

# Practical Guidance on Developing a Project's Theory of Change





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# Acronyms

CRS	Catholic Relief Services
EMECA	Europe, Middle East and Asia
GAC	Global Affairs Canada
IR	intermediate result
RF	results framework
SO	strategic objective
тос	theory of change
TOPS	Technical and Operational Performance Support
USAID	United States Agency for International Development

# WHAT ARE THEORIES OF CHANGE?

Every project is based on a theory of change, or TOC, articulating the logical flow between a key problem and its immediate and root causes, the long-term change it seeks to bring about in response to this key problem, and what needs to happen in order for this change to come about. A TOC provides an overarching picture of the project's intended pathway of change, explaining how the intervention is expected to interact with other concurrent interventions and contextual conditions to enable a series of outcomes at various levels of an objectives hierarchy, including intermediate results, (IRs) strategic objectives (SOs) and project goal. The TOC can be represented graphically or as a narrative explanation of how the various elements of the project and associated assumptions fit together, and how and why a desired change is expected to happen.<sup>1</sup>

### WHY DEVELOP THEORIES OF CHANGE?

TOC development is becoming increasingly common in international assistance programming across a wide range of international and local actors.<sup>2</sup> TOCs have multiple purposes:

- As a design tool: The TOC is a bridge between the problem analysis visualized in the problem tree<sup>3</sup> and the proposed response reflected in the project's results framework (RF) or Proframe/Logframe. The TOC helps articulate, justify and check the logic and feasibility of the project's change hypothesis.
- As a communication tool: The TOC tells the "project story" in a focused and comprehensive manner thus helping convey the project's intentions to donors and other stakeholders.<sup>4</sup>
- **As a management tool:** The TOC helps the project team manage for results<sup>5</sup> and generate learning about a project's change hypothesis, thus supporting adaptive project management.
- As a learning-facilitation tool: The TOC is a foundation for developing a project's learning questions to help structure ongoing learning and evidence-based reflections around key pathways of change and assumptions. The TOC also helps with the development of evaluation questions making evaluations more relevant and specific to the actual project. For example, the TOC can help ensure that evaluation questions test the *"if-then"* causal chain, or explore the interconnectedness between causal pathways or activities, or the relative importance of a causal pathway in accomplishing high-level results, etc.<sup>6</sup>

<sup>1.</sup> TOPS 2019.

<sup>2.</sup> The only exceptions are humanitarian aid projects focusing on immediate life-saving activities, which thus have no development or behavioral change components.

<sup>3.</sup> For more information about problem trees, refer to *ProPack I* (CRS 2015).

<sup>4.</sup> Valters 2015.

<sup>5.</sup> GAC 2016.

<sup>6.</sup> Evaluation Office of UN Environment 2017.

### TOC AND RESULTS FRAMEWORK: SIMILARITIES AND DIFFERENCES

Both the TOC and the results framework (RF) are design tools that help articulate a project's logic, explaining the desired long-term change and mapping out what needs to happen for that change to be achieved. A TOC incorporates key design decisions presented in the RF but goes beyond what the RF depicts. The RF elements are typically reflected in the *"if-then"* parts of the TOC; however, the TOC is not simply a narrative retelling of the RF. The TOC contains all the preconditions required to achieve a long-term change, *whether they are inside or outside of the project's direct control* and whether those preconditions are to be accomplished by CRS or other actors or represent contextual factors that may influence project success. On the other hand, the RF only includes interventions that are the direct responsibility of the project team.<sup>7</sup> Additionally, the TOC enables a description of the interconnectedness or mutual reinforcement between various causal chains which the RF depicts in a limiting way i.e., arrows between objectives statement, cross-cutting outputs or objectives. Refer to the Annex for an example of how the TOC and the RF relate to each other.

#### Where does a conceptual framework fit in and how does it relate to the TOC and RF?

The TOC can be viewed as a link between a sector-specific conceptual framework and a project-specific RF.

