provides a tool to manage this, as noted in Thornton et al. (2017).

## ASSESSING A THEORY OF CHANGE

Dhillon and Vaca (2018) also propose an explicit set of indicators of how good the ToC process itself is likely to be, including the strength of the evidence cited, the degree to which causal links are explicit, the level of representation detail, the degree of testing of causation, and the levels of participation.[12] These indicators provide a set of general criteria against which funders like the GEF might assess the quality of ToCs. Davies (2018) also addresses the

quality of ToCs, though more from the evaluation perspective.

Colby and Collins (2013) note a number of "red flags" for quality assessment of a ToC process, aimed more at those commissioning a ToC process than for assessment afterwards. These are:

- There is no mandate or buy-in from key decision maker(s).

- Some of the necessary people are not participating.

- Outcomes are stated as actions or interventions, not conditions.

- Outcomes are compound statements.

- Outcomes are too vaguely stated to be helpful when making decisions.

- Outcomes are not in chronological order.

- Backward mapping does not always work right away.

- Not enough time and follow-through have been given to the process.

- Facilitation is not set up and run properly.

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10   Davies (2018).
11   For example, Maru et al. (2018b); Thornton et al. (2017).
12   See Dhillon and Vaca (2018, figure 8, p. 74).

# S2. SPECIFIC AREAS OF GUIDANCE

In its comprehensive approach to project and programme planning, the RAPTA framework identifies four key steps in developing a ToC, as well as some precursors or inputs, and a fifth step that links to other elements of planning.[13] Importantly, RAPTA embeds ToC within the whole planning process, as illustrated in figure S1. RAPTA strongly emphasizes a systems approach with well-considered partner and stakeholder engagement to inform the causal links in the ToC; these emphases were not unique across the sources reviewed here but are particularly important to the GEF's goal of achieving systemic, transformative and long-lasting impact, and so are highlighted in this guide. Almost all sources on ToC highlight links to monitoring and evaluation, but to different ends.

RAPTA outlines ToC only briefly. The most extensive repository of material about developing ToCs is on the Center for Theory of Change website.[14] Most of the sources we uncovered in use by GEF agencies derived some of their guidance from here. Notable on this website are the primer and facilitator material,[15] as well as many other supporting materials.[16]

A variety of more recent, partly derivative, sources of value are noted in table 1. Several other useful sources promote a similar sequence without necessarily labelling steps.[17]

## KEY STEPS

Table 1 summarizes the steps recommended in a variety of ToC guides. Despite different numbers of steps, common factors include:

- Having clarity about the vision or objective

- Working back from the impacts through the outcomes to the outputs needed for the intervention

- Being clear on the rationale for and assumptions behind the causal links (citing evidence or noting where it may need to be developed)

- Exploring barriers and enablers explicitly (often described as risks)

- Reflectively analysing what is the necessary and sufficient set of intervention pathways

- Clarifying the area of responsibility (while identifying what else must be done, and by whom, for the overall intervention to work)

- Developing indicators of success related to each causal pathway

- Describing the ToC with a diagram and a narrative accompaniment (that properly includes a rationale for the intervention; a situation analysis; a description of the diagram; key elements of evidence; and a monitoring, evaluation and learning plan)[18]

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13    O'Connell et al. (2019, pp. 17–18).

14    https://www.theoryofchange.org.

15    Taplin and Clark (2012); Taplin and Rasic (2012).

16    https://www.theoryofchange.org/library/publications and https://www.theoryofchange.org/library/presentations.

17    For example, Dhillon and Vaca (2018); Harries, Hodgson and Noble (2014) and the derivative CLiNKS and NPC (2014); Maru et al. (2018b); UNDG (2017) and the related UNDP Effectiveness Group (2016); UNEP Evaluation Office (2017).

