SERVIR Service Planning Toolkit: Monitoring, Evaluation and Learning Tool

19 September 2017

I. Monitoring, Evaluation and Learning Tool

Introduction

In keeping with the Service Planning approach, SERVIR monitoring, evaluation and learning (MEL) is evolving to expand the use of impact-driven planning and monitoring tools. First among these tools is Theory of Change (ToC), an important new element woven into all stages of service planning.

Increasingly used in the development world to design effective, impact-oriented activities, ToC captures the "how" and "why" of desired change in a particular context and brings clarity to the logic underpinning MEL. Its goals are to:

- Identify the steps of a service from a change perspective, considering inputs, activities, outputs, outcomes and impact;
- Promote shared understanding among stakeholders of factors critical to effective implementation and sustainability of services;
- Establish a foundation for ongoing evaluation of a service;
- Identify measurements for determining progress; and
- Highlight assumptions that underpin the logic of a service concept.

MEL spans the three steps of the Service Planning lifecycle. Accordingly, preliminary thinking on ToC begins in the Consultation and Needs Assessment phase, as service goals become clear. The formal ToC process continues during the design and implementation of a service. It has strong links to other tools, particularly stakeholder mapping, which can help inform key elements of the ToC.

This tool is a resource for SERVIR Hubs in 1) developing a service-level Theory of Change and 2) aligning it with ongoing MEL activities. As a matter of practice, Hubs should develop a ToC for each service.

This tool includes detailed sections on: general guidance; ToC development in steps; and ToC resources, including a suggested SERVIR template for ToC and a sample ToC.

This tool will be revised and updated based on lessons learned through Hub experience. The templates provided for ToC are offered as a starting point and should be expanded and/or refined based on Hub needs.

IN 50 WORDS OR LESS…
Monitoring, Evaluation and Learning
PURPOSE*:* To strengthen MEL by developing theories of change for services, capturing a pathway to progress in addressing a development problem.
APPROACH*:* Collaborative, ongoing engagement of implementing partners through workshops or meetings to develop, review and update a ToC.
EXPECTED OUTCOME*:* A narrative product explicitly detailing the change pathways for a service, from input to impact. Hubs may also opt to include an accompanying graphic product.

Part 1: General guidance

Like any planning and evaluation method, ToC requires participants to be clear on long-term goals, measurable indicators of success and realistic actions to achieve those goals. It might be considered a roadmap or blueprint of how to get from "here to there."

While the concept may sound complicated, ToC relies on the instinctive skills people use in their everyday lives to solve problems and achieve their goals. For example, if a person had a goal of losing 10 pounds of weight within three months, certain steps would be required to reach that outcome. First would be more exercise, then changing diet to reduce caloric intake and avoid sugary drinks. This regimen would be required for at least 90 days. That process is an example of a ToC: a path to achieve desired outcome. Importantly, the goal is specific and measurable, the timeline is firm, and, in order to monitor progress, the person must know the baseline: the starting weight. A ToC is as simple as that.

WHAT IS THEORY OF CHANGE?
A planning and evaluation tool that conceptualizes in detail how activities and interventions will lead to impact. USAID defines a theory of change as "the reasoning behind how and why a purpose or result is expected to be achieved in a particular context." (Source: USAID ADS 201). *In practice, ToC is both process and product:*
The process *is collaborative thinking on the underlying causes of a situation, consensus on the desired change, and brainstorming on how to achieve that change.*
The product *is a visual representation of those steps and the logic behind them, typically captured in a graphic or flowchart. It includes: impact, outcomes, outputs, activities, inputs, indicators, assumptions and pathways to change.*

The development of a ToC is informed by the Consultations and Needs Assessment process, during which Hubs and stakeholders begin to discuss plans for specific services and the impact those services will have. In general, the ToC document should be initiated during Service Design, as work begins to develop the Service Concept document. In fact, a ToC is often a useful tool for facilitating the design of an activity or service. By starting with the results you're trying to achieve and then identifying the necessary outcomes to reach those results, you may naturally identify service components. This timing is intentional: at later stages, it is more difficult to develop a theory about how change occurs. Typically, logic models and log frames do not explain how a project or policy is understood to work. When projects fail to have any kind of Theory of Change, it is difficult to build a coherent understanding of the intervention and articulate its results, even if massive amounts of data are collected. When this happens, it may not be possible to ascertain exactly how implementers contributed to attainment of the overall goal.

ToC and MEL

The ToC does not replace existing MEL approaches. The ToC cannot stand alone: it must be anchored in and complemented by reliable baselines, consistent data collection, indicators, etc. This structure is important as it will help to avoid gaps in logic. For instance, if a Hub suggests that capacity improvement will be a result of training, but baseline capacity and subsequent changes are not measured after training, the resulting logic is: *people attended the training, therefore they are more capable now*. This represents a gap in logic.