Conceptual frameworks, also known as theoretical frameworks,<sup>8</sup> describe factors or determinants that have been shown through research to contribute to a problem.<sup>9</sup> They are key to evidence-based project design as they help guide assessment planning, data collection and analysis, i.e., they help identify what to collect to explore the problem and its potential causes and how to sort the data to ensure the rigorous and thorough causal analysis portrayed in a problem tree. Conceptual frameworks help organize assessment findings into causal streams thus revealing key strategic areas for potential intervention. Based on robust research by experts, they represent an evidence base that underlies a project's problem analysis, while assessment data— both primary and secondary—provide the context-specific evidence pointing to which of the key determinants from the conceptual framework are more or less relevant in the project context.

Results frameworks are visual representations of a project's hierarchy of objectives, describing the change the project wants to bring about (SO), why this change is important (goal) and what steps need to happen (IRs) for this change to occur.<sup>10</sup> They describe project interventions developed based on specific information learned through the assessment. TOCs combine a bit of both. They document evidence-based explanations about why some determinants from the conceptual framework are deemed more or less important than others in the current context, explicitly capture key assumptions underpinning project success, and explain how and why the project-based intervention—presented in the RF—should produce a desired long-term change.

<sup>7.</sup> CRS and Humentum 2019.

### WHAT SHOULD A THEORY OF CHANGE INCLUDE?

A theory of change is a concise, explicit explanation of:

"If we do X, and Y holds true, then we'll achieve Z because a, b, and c."

With this structure, the TOC makes clear **how** (if-then) and **why** (because) the project team expects or assumes that certain actions will produce desired changes for individuals, groups, communities or institutions in the environment where the project will be implemented.<sup>11</sup>

TOCs can be developed for different levels of the objectives hierarchy. A "high-level" TOC articulates how successful achievement of the project's end-of-project objectives or outcomes (SOs) will be contributing to longer-term, broader, lasting change (project's goal). However, often TOCs are developed to describe the whole causal chain—from activities to outputs, from outputs to IRs, from IRs to SOs, and SOs to goal. In this case, the TOC typically splits into complementary "*if-then-because*" statements that focus on the changes that the design team is *least certain about* where assumptions are greater, or evidence is less strong.

Presenting a more comprehensive, multi-level TOC enables the design team to investigate and explain the interaction between various activities or strategies; in other words, it helps describe *pathways of change*. Pathways of change identify the connections between different preconditions, and how they relate to or mutually reinforce each other, and describe the sequence in which they are to be achieved.<sup>12</sup> Pathways represent a causal logic; each level along the pathway depicts the set of outcomes that must come into being in a specific sequence for the next outcome up to be achieved.<sup>13</sup> Often a project has multiple pathways that lead to the long-term outcome. For example, an education project may have access to a quality learning environment, quality teaching, and parent/caretaker involvement in a child's education, as concurrent pathways that collectively, through a series of preconditions, lead to children learning effectively in a safe and nurturing learning environment.

#### **Donor requirements**

Donors have different requirements in terms of the levels a TOC should cover; some requesting only a higher-level TOC (SO to goal), others requiring a more detailed description of pathways of change (inclusive of IR and output levels) and how all these lower-level changes fit into an overall causal chain. Some donors may also require "stretching" the "*then*" to include not only the project goal but also the longer-term broader change often depicted in their own strategic plans or development policy. In these cases, the wording may be "*if ... then [...goal...], thus in turn [...longer-term goal/broader change...]*".

<sup>11.</sup> ProPack I (CRS 2015).

<sup>12.</sup> CRS and Humentum 2019.

<sup>13.</sup> Taplin and Clark 2012.