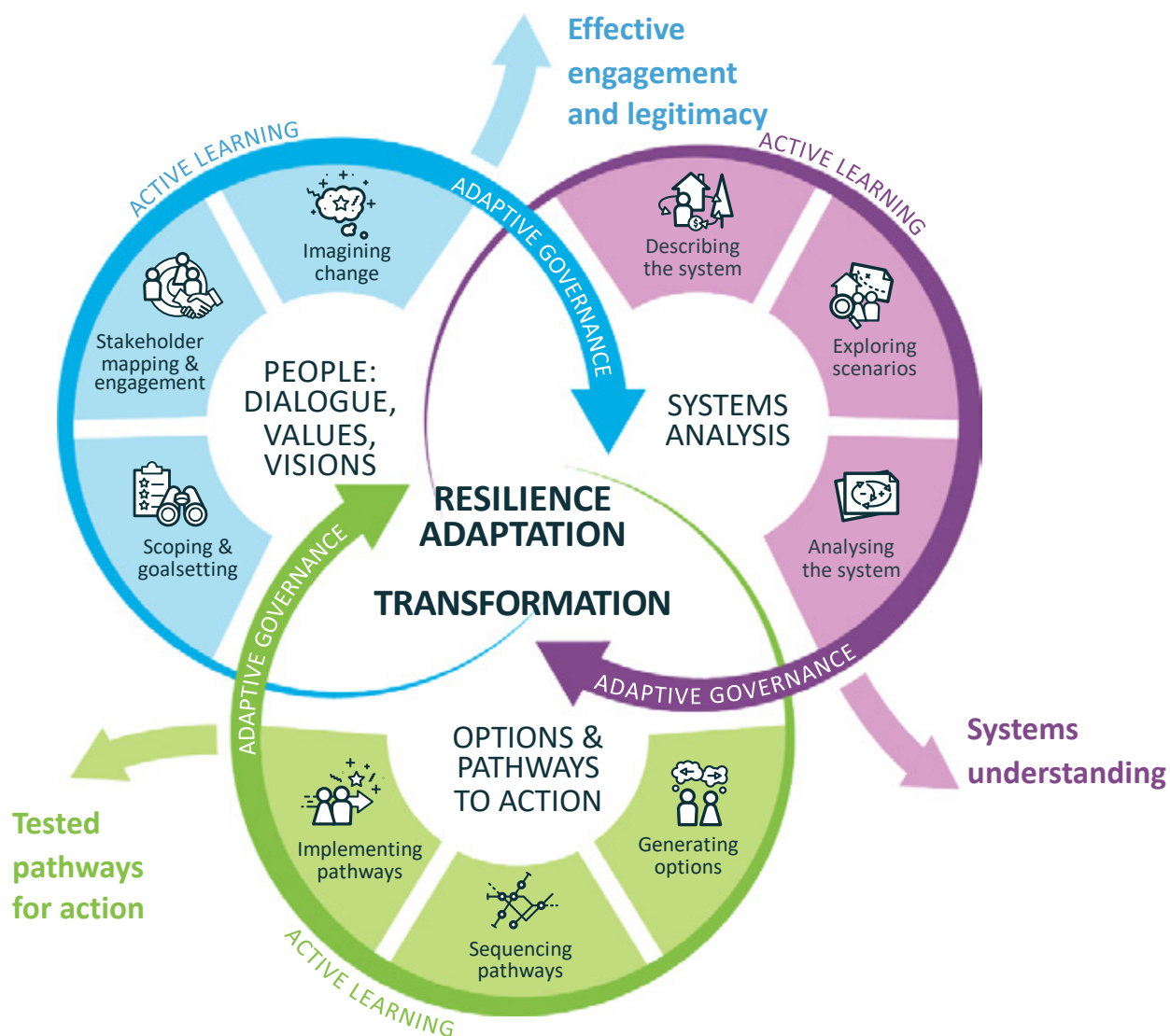18    Harries, Hodgson and Noble (2014).

Figure S1 Summary diagram from RAPTA version 2. Theory of change is discussed under "imagining change", at top left. Source: O'Connell et al. (2019).

Table 1

Summarized recommendations of steps in developing a Theory of Change from various reviewed sources

| Source | Recommended steps |
|---|---|
| RAPTA (O'Connell et al., 2019) [p.18, abbreviated] | 1. Clarify goals and work backwards to specify necessary and sufficient long-term, medium-term and immediate outcomes, outputs, activities and resources to achieve them<br>2. Describe the causal logic and assumptions, organised into 'pathways' of impact. Create preliminary narratives to explain these<br>3. For pathways within scope, list the evidence that exists or is required to support the Theory of Change. Challenge existing assumptions and logic, ensuring key assumptions are valid<br>4. Identify partnerships to lead or support impact pathways outside scope<br>5. Iteratively consider implications for Scoping and Goal Setting, Stakeholder mapping and engagement, Adaptive governance and Active learning. Revisit throughout the process |
| TasCOSS https://www.tascosslibrary.org.au/how-write-theory-change-0 | 1. Identify the problem you are working to address<br>2. Work out what you want to achieve (your long term goal)<br>3. Walk backwards to get where you want to go!<br>4. Explain your 'assumptions'<br>5. Now work out what out what you will do to achieve your desired outcomes<br>6. Draw a line above your area of responsibility<br>7. Develop indicators to measure whether you have been successful<br>8. Summarise and explain your Theory of Change |
| UNHCR Lebanon (p.9) (https://data2.unhcr.org/en/documents/download/66489) | 1. Focus on the high-level change the sector intends to contribute to in the current context<br>2. Identify what is needed for the desired development change to happen<br>3. Establish and make explicit the related key assumptions underpinning the theory of how change happens, and major risks that may affect it<br>4. Identify partners and actors who will be most relevant for achieving each result, taking into account the related risks and assumptions |
| theoryofchange website, various sources, e.g. Taplin and Clark (2012) (also accessed through World Bank wiki) | 1. Identify long-term goals<br>2. Backwards map and connect the preconditions to achieve the goals; explain why these preconditions are necessary and sufficient<br>3. Identify your basic assumptions about the system<br>4. Identify the interventions that will create your desired change<br>5. Develop indicators to measure progress on outcomes<br>6. Quality review – plausible, feasible, testable?<br>7. Write a narrative to explain the logic of the initiative |
| Poverty Action Lab, also through World Bank wiki | 1. Analyze the situation<br>2. Clarify the program goal<br>3. Design the program/product<br>4. Map the causal pathway<br>5. Identify explicit assumptions<br>6. Design specific, measurable, achievable, reliable and time-bound indicators<br>7. Convert to logical framework |
| UNDG (Latin America) for several UN bodies | 1. Analysis of situation and context<br>2. Identify pre-conditions<br>3. Identify role of related parties<br>4. Make assumptions and risks explicit<br>5. Validate it<br>6. Turn it into a narrative |
| UN Development Group (2017) | 1. Focus<br>2. Identify what is needed for change<br>3. Reflect assumptions and risks<br>4. Identify partners and actors |

## PROCESS

Specific guides also provide different insights into *how* to carry out ToC processes, including practical advice on the process. Some key points from Harries, Hodgson and Noble (2014), Taplin and Clark (2012), and Taplin and Rasic (2012) are:

- Consider factors affecting your approach:[19]

  — Purpose of your theory of change.
  — Size and complexity of the project: Is it for a whole organization or a single project or campaign? (Can develop a high-level, overall Theory of Change for an organization alongside more detailed ones for individual projects.)
  — Stage of development.
  — Direct or indirect impact on service users.