Another practical challenge is that some projects fail to systematically use ToC to identify relevant data to be collected or to guide analysis. For example, they do not identify intermediate outcomes, and, as a result, do not collect data about them. Gathering evidence to test ToCs can be difficult, so some projects avoid it all together. However, they face significant problems later when the time comes to conduct an evaluation or assessment. The result then, often, is "retrofitting," in other words, redefining the ToC to fit the data collected. This is a bad practice.

If the theory has implicitly shifted throughout the intervention, then the process should be pretty much the same as in development of the original ToC. However, one must be aware of the need to revise the MEL plan, indicators and data collection strategy given that those elements were developed on the bases of the original ToC. There may be gaps or misaligned indicators as a result of the changes made the ToC which need to be addressed.

Revising the ToC

It is important to note that as Service Design evolves, the ToC may also need to change. ToCs are highly contingent on a range of factors that affect the likelihood that the change will occur based on a set of actions associated with the service. Systemic changes can be complex and highly unpredictable, particularly in the arena of climate change and environment. That means that in many cases, Hubs and implementing partners will be forced to depart from attempting to capture the change in a linear "if-then" fashion to capture complexity. One way, but not necessarily the only way, is to think of the ToC narrative as being similar to conditional probabilities in statistics: the likelihood of attaining Outcome A given that Event B occurred. For example, "if we do X, then Y will occur, which results in Z, which achieves A and B." So, A and B occur only if Z occurs; Z occurs only if Y occurs. Monitoring and evaluation systems need to be designed to capture evidence on both "if" and "then."

AN EXAMPLE OF COMPLEXITY IN ToC

A solid ToC requires planners to anticipate the complex causes and effects of actions or events – and what happens if they do not occur. For example, a drought information system aims to assist government and the agricultural sector with seasonal forecasting and implementation of short and long-term mitigation measures before and during droughts. Even with the system in place, change depends on implementation of mitigation measures, and how they impact local economic and social systems affected by the drought. These, in turn, affect ecosystem services, food and water security, and biodiversity in a positive or negative way – and those effects will have some direct or indirect influence on the ability of the stakeholders to implement mitigation measures. In this case, the implementation of mitigation measures – or the lack thereof – improves or worsens the existing situation. This sort of feedback loop characterizes the complexity.

Still, it is also important to avoid revising the ToC too frequently. In practice, it will be more likely that the Service Design, intended activities, etc. may need to be adjusted in order to achieve outcomes specified in ToC.

Part 2: ToC in steps

This section of the tool provides Hubs and users with a stepwise approach to ToC. The consultative process is broken down into seven steps (Figure 10).

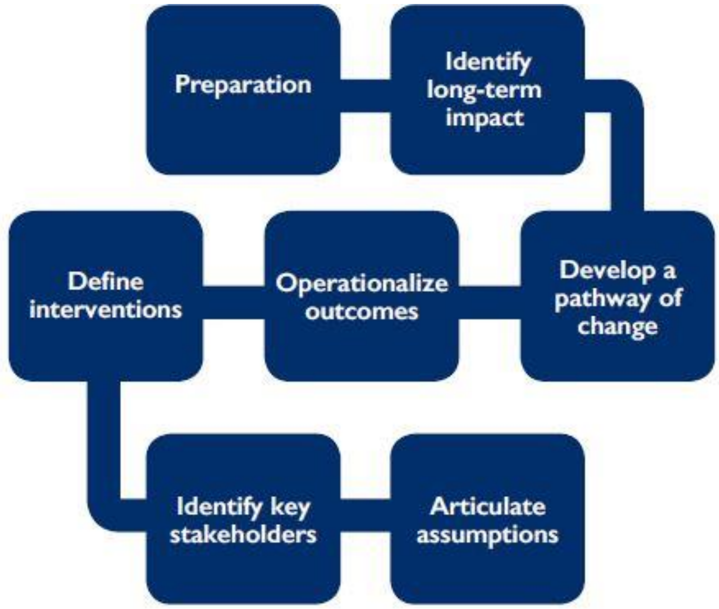

Figure 1. Key steps in developing a Theory of Change

The following sections explain key issues associated with each step. Step 1 would normally be done by and within the Hub. Steps 2-7 would normally be done together with implementing partners and others, in a workshop or other consultative setting.

Guidance here is linked to the development of a narrative ToC, which is recommended because it helps draw out causal links and ensure a complete thought process. In a workshop setting, however, a graphic ToC may be a more useful tool for brainstorming and visualizing pathways. Regardless, as the narrative and graphic ToCs align, the task of completing the narrative later, after the workshop, should not be difficult. (Templates for both are included in Part 3).

Step 1: Preparation

This step will help to define a preliminary problem specification and risks in a given context.

Select the service for which the ToC will to be developed. In most cases, these decisions will be linked to the service design step, when Hubs and implementing partners agree on priority services and begin developing the service concept document.