# **ELEMENTS OF A THEORY OF CHANGE**

**IFs:** The ifs of the TOC are typically preconditions that must be in place for a long-term change to occur.<sup>14</sup> TOCs can have the following types of ifs:

- 1. Preconditions chosen to be addressed by the project, captured in the *"If we do X"* part. These are typically *selected as objectives statements* and as such often also end up in the means-to-end logic presented in the RF (i.e., IRs, SOs) or Proframe/Logframe (i.e., activities, outputs, IRs, SOs).
- 2. Preconditions that the project *will not directly tackle* but which are critical for the achievement of the long-lasting change the project aims to achieve. These are *assumptions*, captured in the *"and Y holds true"* part of the TOC. Assumptions are factors that project implementers cannot—or decide not to—control, but that could endanger project success if they are not realized. Assumptions may be:
  - Context-related factors
  - Possible (but not probable) risks
  - Decisions about what the project will not do
  - Results/activities by other actors

Assumptions are most easily spotted when describing the pathway of change and when thinking of factors that could affect how each level leads to the next. They can occur at any level of the causal chain and associated pathways of change. Assumptions can be difficult to identify as they are often taken for granted or are linked to deeply held convictions. To avoid this, as a rule of thumb, always back up assumptions with evidence.

#### More about assumptions: how to identify them and, where the evidence comes from?

To ensure there is enough evidence on potential assumptions, and to minimize potential bias while identifying assumptions, consider the following best practices:

#### During the assessment<sup>15</sup>...

- Frame the assessment using the relevant **conceptual framework** to determine what data to collect and to ensure no key factors contributing to a problem are missed.
- Conduct a **gap analysis** to identify the work of other actors and their geographical coverage.
- Conduct a **capacity analysis** to better understand the capacities of CRS and our partners in relation to project scope and scale to ensure there are no hidden capacity-related assumptions.
- If the project includes a social behavior change component, consider conducting a **barrier analysis**<sup>16</sup> to assess determinants and barriers to change for the target population in the specific context, and check for any assumptions that may hinder delivery of the expected change.

<sup>14.</sup> CRS and Humentum 2019.

<sup>15.</sup> For more information on assessment and project design tools, refer to *ProPack I* (CRS 2015).

<sup>16.</sup> For more information on barrier analysis, consult *Designing for behavior change in 11 steps* (CRS internal).

#### At the design workshop...

- Use **assessment data** to help determine the relative importance of key determinants from the conceptual framework and decide whether any of the determinants can/should be treated as assumptions.
- Use assessment data to reveal any contextual factors—political, economic, social or environmental—that may influence the core problem and desired long-term change.
- Make sure the design workshop engages CRS and partner staff of different genders, backgrounds, etc. Assumptions tend to vary among stakeholders and will become apparent when there are differing views on whether or not a certain level of change will lead to the next level of desired change.
- Consult with **sectoral experts or experts of the local context** as they can help refute or validate assumptions.

Focus on assumptions that are **external** to the project and **outside of its control**. Internal, implementation-related assumptions (e.g. farmers are motivated to change their behavior, men and women are open to trying new practices, husbands allow their wives to attend meetings) should be woven into the project's implementation strategy as much as possible so they are within the realm of influence of a particular project activity.<sup>17</sup>

#### **Example from the field**

The project design team worked on the development of a food security project. Based on the findings of a needs assessment, the team decided to focus on the two food security determinants, food availability and access. Such a design decision necessitates a TOC to explain the state of food utilization as the third critical determinant or precondition for food security. The team can either present evidence that shows food utilization is not a significant determinant (e.g., assessment data shows that utilization is not an issue; typically presented in the "because" part), or can treat it as an assumption in one of several ways:

- They may assume that the work of another actor on food utilization in the same geographical area will complement their efforts on food access and availability (based on a gap analysis).
- They may prioritize food access and availability based on available resources and needed scale (a "*scope*" decision).
- They may assume that they cannot tackle utilization until they have increased availability and access (e.g., based on lessons learned in previous project).
- They may assume that increasing access will result in significant improvement for everyone even if utilization/intra-household food distribution is not directly addressed (e.g., based on assessment data).

<sup>17.</sup> The "holding true" part of the assumptions will have to be included in the project's monitoring system, so they are regularly checked. If there is any indication from light or rigorous monitoring that the assumptions are not holding true, they must be revisited and the design and/or implementation modalities adjusted to bring the assumption under project control or to otherwise deliver the change desired. Refer to <u>Practical guide: Monitoring for problem-solving, adaptive management, reporting and learning</u> (CRS 2019).