- In workshops, start by brainstorming or writing on sticky notes to populate a general Theory of Change and get your group talking. Only move towards specific issues and refinements once everyone has had a chance to have input.

- Probe for assumptions in a group setting to reveal underlying differences in preconceptions. Listen for hidden assumptions and challenge them (nicely!). Especially, get a clear rationale if there seems to be disagreement.

- Hold off on listing specific outputs and activities until the essential logic of short- and longer-term outcomes is reasonably clear as a key precondition for achieving the goal.

- Avoid wasting time worrying too much over wording and specific links. Your Theory of Change will never be perfect. The main aim is to produce something that everyone broadly agrees with and that is useful for your aims.

- Conduct a quality review (Is the ToC plausible, feasible and testable? Is it necessary and sufficient?). This review should be ongoing during the ToC process.[20]

- Develop a summary narrative as an essential part of the ToC process and one of its key products. The narrative "explains the pathways of change, highlights some of your major assumptions, rationales, and interventions, and presents a compelling case as to how and why your initiative expects to make a difference." It may also "contain some information that is additional to what is in your theory, such as your overall vision, the history of how your initiative came to be, and some community context".[21] It should be kept to one to two pages.

- Create a ToC diagram as a useful part of the documentation. These diagrams come in many forms. Guidance on diagram development is provided by van der Laan (2019) and discussed by Dhillon and Vaca (2018) and Davies (2018), among others.

- Keep the first meeting to ideally 3–4 hours, though for a smaller team a full day will be valuable. If stakeholders are being engaged, a minimum of 6–8 people is ideal to get a diversity of viewpoints; 15 or so is acceptable.[22]

- Consider having a "parking lot" sheet of paper on the wall to acknowledge and capture issues that might disrupt the flow of the meeting, without being diverted into discussing them.

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19   Harries, Hodgson and Noble (2014, p. 9).

20   Taplin and Clark (2012).
21   Taplin and Clark (2012).
22   Taplin and Rasic (2012).

## PARTICIPATION

Many guides speak about the importance of involving people. The following points draw from Harries, Hodgson and Noble (2014), Taplin and Clark (2012), and Taplin and Rasic (2012):

- Engaging a range of people, including practitioners, volunteers, managers, services users and external stakeholders, is important. However, it is not necessary or efficient to involve everyone with an interest in your work; a group of 3–10 people seems to work well.

- Is the process going to be undertaken in a workshop or by talking to people individually? Workshops are more efficient and tend to be the most common approach. They need to be facilitated so that everyone feels able to contribute, regardless of their position in the organizational hierarchy.

- Developing a ToC can be demanding, and people lose focus after a few hours. Spend between half a day and a day on it at most. You can always reconvene the group later, which will allow time for writing up, reviewing and taking stock.

- It is useful to split a big group into smaller ones that can move around the room commenting on the logic of different causal pathways.

- Bringing in more viewpoints can help the group think through all possible causal pathways and thus avoid unintended consequences. For a good example of how unintended consequences can emerge from not considering enough possible causal pathways, see Bloem (2019a, 2019b), discussing how the regulation of conflict minerals in central Africa to reduce conflict may have in fact tragically increased conflict through other causal pathways.

## ITERATION

Most guides emphasize that a complete ToC is not achieved in one meeting and that, in fact, the ToC is an ongoing work, not only because of the need to continue developing the logic of the ToC but also because of the different primary reasons for applying it through the life cycle of an intervention. Examples of advice from specific guides follow:

- Learning for Action (n.d.): "A Theory of Change…is a living tool."

- Organizational Research Services (2004): "It is typical for a theory of change outcome map to be revised several times before it provides a complete and clear picture of your community change effort."

- TasCOSS Library (n.d.): "It's best to create a Theory of Change before you've decided how your program will be constructed… But…you can view creating a Theory of Change for an existing service as an opportunity to test the structure and logic of your program – it could lead to service improvements."

- Harries, Hodgson and Noble (2014): "A theory of change is an iterative process: as well as sending the draft to the people who attended the workshop, you may find it useful to circulate it more widely for further feedback, for example, to senior managers and partner agencies."

- Harries, Hodgson and Noble (2014): "A theory of change should be seen as a working document. You can always update it to reflect learning and new situations."

# MONITORING, EVALUATION AND LEARNING

As a core original rationale for ToC, all guides say something about indicators, learning, and testing the logic on which the ToC is based. The guidance can be summarized as follows:

- Ideally, every outcome or precondition should be accompanied by at least one indicator to measure success;[23] in practice, an intervention may later decide some outcomes are more important to spend resources collecting information on than others.[24]

- Indicators should be able to address four target elements, along the lines of "How many of who or what will reach what level by when?"