Do the homework. The process should begin with a good understanding of the situation, e.g., the problem the service seeks to address, its causes and consequences, and associated

ToC WORKSHOP PLANNING

- *The steps involve five group sessions, each about two hours long. Depending on circumstances, these could be done in a series of meetings or a 1.5-day workshop.*
- *As necessary, adapt the ToC template to the local context. If planning to produce a graphic version of the ToC, prepare that template in advance, drawing on the example in Part 3.*
- *A ToC process is most effective when many viewpoints are represented; eight to 15 participants achieves this without making the group unmanageable.*
- *Participants should include individuals able to represent gender considerations and the needs of other special audiences.*
- *It is preferable to engage a facilitator to lead the ToC process to ensure an open discussion and equal participation.*

opportunities. Ideally, this information will be summarized neatly in the consultation and needs assessment report. New information may have emerged from subsequent consultations or any stakeholder mapping that was conducted. If uncertainty remains, a few key informant interviews should help fill in knowledge gaps. If the problem is not accurately defined, the ToC will not lead to the right solutions.

Get to know the key players in advance*.* Most likely, the Hub team will know or have met ToC participants during the consultations process, stakeholder mapping or prior collaborations. Should someone new be participating in the ToC process, a Hub team member should try to meet them in advance to gauge their interest, involvement in the service, etc. The participation of decision-makers is important, but if they are not able to attend, the Hub team should at minimum seek to determine their views about the service in advance.

Prepare the participants. When possible and as appropriate, provide participants with brief information on the service, a stakeholder map (if it exists) and other relevant information.

Step 2: Identify impact

[Group Session 1]

The ToC process can be considered a "backward" experience in the sense that it starts by identifying the desired long-term -goal of a service and then works back from it to identify all the conditions that must be in place for the goals to occur.

Group Session 1 kicks off the process. A bit like brainstorming, it should be conducted with an inclusive tone so that everyone participates. To stimulate discussion, it may be helpful to review key issues related to this service emerging from consultation and needs assessment or stakeholder mapping.

In defining the long-term impact of the service, it is very important to be as specific as possible and avoid a "mega-outcome" – something too big and complex to be achieved by this service. Such impacts are common in strategic plans and program proposals, but they are too vague to serve as a foundation for a ToC.

The problem with a vague impact is that it cannot be measured. It also leads to fuzzy thinking about inputs. Take the example: "*Improving environmental management and resilience to climate change*." How exactly are "improvement" and "resilience" defined in the local context? Or in the context of the service? The task

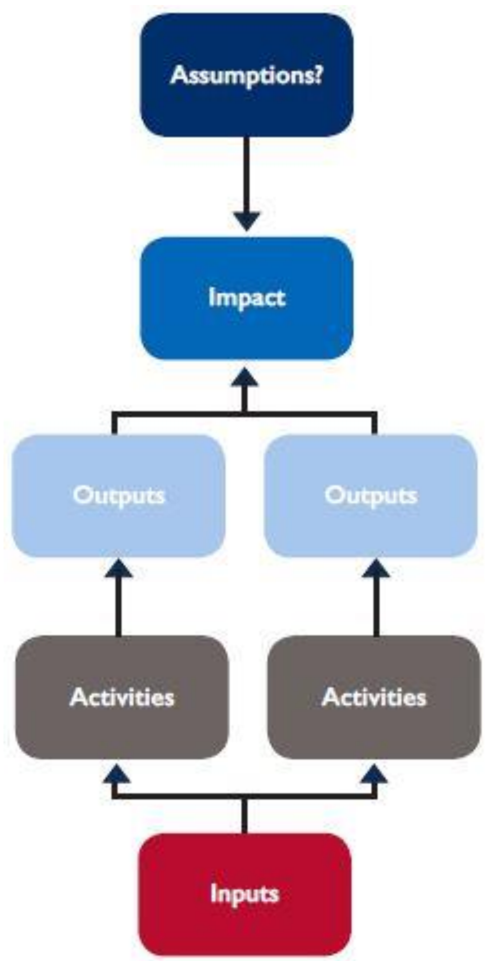

Figure 2: Simple overview of Theory of Change pathway

of measurement will be much easier if dimensions are specified. The impact would be easier to measure if it were: "*Increase hectares of protected forest"* or "*Raise incomes for forest-dependent livelihoods*." These statements of impact suggest metrics for tracking and measurement.

Another key point is that a service may have potential to achieve multiple goals, each with their own set of activities, outputs and outcomes. The task falls to the facilitator to work with participants in disaggregating large goals into a vision for a single achievable impact with its component parts. Figure 12 breaks this step into tasks, which are discussed in detail in the next section.

Figure 3: Overview of tasks in identifying long-term impact

Step 3: Develop a pathway of change
[Group Session 2]

This second group session is the most time-intensive and potentially challenging step. Its goal is to identify and sort the levels of outcomes related to the ultimate impact into a logical sequence- a pathway of change.