**THEN:** For a high-level TOC, the "*then*" is most often expressed as the long-term change or desired lasting impact of the project. This level of change, whose wording is grounded in a positive iteration of the core problem presented in the problem tree, is often depicted in the goal statement of the RF. For a multi-level TOC, the "*then*" graduates through the causal chain, eventually ending with the goal as the ultimate project result.

**BECAUSE:** The "*because*" gives the evidence for why a certain pathway of "*if-then*" hypotheses should work in a given context. Evidence can come from assessment data, existing research, publications, past project evaluations, or studies performed by sectoral experts. The evidence presented needs be relevant to the chosen strategy and the specific context in which the project is implemented. The "*because*" should not contain all the evidence that the team was able to find, but rather a few compelling reasons with trusted references that clearly substantiate why the proposed "*if-then*" hypotheses should work in this context.

# HOW TO DEVELOP A THEORY OF CHANGE

Figure 1 shows the steps for developing a TOC in sequential order, although they tend to be iterative. They need to be constantly revisited as the team gets more information and their thinking evolves.

Figure 1: Steps for developing a theory of change

Problem tree	<ul> <li>Organize assessment data around the key determinants of the conceptual framework.</li> <li>Highlight cause-and-effect relationships.</li> </ul>
Objectives tree	<ul> <li>Articulate the core problem and immediate causes into positive statements; core problem ⇒ long-term change/potential goal; immediate causes ⇒ preconditions for change/potential strategic areas of intervention.</li> </ul>
ldentify "pathways of change"	<ul> <li>Identify potential linkages between preconditions and the sequence in which they should occur; use "backwards mapping" process</li></ul>
Identify assumptions	• Identify factors (economic, political, environmental, social) from the assessment data that are important to the success of the TOC but outside the control of the project. Highlight where in the pathway of change they could influence a result.
Prioritize: Decide on project scope and scale	• Based on assessment results (needs, gaps, causes that are more or less significant, etc.), results of the capacity analysis, the call for proposal, budget and timeframe, decide which causal streams/pathways of change will be covered by the project; mark those in the diagram.
Decide on project strategies	• Using evidence (e.g. evaluation findings, research, best practice analysis, lessons learned) and sectoral experts' input, decide on the most appropriate strategy(ies) to address identified needs and achieve long-term change.
Produce draft diagram of TOC	<ul> <li>Add the chosen strategies in the diagram; use arrows to illustrate how the strategies address one or multiple preconditions.</li> <li>Check the logic and assumptions for each stream; discuss evidence about why it should work.</li> </ul>
Transform TOC diagram into RF	• Based on the prioritization, transform the part of the TOC the project will work on into an RF, Proframe/logframe or other project logic tool.
Write the TOC narrative	• Document all decisions, assumptions, and the evidence for them, in a TOC narrative.

# HELPFUL TIPS FOR DEVELOPING A THEORY OF CHANGE

**Be comfortable with a "messy" problem tree!** In practice, problem trees are rarely arranged in an orderly way with clear layers of root causes. They contain *all relevant* assessment data, and thus might be challenging to arrange, e.g., if the problem is large, there may be a number of factors or causes contributing to it. Remember that the core problem usually talks about key conditions experienced by a specific vulnerable population that directly relate to the problem. There is typically a complement of **underlying causes** that should be grouped according to the determinants of the relevant conceptual framework and then arranged in cause-effect relationships under each determinant.

When transforming the problem tree into an objectives tree, keep the "whole picture" Keep all immediate causes and associated underlying causes that have been shown by assessment data to be relevant in the context. The objectives tree is the basis for a first iteration of the project's TOC. Since the TOC will be describing the project's big picture it is important to keep all main preconditions for change regardless of whether all those preconditions and pathways of change will be worked on. Problem trees also contain contextual conditions-e.g., economic, political, social, environmental or culturalas underlying causes. The hint that there may be contextual factors in the problem tree is that these often cannot be turned into reasonable positive statements.<sup>18</sup> Make a note of these as they can point to important assumptions about the context that could influence the project.