- The ToC process should work out what outcomes ought to be prioritized for monitoring and to discuss how they should be monitored in general terms. It is a task for a smaller group of evaluators, after the workshop, to design the detailed measurements, tools, data sources and time frames for monitoring.[25]

- Some aspects of clarity of logic in the ToC matter particularly for evaluation, as discussed by Davies (2018).

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23    USAID OFP (2016).
24    Taplin and Clark (2012).

25    Taplin and Rasic (2012).

# S3. ANNOTATED BIBLIOGRAPHY

## ONLINE SOURCES AND GREY LITERATURE

### ActKnowledge (2011).

https://www.theoryofchange.org/wp-content/uploads/toco_library/pdf/2011_-_Montague-Clouse_-_Theory_of_Change_Basics.pdf

A useful short primer that emphasizes (i) ToC being both a process and a product and (ii) the importance of clear vision, causal pathways, indicators of success:

> "Theory of Change is a planning process created specifically for community change efforts."
>
> "Theory of Change is *not* a general theory of how change happens; rather, the theory is specific to your effort."
>
> "Theory of Change is useful for setting goals, strategic planning, and program evaluation."

> "TOC is a 'Process' and a 'Product' [–] A structured thinking PROCESS that allows groups to turn their theories about what needs to change and why into a 'causal pathway' [–] A PRODUCT that illustrates the results of the TOC *process*."

A causal pathway is "a step-by-step, backwards mapping process through which a group determines all the preconditions necessary to reach an ultimate vision."

### Better Evaluation, Describe the theory of change.

https://www.betterevaluation.org/en/node/5280

The website of an Australian Department of Foreign Affairs and Trade and partners initiative. It is about evaluation but emphasizes that a ToC is the first step. It also mentions unintended results, positive or negative, and long-term durability (sustainability).

### Brown (2016).

https://usaidlearninglab.org/lab-notes/what-thing-called-theory-change

> "Not only does the ToC show the outcomes/preconditions, it also outlines the *causal linkages in an intervention* between the shorter-term, intermediate, and longer-term outcomes. The identified changes are mapped—as the '*outcomes pathway*'—showing each outcome in logical relationship to all the others, as well as chronological flow."
>
> "Ideally, every outcome/precondition should be accompanied by at least one *indicator* to measure success."

## Center for Theory of Change, TOC origins.

https://www.theoryofchange.org/what-is-theory-of-change/toc-background/toc-origins

Provides a brief history of ToC:

"Weiss popularized the term 'Theory of Change' as a way to describe the set of assumptions that explain both the mini-steps that lead to the long-term goal and the connections between program activities and outcomes that occur at each step of the way. She challenged designers of complex community-based initiatives to be specific about the theories of change guiding their work and suggested that doing so would improve their overall evaluation plans and would strengthen their ability to claim credit for outcomes that were predicted in their theory."

## Center for Theory of Change, TOCO software.

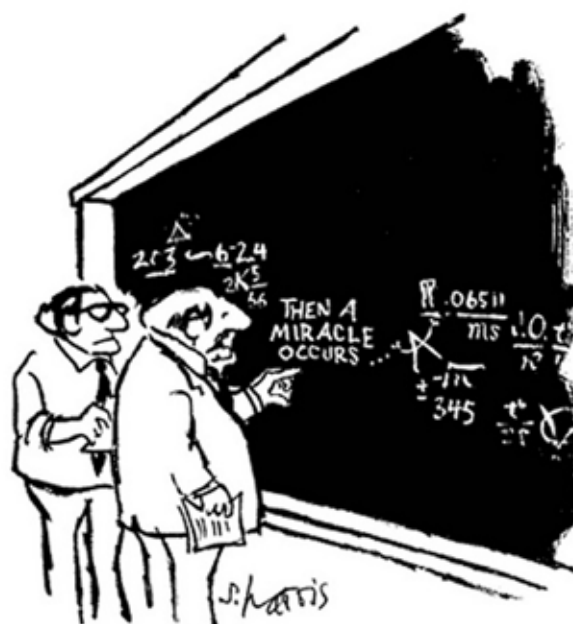https://www.theoryofchange.org/toco-software

Describes Theory of Change Online (TOCO), a tailor-made software tool from ActKnowledge for recording the outputs of a ToC workshop.

## Center for Theory of Change, What is Theory of Change?

https://www.theoryofchange.org/what-is-theory-of-change

"Theory of Change is essentially a comprehensive description and illustration of how and why a desired change is expected to happen in a particular context. It is focused in particular on mapping out or 'filling in' what has been described

as the 'missing middle' between what a program or change initiative does (its activities or interventions) and how these lead to desired goals being achieved. It does this by first identifying the desired long-term goals and then works back from these to identify all the conditions (outcomes) that must be in place (and how these related to one another causally) for the goals to occur. These are all mapped out in an Outcomes Framework."

"The Outcomes Framework then provides the basis for identifying what type of activity or intervention will lead to the outcomes identified as preconditions for achieving the long-term goal. Through this approach the precise link between activities and the achievement of the long-term goals are more fully understood. This leads to better planning, in that activities are linked to a detailed understanding of how change actually happens. It also leads to better evaluation, as it is possible to measure progress towards the achievement of longer-term goals that goes beyond the identification of program outputs."

Step 2 is essentially clarified in this famous cartoon (credit: Sidney Harris).