A key component of the ToC experience is the process of "backwards" mapping, beginning with the long-term impact and working back toward the earliest changes that need to occur. Counter to conventional planning, this process starts by asking "*What preconditions must exist for the long-term impact to be reached?"* rather than" *What activities can we undertake to advance our goals?"* The facilitator's task is to push participants to answer the question repeatedly until a complete picture emerges.

Summary of the steps
Typically, the steps include:

- *Brainstorming the impact(s)*: this is the highest-level result of the service, intended to contribute to mitigating the development problem. This is included in the "Expected Changes" section in the ToC narrative template.
- *Identifying outcomes*: once there is agreement on impact(s), proceed to identify outcomes, the preconditions sufficient and necessary for the impact to occur. illustrates the flow of the process.
- *Prioritizing*: next, sort and narrow down the list into the four to six most important outcomes.

- *Determine outputs*: Once there is consensus on priority outcomes, continue with the backwards mapping process to select the outputs, the preconditions which are sufficient and necessary for each outcome to occur. Consider each outcome one at the time, describing associated outputs. These outputs will be direct results of the activities the Hub and implementing partners plan to take.
- *Determine activities*: Once the group is satisfied with the outputs, repeat the process iteratively to determine which activities will be sufficient and necessary to deliver the intended outputs. Again, consider one output at the time. *List inputs*: Continue the process to determine which inputs are required (time, money, people, other resources) in order for the activity to take place successfully. By the end of this process, the group should have information to successfully complete the impact, outcomes, outputs and major inputs/activities fields within the "Expected Changes" section part of ToC narrative template.

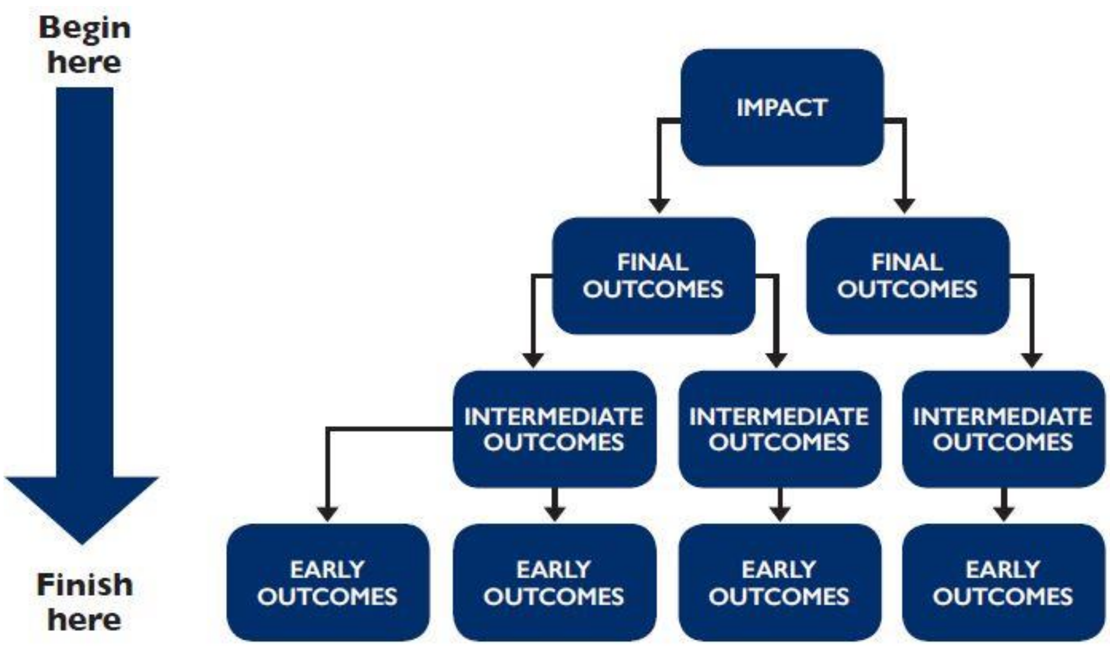

Figure 4: The flow of brainstorming about change. The complexity of the service will determine how many levels of outcomes are required.

More on mapping outcomes

The discussion of outcomes has potential to be the most challenging, because some outcomes may depend on the achievement of earlier outcomes. To begin the discussion, the facilitator must ask the group: "*What outcomes must be brought about in order to achieve impact?"* These are placed directly underneath the impact statement as *intermediate outcomes*. The group should start with one outcome and determine its necessary preconditions – this is called "unpacking" an outcome – before moving on to another. Once that information is captured, the process continues, backwards, to unpack *early outcomes* required in order to achieve the intermediate outcomes.

Typically, the group will be able to identify anywhere from one to six outcomes. These may be different in terms of when these occur during the application of the service. Some may be immediate, or near-term outcomes, which are typically defined as outcomes that occur within one to two years after implementation of a service. Others may occur much later. So, immediate outcomes represent preconditions for attainment of long-term ones. A note of caution: ensure the group identifies preconditions as opposed to interventions. Preconditions are the outcomes; interventions are the activities.