# Continually check the logic of the TOC, including assumptions, and the evidence that backs it up.

When producing the initial draft of the TOC, be sure to check the cause-effect or means-to-ends logic between various levels of preconditions. Identify sets of preconditions that need to work together or be sequenced in a particular way to achieve the next level. Use arrows in all directions to indicate the sequencing and relationships between preconditions and to signify pathways of change. Check the TOC back and forth through the levels to make sure everything flows in a logical manner and is backed up by evidence. Use different colors to indicate which cause-effect relationships are supported by evidence versus those for which there is no evidence, or it is assumed will happen. Helpful questions to facilitate this thinking are:

- How do we know this change will happen? How does it relate to long-term desired change, and to other preconditions?
- Where could it go wrong? Are we making any assumptions? Do other things need to happen for this precondition to lead to the next level? How probable are these assumptions? Are they backed up by evidence?

Use the theory of change (and results framework) as flexible design tools. In practice, development of the TOC and RF is an iterative process that does not follow consecutive steps. As soon as priorities have been identified and decisions made on project scale and scope, the work on the RF can begin. Do not feel limited by the typical look of each tool in some of the existing examples. As the TOC evolves into an RF, add activities and/or outputs to the RF structure to quickly check the logic of the entire objectives hierarchy. Be aware that one precondition or output may contribute to the achievement of more than one IR or SO, and that there could be mutually reinforcing IRs or outputs. Make any adjustments required, such as rewording the focus of IRs or outputs and activities, but be sure not to focus on polishing the language at this stage. As the RF is refined, continue to check back and forth between the TOC and the RF to see if the "if-then" logic holds true and is supported by evidence.

**Start thinking about indicators.** Even at this early stage, it is very useful to start identifying potential indicators, especially at the IR and SO levels. Use the questions:

- What will tell us that we are successful in achieving this level?
- What will tell us we are progressing through pathway of change?

If work on the skeleton of the RF has already begun, ask how those indicators match RF statements. This approach is likely to result in more meaningful indicators, rather than just restatements of objectives. Furthermore, this approach will ensure that data is collected that will help test the TOC, especially any part of the TOC the team is uncertain about. Early identification of indicators is also a useful technique for refining objectives statements and the overall theory of change of a project.

<sup>18.</sup> For example: (for an agriculture project) "The region x is subject to severe flooding from rivers during the winter" or "Turnover among government officials happens every two years."

# PRESENTING THE THEORY OF CHANGE: WHAT SHOULD THE NARRATIVE INCLUDE?

The TOC narrative<sup>19</sup> focuses on documenting decisions and explaining what is not explicit and obvious in the logic model presented in the RF, Proframe/logframe or other donor-prescribed framework. These are often levels or elements where logic faces the biggest "leaps of faith," i.e., there is less certainty about how things will evolve. Simply put, the "obvious" causal chains would not have lots of associated assumptions or need for evidence. Articulate why change is expected to happen, even though management control over expected changes is limited.

The TOC narrative is an opportunity to justify the design choices made, convey the degree of certainty that the pathways of change will occur (by presenting an associated evidence base), and outline the assumptions that could threaten progress along that pathway.<sup>20</sup> It is an opportunity to highlight mutually reinforcing activities or the sequencing of activities across causal chains, which cannot easily be shown in logical frameworks.