"I think you should be more explicit here in step two."

Center for Theory of Change,
FAQS (frequently asked questions).

https://www.theoryofchange.org/
what-is-theory-of-change/faqs

"A Theory of Change is a specific and measurable description of a social change initiative that forms the basis for strategic planning, on-going decision-making and evaluation." The term is also applied to the methodology used to create a Theory of Change.

"A Theory of Change provides a roadmap to get you from here to there. If it is good and complete, your roadmap can be read by others and show that you know how to chart your course. This is helpful with constituents, staff, partners organizations and funders."

"More importantly, if it is good and complete, you have the best chance of making the change in the world you set out to make and of demonstrating your successes and your lessons along the way."

"Developing a theory usually implies getting numerous stakeholders to the table, and funders have learned that initiatives that the community or key stakeholders do not support are not likely to produce outcomes."

When to stop? "Sometimes, it is necessary to have a very 'broad' theory: that is, account for every precondition for your long-term goal, and sometimes it's important to have a 'deep' theory: work a pathway that your initiative will be working on all the [way] back to the very first step needed. Other times, e.g. for evaluation, you may only need to model what you are doing in a summary form. That will allow evaluation of key outcomes, but not provide enough detail for programmatic decision-making. How far to go is always a prime consideration when undertaking theory construction."

Center for Theory of Change,
Publications.

https://www.theoryofchange.org/library/publications

Contains multiple useful sources.

Center for Theory of Change,
ToC examples.

https://www.theoryofchange.org/library/
toc-examples

Gives specific examples of ToCs in multiple languages, though mostly from 2013 or earlier.

Center for Theory of Change,
Presentations.

https://www.theoryofchange.org/library/
presentations

Contains various presentations on ToC.

## Clark and Anderson (2004).

http://www.theoryofchange.org/wp-content/uploads/toco_library/pdf/TOCs_and_Logic_Models_forAEA.pdf

"Theories of Change link outcomes and activities to explain HOW and WHY the desired change is expected to come about."

"Theories of Change also require justifications at each step – you have to articulate the hypothesis about why something will *cause* something else (it's a causal model, remember!)."

"Theories of Change require identifying indicators

…

"Because, you need to know HOW WELL a precondition needs to be met in order to get to the next goal."

"Theories of Change are best when you need to:

• Design a complex initiative and want to have a rigorous plan for success

• Evaluate appropriate outcomes at the right time and the right sequence

• Explain why an initiative worked or did not work, and what exactly went wrong"

"Undertake a TOC process that is a manageable scope for your organization. Make sure you get stakeholders to articulate what has to happen IN ORDER for goals to be met and their assumptions about why…"

"Then, summarize your theory in ways that serve the purposes of your different constituents, such as residents, funders, Boards, etc."

"A Logic Model that is a summary of an underlying theory is a much more powerful tool."

## CLiNKS and NPC (2014).

https://www.clinks.org/sites/default/files/2019-01/TheoryofChangeGuide.pdf

This publication extends aspects of Harries, Hodgson and Noble (2014) and provides a workshop template with timings (appendix 4, pp. 32–33) and an example of providing evidence (appendix 5, p.34 onward).

## Colby and Collins (2013).

https://www.theoryofchange.org/wp-content/uploads/toco_library/pdf/TheoryofChangeFundamentalsWebinarJune2013.pdf

Identifies a series of red flags regarding ToC quality and failings.

## DGMT Growing Confidence, Why is a Theory of Change important?

https://www.dgmt-growingconfidence.co.za/content/why-theory-change-important

Brief explanation of ToC in a school development context.

## Foundations of Success website.

http://fosonline.org

The Foundations of Success website provides further material, mostly labelled as the "results chain" approach (see Margoluis et al., 2013), which is closely aligned to the ToC philosophy and essentially provides the causal logic component of ToC.[26]

## Harries, Hodgson and Noble (2014).

https://www.thinknpc.org/wp-content/uploads/2018/07/Creating-your-theory-of-change1.pdf

Excellent full documentation of ToC process from New Philanthropy Capital, including consideration of enablers (they distinguish internal and external enablers, the former being more under project control).

See box 1 (p. 8) for key components as outputs, p. 9 for "factors affecting your approach" and box 3 (p. 10) for tips on the ToC process, including not being too complex. There is a good chapter on representations, from simple planning triangle and logic models, where causality is implicit, to outcomes chains, which encourage more thinking about how and why change occurs (p. 11 onward, particularly p. 15). The guide highlights the importance of adding a narrative (p. 18), suggesting elements of context, assumptions, evidence, and internal and external enablers. It also discusses (i) measurement (p. 22) through four pillars (map ToC, prioritize what you measure, choose level of evidence, select sources and tools) and (ii) the use of ToC to improve services (p. 26).

> "A theory of change is a tool to help you describe the need you are trying to address, the changes you want to make (your outcomes), and what you plan to do (your activities)."

## Learning for Action (n.d.).

http://learningforaction.com/what-is-a-theory-of-change

> "A Theory of Change (TOC) is a living tool". This resource is explicit about the stages of articulating the ToC; measuring, planning and implementation; and continuous improvement. There is lots of good information, but the page distinguishes a "program model" that sounds overly based on simply improving what you are already doing; though it does also caution against just mirroring what you are already doing."