Not all outcomes have to be “unpacked”: For example, outcome for which the Hub may not be accountable, such as “*A 10 percent growth in farmers’ income”* may not need to be unpacked. Or, if the Hub or another group of stakeholders is specifically working on an outcome through another service, that outcome does not necessarily need to be unpacked. This is a judgment call of the group. However, the group’s assumptions should include a note about why that outcome was not unpacked.

One might ask how far this process should go. The depth of a ToC is determined by how far the Hub team is able to drill down from the long-term outcome. There is no hard and fast rule about how detailed this identification process should be. Generally, three or four steps down from the first row of outcomes is adequate to understand the pathway required to reach the long-term outcome. The same logic applies to ToC template.

Step 4: Operationalize impacts, outcomes and outputs by selecting indicators

[Group Session 3]

Once Step 3 is complete, it is important to define indicators that the group can use to track progress toward outcomes. In general, defining indicators is the most difficult part of ToC development. However, the ToC narrative template attempts to simplify this step for Hubs by listing core USAID reporting indicators (both USAID Global Climate Change (GCC) and SERVIR standard indicators), as well as other USAID reporting indicators (e.g. Science, Technology, Innovation and Research indicators) relevant for the whole program. The task is to select appropriate reporting indicators from the included list, and, where necessary, expand to include Hub-specific or other required indicators to capture progress on the service delivery.

Remember that as each service is conceived and designed to contribute to attainment of greater objectives of the SERVIR program, one or more standardized indicators included in the ToC template should be applicable to that service. If the Hub finds that none of those indicators is adequate to capture what the service is supposed to accomplish on any level – impact, outcome or output – this is a warning that the service or its ToC does not fit the framework of the SERVIR program. Either the proposed design of the service or the ToC needs to be re-examined very critically.

To start this group session, the facilitator should post a clean, uncluttered version of the template (or graphical representation thereof) at the front of the room or distribute cleaned ToC template sheets, with information developed thus far, to participants. The facilitator should work through one impact, outcome and output at the time and ask participants to jot down answers to the following questions:

- What are measurable dimensions of the impact, outcome and output?
- Who (target population) or what (observed phenomenon) is expected to change?
- What is the current status of the indicator(s) related to both? (if the Hub tracked the same indicator(s) earlier)
- What standard (USAID GCC or SERVIR) indicator(s) will measure success on this outcome?
- Are additional indicators required to adequately capture change? If so, which ones?
- How much does our observed phenomenon or target population have to change in order to determine success in reaching the indicator(s)? This helps set targets for indicators.
- How long will it take to reach the threshold of change on the indicator(s)? This is to estimate if the change is likely to occur within reasonable timeline and whether the hub will be able to capture it when the change indeed occurs.

Participants are not asked to deal with the baseline question; that is a research question that needs to be accurately documented once the actual measurement instruments have been decided on. It is not the participants' task to think at this level of detail.

Ideally, every impact and outcome on the map should have an indicator, but available resources often make that difficult to do. At a minimum, every outcome for which initial interventions will be designed should have an indicator. It will then be the task of evaluators and organizational learning people to design measurements and tools and identify data sources for MEL purposes. It may be a good idea to use a smaller group to help determine success measurements, particularly those familiar with outcomes measurement and the types of data available to use.

By the end of this step process, the Hub and implementing partners should have successfully completed the "Service Indicators" section of the ToC template.

Step 5: Define interventions

[Group Session 4]

Here, a Hub team has two key tasks: 1) decide which subset of outcomes and outputs the service can and will attempt to produce; 2) define activities that Hubs can and will take to produce the outcomes and outputs as possible; 3) define which inputs are needed to implement those activities.

Deciding which subset of outcomes and outputs is feasible requires a group discussion. This part of the process may require management of expectations because the Hub may have to accept that it does not have capacity to act on each identified precondition. As noted earlier, by the end of this process, the group should have a subset of outcomes to use as the basis for planning activities and inputs, e.g. refined "Expected Changes" part of template: outcomes, outputs and major inputs/activities.

Breaking the task into small groups or individual assignments works well, so the facilitator may want to assign small groups one or two outcomes, and then ask participants to take 15 minutes to think of the activities required to bring that outcome about. When all of the activities have been determined or mapped, each group would then take turns explaining its rationale for expecting the inputs, activities and outputs to bring about the targeted outcome at the levels identified by the indicators that were chosen earlier.

The process continues until the group reaches consensus on whether each outcome has been:

- Ruled inside or outside of the influence of the service,
- Determined to be the result of a domino effect that starts earlier in the change process;
- Matched to a series of inputs, activities and outputs that can plausibly be expected to produce the desired results.

Step 6: Identify people and organizations, and their engagement in the service

[Group Session 5]

This step should be simpler than others. Most of the information needed for this session should be available based on consultations and needs assessment and any stakeholder mapping that was done.