The TOC narrative typically includes all TOC elements described above, most often presented in the following way:<sup>21</sup>

- **Explanation of TOC, pathways of change and supporting evidence** Start the narrative with a section discussing how the end-of-project results (SOs) together contribute to the goal, and evidence for proposing that it is so. Then focus on the relationships between activities/outputs, IRs and SOs within each SO causal chain, explaining the evidence underlying the choice of the intervention focus and selected strategies. Describe pathways of change: how activities or a set of mutually reinforcing activities or results contribute to the next level or, if relevant, to several outcomes. Explain any interconnectedness between results or outcomes that may not be evident in the project's objectives hierarchy, and how it all fits with the TOC. Cite the most relevant, generally accepted, research-based frameworks or approaches. Include the most relevant findings from the analyses, including analysis of assessment data, gender analysis, barrier analysis, etc., as well as key findings and learnings from relevant evaluations that support the proposed change hypothesis and related assumptions.
- Assumptions List the most critical assumptions made at each level of the logic model (i.e., the ones without which the next level of change could not be achieved). Use references, quotes and evidence from the assessments to justify these assumptions. Be sure to include assumptions about the efforts of other actors. Refer to the gap analysis. Describe the work of other organization(s) in the targeted area and explain how their outcomes relate to the project's TOC. In some cases, the work of others may explain the choices made in project design (e.g., choosing not to undertake an activity because it is being undertaken by another actor).

**Note** Each donor may have its own guidance for presenting the TOC. Some donors require a paragraph or longer narrative sections, others prefer a visual representation accompanied by a narrative.

21. TOPS and GACs 2016.

<sup>19.</sup> Some donors such as Food For Peace refer to the TOC narrative as 'TOC complementary documentation.' In these cases, there may be a set of other documents (e.g., assumption matrix, other actors matrix, etc.) to be submitted together with the TOC narrative.

<sup>20.</sup> USAID Bureau for Democracy, Conflict and Humanitarian Assistance, Office of Food for Peace. 2016. Technical Reference for FFP Development Food Assistance Projects.

# ANNEX: EXAMPLE THEORY OF CHANGE (LOOSELY BASED ON ACTUAL PROJECT)

In a country where most of the population rely on agriculture, such as lambs and milk production, as their primary sources of income, CRS implemented an 18-month project with the following RF and TOC.

#### Results framework (graphic)

**Goal**: Marginalized herder communities of [country] have increased economic resilience to shocks.

**SO**: Marginalized herders achieve optimal productivity of their livestock.

**IR1**: Target herders adopt simple improvements to key animal husbandry practices.

**IR2**: Target herders have year-round access to water for their livestock.

### TOC

#### [From IR to SO, from SO to goal]



#### [Pathway of change activities to outputs to IR1]

The specific behavior changes proposed (feeding ewes more in late premating/ mating and late pregnancy, making sure ewes have freely available water, separating pregnant ewes from other animals, installing ventilation and ensuring dry floors in livestock shelters) are proven [citation] to significantly contribute to ewe conception and kid survival. The introduction of these specific improvements in livestock management practices will be delivered through a series of one-hour practical trainings of herders and regular home visits by local partner experts to further encourage adoption of the new behaviors. [adult learning / SBC citation] Results of the x project, implemented over past two years in [country], demonstrate that 70% of farmers adopt new practices if knowledge gaps are addressed and on-site support is provided.

#### [Interconnectedness between pathways of change]

Simple, targeted improvements to livestock shelter also have significant potential to reduce the morbidity and mortality of adult females and their offspring. Together, improved the health and nutrition of ewes will result in increased conception rates and kid survival to 8 weeks [the lambing percentage], resulting in increased livestock productivity.

This theory of change is expected to work in the context of [country]: **BECAUSE**:

- The assessment of herding practices and outcomes in [country] conducted by the regional technical advisor for agriculture in [year] [citation], compared to international productivity standards for small ruminant varieties common in [country][citation], suggests that current livestock shelter and feeding practices are the most significant causes of low conception and kid survival rates, as well as poor animal health.
- Social behavioral change theory [citation] suggests that focusing on a small number of simple behaviors that can result in significant increases in productivity at no or little cost is likely to result in greater adoption of target behaviors.
- The assessment confirmed that small ruminants are a critical livelihood and income source for poor and marginalized farmers in [country] and a key safety net at times of stress and shocks.
- Past project evaluations [citation] reveal that government veterinary services, while not perceived as adequate by herders, have adequately managed significant disease outbreaks in the past.

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