## Learning for Sustainability, Theory of Change.

https://learningforsustainability.net/theory-of-change

Multiple further sources can be found on this page.

## Monitoring and Evaluation News.

https://mande.co.uk

Rick Davies' monitoring and evaluation website provides other useful material.[27]

## Office of the United Nations High Commissioner for Refugees, Lebanon (2018).

https://data2.unhcr.org/en/documents/download/66489

This is a nice visual summary of ToC, including example diagrams. It mentions risks as barriers and the need to think about mitigation plans for all of them.

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26  See http://fosonline.org/library/using-results-chains and a version for the U.S. Agency for International Development at https://usaid-learninglab.org/sites/default/files/resource/files/biodiversity_how-toguide2_508.pdf.

27  For example, https://mande.co.uk/2018/lists/participatory-toc-development/participatory-approaches-to-the-development-of-a-theory-of-change-beginnings-of-a-list.

"What is a Theory of Change?

- A representation of **how** and **why** a complex change process will succeed given specific assumptions

- A blueprint of all the building blocks needed to achieve the longer-term goals of a particular intervention"

## Organizational Research Services (2004).

https://www.aecf.org/resources/theory-of-change

Another earlier example of a how-to, from the Annie E. Casey Foundation. It has a good call to arms:

"Some stakeholders may react in frustration to the theory of change development process because they view it as 'taking time to think' which takes time away from 'doing the work.' However, the thinking involved in building a theory of change does not in any way preclude doing the work.… it is almost impossible to determine whether progress has occurred in a community change initiative if you have not explicitly identified the steps to progress. Communities have too much at stake to engage in work without a clearly defined purpose."

It discusses testing, sharing and revising: "It is typical for a theory of change outcome map to be revised several times before it provides a complete and clear picture of your community change effort."

## TasCOSS Library (n.d.).

https://www.tascosslibrary.org.au/how-write-theory-change-0

Good summary on a page; includes recommendations like writing up on sticky notes, thinking in terms of "headlines", needing to develop a ToC as a team.

"It's best to create a Theory of Change before you've decided how your program will be constructed: you start with the long-term outcome you want to see and work backwards to work out how it will be achieved. It's a way of designing a new program."

"But…you can view creating a Theory of Change for an existing service as an opportunity to test the structure and logic of your program – it could lead to service improvements."

## Van der Laan (2019).

https://datajourney.akvo.org/blog/how-to-design-a-theory-of-change

This blog post provides a simple guide to putting together the visualization of a ToC, though the examples re very varied (see primer, appendix 3).

## Vogel (2012).

https://www.theoryofchange.org/wp-content/uploads/toco_library/pdf/DFID_ToC_Review_VogelV7.pdf

Reviews, for DFID, the use of Theory of Change in international development.

## Vogel and Stephenson (2012), Appendix 3: Examples of Theories of Change.

https://assets.publishing.service.gov.uk/media/57a08a66ed915d622c000703/Appendix_3_ToC_Examples.pdf

Examples of ToCs from DFID. The examples meet expectations to varying degrees, but all show basic elements of ToC.

## GEF AGENCY-RELATED SOURCES

### Food and Agriculture Organization of the United Nations (2014).

Provides a good example of assumptions, diagram and actions, but perhaps not of explicit barriers and enablers (though there are some in the assumptions). And FAO (2018, p. 5) gives a good example of a food systems approach.

### United Nations Development Group, Latin America and the Caribbean (2016).

A good summary of ToC for the United Nations.

> "At every key point in the ToC, ask the question 'why do I think change will happen?'"

The publication contains some more examples and some suggested reading that is mostly covered in this supplement. A simple, iterative ToC diagram is included on page 2; the surrounding text emphasizes causality.

### United Nations Development Group (2017).

An underpinning United Nations Development Group guide to ToC that is compatible with other sources for intent but slightly oversimplifies the steps to four: focus, change analysis, make assumptions and risks explicit, and identify partners and key actors.

### United Nations Development Programme (2017).

The United Nations Development Programme's current strategic plan articulates ToC at the highest level (see annex 4). Also see United Nations Development Programme, Effectiveness Group (2016, section 3) for a programme or project discussion.

### United Nations Environment Programme, Evaluation Office (2017).

> "A Theory of Change (TOC) of a project intervention describes the processes of change by outlining the causal pathways from outputs (goods and services delivered by the project) through direct outcomes (changes resulting from the use of outputs by key stakeholders) through other 'intermediate states' towards impact, in UN Environment's case – long-term changes that deliver (or lead to) environmental benefits and improved human living conditions."
>
> …
>
> "A TOC is best presented as a narrative description that is accompanied by a diagram."

United Nations Environment Programme Evaluation Office (2018, p. 4) outlines the key requirements of ToC, including the ToC being comprehensive, plausible, complete and measurable. Use of ToC in evaluations is also discussed. The publication distinguishes between "ToC at design" and "ToC at evaluation"; the latter may be updated to incorporate any (formalized) project change during implementation.

The United Nations Environment Programme also provides some example ToC diagrams[28] and a description of a ToC (although not the detailed process).[29]

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28  https://wedocs.unep.org/bitstream/handle/20.500.11822/7138/TOC%20Diagrams.pdf.

29  https://www.unenvironment.org/es/node/16893.

U.S. Agency for International Development, Office of Food for Peace (2016).

Good but mostly compatible in process on the theory of change.