To start this group session, the facilitator should distribute cleaned ToC sheets, with information developed thus far to participants. The task in this session is to identify two groups of people and institutions that will engage with the service in some way. This discussion links to pages 1 and 2 of the narrative ToC template, covering: implementing partners, other partners, users, intermediaries and beneficiaries. Here are suggested steps:

1. The facilitator asks participants to use the stakeholder map and the ToC developed thus far to identify implementing partners first. These are individual(s) or institution(s) working collaboratively with SERVIR hub in designing, co-developing and sustaining a service. In most cases, they will be in the room, participating in the development of the ToC. These partners may, in some cases, also be users.

2. Then, the group should identify other partners. These are individual(s) or institution(s) interested in SERVIR and its services but not involved directly in developing services. These may be donors, agencies/NGOs working in related areas, media and private sector associations.

3. The next step in the process is identification of expected roles of partners and the feasible strategy of engaging and working with those partners in designing, developing and delivering the service.

   After that, participants identify service users, intermediaries and beneficiaries. Service user(s) are institution(s) or individual(s) who will be using the service’s outputs in order achieve defined outcome(s). These include individuals or institutions that consult

SERVIR data, products or tools or participate in training to fulfill a particular purpose. They can be technical staff, analysts, researchers or decision-makers; they often have some level of responsibility for communicating to beneficiaries.

4. Intermediaries (or next users) are those institutions or individuals who can enable development impact by supporting the uptake, upscaling and effectiveness of a service. These may be extension agents, NGOs, CBOs or media that will use the service by disseminating information to beneficiaries. In this context, certain decision-makers may also be considered intermediaries as they may play roles as champions of the service.

5. After that, participants should identify beneficiaries. This group includes those institutions or individuals who are expected to benefit from the products/services developed, including data sets, information systems, tools, etc. These benefits often relate to: greater ability to adapt to climate change, increased livelihoods resilience, ability to prepare and respond to disasters, etc. Beneficiaries (such as farmers, community members, local water/resource managers, community-based organizations, universities) may not necessarily use the data, product or tool directly, but will, nevertheless, experience benefits of the service.

   Consideration of beneficiaries should also include specific attention to the potential benefits of the service on special audiences and what particular inputs and activities are required to ensure they benefit. These audiences include those marginalized by gender, access to information, geography, poverty, etc. This thought process mirrors the similar high-level thinking undertaken during development of the service concept document.

6. Finally, participants will work to identify expected roles of partners and feasible strategies to engage users, intermediaries, and beneficiaries, in order for them to realize the benefits of the service.

Step 7: Articulate assumptions and conduct analysis of relevant issues

[Group Session 6]

This step should be conducted as a review session. The facilitator's aim is to get everyone on the same page about the ToC narrative, the indicators that will be used to track success, and the interventions to produce outcomes. In addition, this discussion should explicitly consider potential issues, such as unintended consequences of the service delivery as proposed. Other issues relevant for the service delivery, such as transboundary, gender, or environmental issues, should also be specifically addressed and resolved before the ToC can be considered final and actionable.

An important activity in this session is to check the underlying logic of the theory against these standards of quality:

- *Plausibility:* Is the story about the pathway of change and impact realistic?

- *Feasibility*: Does the group have the capacities and resources to implement the inputs required to produce the outcomes in the pathway of change?
- *Testable*: Are measures of success specified measured clearly enough that progress toward the goal is recognizable? Are indicators defined for each outcome in clear terms that a researcher or evaluator can use to produce a research or MEL plan?

SUMMARY: TIPS ON THEORY OF CHANGE	
DO…	**DON'T…**
…explain the theory of how change occurs. Many logic models and log frames focus on the inputs without describing how they expected to catalyze change.	**…underestimate dependency and complexity.** Systemic changes can be complex and highly unpredictable. It may be impossible to the change in a linear "if-then" fashion.
…avoid gaps in the theory of change. Ensure there is evidence to demonstrate change over time. For example, if the service goal is to build capacity, make sure to measure baseline capacity and changes after the intervention. That will ensure consistency in the logic of the theory.	**…forget to communicate and share**. ToCs require ownership and collective understanding of the conditions for change, the critical indicators and definitions of success. When partners are "on the same page," positive change is more likely.
…integrate the ToC into ongoing planning and implementation. Revisit the ToC regularly and meet with partners to assess progress and update as needed.	…**allow the ToC framework to inhibit communication.** When these are simplistic, stakeholders may misunderstand important elements. When complicated, stakeholders may shut down.
…**use the theory of change to guide data collection, analysis and reporting.** A clearly articulated plan is needed to align data collection for the ToC and project-level MEL.	**Be clear and consistent with terminology**. Even if adapting this template to suit the Hub's context, use one set of terms.

More on ToC approaches

Across the many methods used to build a ToC, the specifics vary widely. Some put the impact at the top; others at the bottom. Some include one layer of outcomes; others use more. Some have arrows that point between various outcomes, others not. The important thing is that the chart be complete, clear and understandable to an outside reader.

ADDITIONAL ToC RESOURCES

Among the most highly cited ToC resources is W.K. Kellogg Foundation's Logic Model Development Guide. http://bit.ly/1My75Ay. Other resources include

- Overseas Development Institute, https://usaidlearninglab.org/library/theories-change
- DIY Toolkit, http://diytoolkit.org/tools/theory-of-change
- Theoryofchange.org, ToC examples including one in French http://www.theoryofchange.org/library/ToC-examples/
- Anderson, A., the Community Builder's Approach to Theory of Change: A Practical Guide to Theory Development. The Aspen Institute Roundtable on Community Change. http://goo.gl/9cnhhK
- Starr, L., and Fornoff, M., Theory of Change: Facilitator's Guide. TANGO International and The TOPS Program. http://goo.gl/8p0rW7
- Taplin, D. and Rasic M., Source Book for Facilitators Leading Theory of Change Development Sessions. ActKnowledge, Inc. http://Goo.Gl/S7g0u3

Part 3: Theory of change templates

There is no right or wrong way to construct a ToC template; they come in many shapes and sizes. The content is more important than the specific format. In some cases, a standalone text description in a table may work, but in most cases, charts with text often communicate more effectively. This section includes a narrative template, an example of a completed narrative ToC and a sample template for a graphic ToC.

SERVIR Narrative ToC Template

SERVIR SERVICE THEORY OF CHANGE			
SERVICE NAME/TITLE: *enter service name or title*			
Narrative description of the Theory of Change:	*Enter brief narrative description of service Theory of Change*		
Service problem area:	☐ Adaptation ☐ Sustainable landscapes *Check applicable problem area based on USAID categories. This will enable you to differentiate indicator(s) disaggregation and reporting requirements. For example, if the service envisions training, you will be able to report the number of people trained either under Adaptation or Sustainable Landscapes based on this classification. If cuts across both areas, and you do not wish to differentiate, then check both boxes.*		
Geographic coverage:	*Enter country/countries to be covered by this service. Note that when reporting on indicator data, it is strongly recommended that you note the country, even if this disaggregation is not required.*		
Problem specification:	*Briefly describe the specific impact or effects of the development problem that this service intends to address. (Should align with same field in Service Concept Document.)*		
EXPECTED CHANGES			
Impacts:	*Identify desired impacts of the service on beneficiaries.*		
Outcomes:	*Identify desired outcomes that attainment of outputs is supposed to achieve.*		
Outputs:	*Indicate desired outputs resulting from implementation of the service.*		
Major inputs/activities:	*Identify major activities and inputs required for outputs to be achieved.*		
Implementing partners: *Individual or institution working collaboratively with SERVIR in designing, co-developing and sustaining a service. These partners may, in some cases, also be users.*	PARTNER	EXPECTED ROLE	STRATEGY
	Identify any partners who directly work with you on development of the service. Note that this information will help you to report on SERVIR 5 indicator.	*Identify the specific role you expect the partner to play in development of the service.*	*Identify the strategy to engage partners.*
Other partners: *Institution or individual interested in SERVIR and its services but not involved directly in developing services.*	PARTNER	EXPECTED ROLE	STRATEGY
	Identify any other partners which may be relevant for service development or	*Identify the specific role you expect the partner to play.*	*Identify the strategy to engage partners.*

Examples: donors, agencies/NGOs working in related areas, media and private sector associations.	*implementation, but who do not necessarily play the role of service users or beneficiaries.*		
Risks:	RISK:		MITIGATION MEASURES:
	Identify risks. Enter as many rows as necessary.		*Identify mitigation measures for each risk.*
Assumptions:	*Identify assumptions clearly. Note that assumptions are not the same as risks. Let's say that we have a future event that will have an adverse impact on our service. In other words, if the event occurs, it will cause some difficulty for the service to be implemented. If the combination of the probability of the event occurring and the impact on service is unacceptable, we can identify it as a risk. If the combination of the probability of the event occurring and the impact is acceptable, then we can call it an assumption. Remember — you can live with your assumptions. You must manage your risks.*		
ISSUE ANALYSIS: *what are potential issues associated with development and/or implementation of a service?*			
Unintended consequences:	*Identify consequences. Enter as many rows as necessary.*	*Identify potential effects of each unintended consequence.*	*Identify mitigation measures.*
Potential transboundary issues:	*Identify issues.*	*Identify potential effects.*	*Identify mitigation measures.*
Gender issues:	*Identify issues.*	*Identify potential effects.*	*Identify mitigation measures.*
Environmental issues:	*Identify issues.*	*Identify potential effects.*	*Identify mitigation measures.*
Conflict issues:	*Identify issues.*	*Identify potential effects.*	*Identify mitigation measures.*
USERS			
User(s): *Institutions or individuals who will be using the outputs in order achieve the outcome(s) defined above. These include individuals or institution that consults SERVIR data, products or tools to fulfill a particular purpose. They can be analysts or decision-makers. They are often responsible for communicating to beneficiaries. Examples: Bangladesh Flood Forecasting and Warning Center, Tea Research Foundation of Kenya*	USER	EXPECTED ROLE	STRATEGY
	Identify users.	*Clearly and briefly identify the role of the immediate user. This is how we expect the service will be used by the identified entities. Note that this identification will help you to report on relevant indicators.*	*Identify the strategy to engage the immediate users.*
	Add rows as necessary.	*Add rows as necessary.*	*Add rows as necessary.*
INTERMEDIARIES			
Intermediaries (next users): *Institutions or individuals who can*	INTERMEDIARY	EXPECTED ROLE:	STRATEGY:
	Identify intermediary.	*Briefly identify how the intermediary will*	*Identify the strategy to engage the next users.*