World Bank Group, DIME Wiki.

https://dimewiki.worldbank.org/wiki/Theory_of_Change

Discusses a ToC built in six steps, based on the Center for Theory of Change website. Also draws on Poverty Action Lab's seven steps (see table 1 for these two sets of steps).

World Bank Group, Independent Evaluation Group blog (Vaessen, 2016).

"Notwithstanding the differences between [intervention design and evaluation], the two are closely linked. In an ideal world, evaluators build on the espoused theories of development practitioners (and related stakeholders), which are articulated during the intervention design phase and are informed by past experience and existing knowledge about what works and under what circumstances. The circle of knowledge accumulation is complete when evaluations feed into the knowledge repositories that inform intervention design. Unfortunately and unsurprisingly, intervention realities are often quite different from this ideal: intervention design tends to be insufficiently informed by existing knowledge repositories, program theories are insufficiently articulated, and evaluators have to do a lot of digging to reconstruct the causal logic underpinning interventions."

World Bank, additional in-house documents that showed compatible ToC steps (provided for this review).

What makes a good ToC? Openness, participation, clarity, plausibility and practicality. What are the "common challenges in formulating a ToC?"

- A disconnect exists between interventions and desired outcomes.

- Components do not cover all aspects of the ToC to achieve the project development objective.

- The ToC is not plausible (i.e. not based on evidence).

- Critical assumptions are not sufficiently addressed.

- The ToC is too complex for the key messages to be understood (e.g. too many arrows).

## PEER-REVIEWED LITERATURE

### Cowie et al. (2018), module D.

Describes a ToC for land degradation neutrality.

"Achieving Neutrality presents the theory of change (logic model) articulating the impact pathway".

## Boshoven, Hill and Koontz (2018).

A general ToC for achieving biodiversity conservation.

"Key findings from the theory of change include: (a) the role of implementing partners evolved and expanded over time, from helping to establish individual enterprises to building alliances and business partnerships between communities and the private sector; (b) it takes longer than the typical three- to five-year donor funding cycle to put in place the multiple enabling conditions that are needed for the sustainability of enterprises and conservation outcomes; (c) typically only a small percentage of community members receive direct cash benefits, however community organizations can distribute enterprise benefits in the form of community services; (d) different stakeholders are motivated by different benefits, and, therefore, incentivizing changes in attitudes and behavior towards conservation is not straightforward; and (e) in multiple sites, partners had verified improved biodiversity conservation results in part due to their conservation enterprises."

## Butler et al. (2016).

An example of ToC to support mainstreaming.

"Mainstreaming climate change and future uncertainty into rural development planning in developing countries… [D]escribes a four year governance experiment in Nusa Tenggara Barat Province, Indonesia, which applied adaptive co-management (ACM) as a governance approach to 'prime' a transformation to adaptation pathways-based development planning. The project's Theory of Change (ToC) consisted of three causally-linked phases which mirrored the evolutionary stages of ACM: priming stakeholders, enabling policies and programs, and implementing adaptation."

## Costanza (2013).

This source provides a much wider perspective on theorizing social change.

"A true theory of social change is … what Elinor Ostrom was reaching for in her target article…. Such a theory must, Lin believed, be grounded in an expanded evolutionary paradigm that is capable of explaining not only how organisms evolve and change, but also how rules, norms, institutions, and cultures evolve and change."

See also Gallopín (2006).

## Davies (2018).

Provides a detailed analysis of how different forms of ToC impact on their subsequent use for evaluation.

> "Six structural problems are described along with their consequences for evaluation. The paper then outlines a range of different ways of addressing these problems".

The paper provides many examples in its overview.

## Global Environment Facility, Independent Evaluation Office (2018).

Describes a GEF ToC for transformation.

> "For this evaluation, transformational interventions are defined as engagements that help achieve deep, systemic, and sustainable change with large-scale impact in an area of global environmental concern. The underlying theory of change is that by strategically identifying and selecting projects that address environmental challenges of global concern and are specifically designed to support fundamental changes in—i.e., 'flip'—key economic markets or systems, GEF interventions will be more likely to cause a large-scale and sustainable impact, subject to the quality of implementation/execution and supportive contextual conditions."

## Higgins et al. (2018).

An example of ToC related to land tenure, identifying core effects and relating them to key contextual factors.

> "The multiple effects of increased land tenure security on rural people through a systematic review…. The research is guided by a theory of change that reflects expected effects from the main land tenure security-related activities. Based on the analysis of 59 robust studies, the paper finds strong evidence for positive effects of land tenure security on productive and environmentally-beneficial agricultural investments as well as on female empowerment, but a lack of support for links with productivity, access to credit, and income. Key contextual factors that shape the validity of expected causal chains are also identified and relate to the potential for discrimination and elite capture, which can affect intervention implementation and enforcement; historical experiences with land ownership, which can shape perceptions of current land tenure security, regardless of the actual level; and the characteristics of local lending institutions, which can influence intended effects on credit access."

## Larrosa, Carrasco and Milner-Gulland (2016).

Example of barriers to success relevant to ToC in conservation.

"Human reactions to conservation interventions can trigger unintended feedbacks resulting in poor conservation outcomes. Understanding unintended feedbacks is a necessary first step toward the diagnosis and solution of environmental problems, but existing anecdotal evidence cannot support decision-making. Using conservation examples, we present a conceptual framework and typology of unintended feedbacks based on a social-ecological systems (SES) approach. Three types of causal mechanisms for unintended feedbacks are distinguished: (1) *flow unintended feedbacks* when pre-existing feedbacks are enhanced or dampened; (2) *deletion unintended feedbacks*; and (3) *addition unintended feedbacks* when interventions, respectively, remove or add actors or links to the SES structure."

## Loiseau et al. (2016).

An example of ToC linked to monitoring, evaluation and learning in volunteerism.

"We propose that a Theory of Change framework, appropriately deployed in the design and conduct of short-term international volunteerism, could help improve volunteer efforts by identifying problems and clearly defining goals, designing and implementing effective strategies, and evaluating the real impacts these have on identified concerns."

## Maini, Mounier-Jack and Borghi (2018).

Discusses the impact of choices about stakeholder engagement in a "complex intervention aiming to improve government payments to health workers in the Democratic Republic of Congo".

"Lessons learnt include: the need for the ToC to understand how the intervention produces effects on the wider system and having broad stakeholder engagement at the outset to maximise chances of the intervention's success and ensure ownership. Power relationships between stakeholders may also affect the ToC discourse but can be minimised by having an independent facilitator."

## Maru et al. (2018b).

Valuable recent review of ToC in agricultural research for development special issue.

"ToC is yet to be appropriately mainstreamed into development by donors, researchers and practitioners. We carried out a literature review, triangulated by interviews with 26 experts in African and Asian food security, consisting of researchers, advisors to programs, and donors. Although 17 (65%) of the experts had adopted ToC, their responses and the literature revealed four challenges to mainstreaming: (i) different interpretations of ToC; (ii) incoherence in relationships among the constituent concepts of ToC; (iii) confused relationships between ToC and project 'logframes'; and (iv) limitations in necessary skills and commitment for enacting ToC. A case study of the evolution of a ToC in a West African [agricultural research for development] project over 4 years which exemplified

these challenges is presented. Five recommendations arise to assist the mainstreaming of ToC: (i) select a type of ToC suited to the relative complexity of the problem and focal system of interest; (ii) state a theory or hypotheses to be tested as the intervention progresses; (iii) articulate the relationship between the ToC and parallel approaches (e.g. logframe); (iv) accept that a ToC is a process, and (v) allow time and resources for implementers and researchers to develop ToC thinking within projects."

## Maru et al. (2018a).

From the same special issue, focuses on actual impact pathways within research for development in agriculture. "This paper finds four emerging impact pathways focused on (1) market linkage, (2) social capital, (3) institutional change or (4) innovation capacity as critical mediating factors."

## Rehfuess et al. (2018).

Developing theory of ToC through a classification in terms of approaches.

"The taxonomy distinguishes 3 approaches (a priori, staged, and iterative) and 2 types (systems-based and process-orientated) of logic models. An a priori logic model is specified at the start of the systematic review/HTA and remains unchanged. With a staged logic model, the reviewer prespecifies several points, at which major data inputs require a subsequent version. An iterative logic model is continuously modified throughout the systematic review/HTA process. System-based logic models describe the system, in which the interaction between participants, intervention, and context takes place; process-orientated models display the causal pathways leading from the intervention to multiple outcomes."

## Rogers and Coates (2015).

ToC to support durability in Food for Peace projects with the U.S. Agency for International Development.

"Awardees should base their sustainability plans and related exit strategies on clearly articulated theories of change. They need to assess carefully and realistically the assumptions underlying sustainability plans and reassess them continually to account for changes in the external environment."

…

"Sustainability plans should clearly articulate the sustainability theory of change as part of project design."

## Tengberg and Valencia (2017).

A Scientific and Technical Advisory Panel document noting ToC for scaling and transformation.

"Understand how higher-level processes along the theory of change can influence agent behaviour at lower levels through scaling out, scaling up, nesting, and institutionalization."

## Thornton et al. (2017).

Important description of how to use ToC to manage constrained flexibility in project delivery.

> "A monitoring, evaluation and learning system that combines indicators of progress in research along with indicators of change aimed at understanding the factors that enable or inhibit the behavioural changes that can bring about development impacts."

## White (2018).

Using ToC to structure systematic reviews.

> "It has been common to say that studies should address not just the question of what works, but also how, where, for whom and at what cost? A unifying framework for such an approach is the theory of change. This paper lays out an approach for using such a theory-based approach to systematic reviews, discussing issues which arise in mixed-methods causal chain analysis. I illustrate the funnel of attrition which is a heuristic device to understand why effect sizes are lower at the higher reaches of the causal chain, including why participation is less than usually expected. Examples are given from the international development sector."

## Wicander and Coad (2018).

Builds on Wicander and Coad (2015) to review the success of applying a ToC regarding substituting new livelihoods for illegal wildlife harvesting, showing some successes but also noting failures of implicit assumptions.

> "Many projects are funded through small, short-term grants and struggle to meet their objectives with the available time, funding and capacity. Given these constraints, few projects monitor their outcomes and impacts. Projects also seldom implement conditionalities and sanctions, which may lead to the alternatives offered becoming additional rather than substitutional activities."

Biggs et al. (2017) describe a related ToC, which has also been extensively field-tested with projects in east and southern Africa through the First Line of Defence initiative.[30]

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30    See IUCN (n.d.).

By Gustavo Frazao

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