enable development impact by supporting the uptake, upscaling and effectiveness of a service. Examples include: extension agents, NGOs, CBOs or media that disseminate information to beneficiaries, or decision-makers who are not users but can play a role as a champion.		*out-scale, upscaled or otherwise enable the service. In some cases, based on the strategy selected by the team, it will be possible to count these stakeholders under appropriate indicators.*	
	Add rows as necessary.	*Add rows as necessary.*	*Add rows as necessary.*
BENEFICIARIES			
Beneficiaries: *Institutions or individuals expected to benefit from the products/services developed, including data sets, information systems, tools, etc. Benefits relate to: greater ability to adapt to climate change, increased livelihoods resilience, ability to prepare and respond to disasters, etc. These stakeholders do not necessarily use the data, product or tool directly. Examples include: farmers, community members, local water/resource managers, community-based organizations, universities.*	BENEFICIARIES	EXPECTED ROLE	STRATEGY
	Identify beneficiaries	*Identify the role, i.e. how do we expect the beneficiaries to use the designed service.*	*Identify the strategy you plan to put in place to ensure that beneficiaries indeed use the service.*
	Add rows as necessary.	*Add rows as necessary.*	*Add rows as necessary.*

SERVICE INDICATORS: *Based on Theory of Change and expected outputs, outcomes, and impact. Each service should provide data for reporting under one or many indicators from the respective monitoring, evaluation and learning (MEL) frameworks because of the SERVIR program design. While unlikely, there may be situations where a service will not contribute to the USAID reporting indicators. These situations should be elaborated under "Notes" section.*		
CORE USAID-Reporting Indicators (*check all applicable*)	☐	EG.11-1 Number of people trained in climate change adaptation supported by USG assistance
	☐	EG.11-2 Number of institutions with improved capacity to address climate change risks as supported by USG assistance
	☐	EG.11-4 Amount of investment mobilized (in USD) for climate change adaptation as supported by USG assistance
	☐	EG.13-1 Number of people trained in sustainable landscapes supported by USG assistance
	☐	EG.13-2 Number of institutions with improved capacity to address sustainable landscapes issues as supported by USG assistance
	☐	EG.13-4 Amount of investment mobilized (in USD) for sustainable landscapes as supported by USG assistance

	☐	SERVIR1. Number of institutions engaged in regional knowledge exchange through SERVIR
	☐	SERVIR2. Number of scientists or decision-makers participating in exchanges between SERVIR and partner institutions
	☐	SERVIR3. Number of SERVIR data layers standardized and made available in data portals
	☐	SERVIR4. Number of data agreements developed/created with USG assistance
	☐	SERVIR5. Number of regional stakeholders co-developing climate mitigation and/or adaptation tools, technologies, and methodologies
Other USAID-Reporting Indicators *(if applicable due to mission requirements or contract, check all applicable).*	☐	STIR.10 Number of innovations supported through USG assistance
	☐	STIR.11 Number of innovations supported through USG assistance with demonstrated uptake by the public and/or private sector
	☐	STIR.12 Number of peer-reviewed scientific publications resulting from USG support to research and implementation programs
OPTIONAL: Hub-specific *(enter any hub specific indicator applicable to the service)*		
NOTES:	*Include any relevant notes*	
THEORY OF CHANGE DIAGRAM (optional)	DIAGRAM INCLUDED: ☐ YES ☐ NO *Please indicate if you developed a diagram of the Theory of Change and check appropriate box. Then, attach diagram of the Theory of Change if you wish to provide visualization of the service TOC to this document.*	

Sample Narrative Theory of Change

<table>
<tr><th colspan="4">SERVIR SERVICE THEORY OF CHANGE</th></tr>
<tr><td colspan="4">SERVICE NAME/TITLE: Temporary Surface Water Monitoring</td></tr>
<tr><td>Narrative description of the Theory of Change:</td><td colspan="3">If information about temporary surface water availability and locations is provided to nomadic farmers in timely fashion (as forecast and actual information) they will be able to navigate their herds to water sources, thus preventing heat stress of animals and resulting losses in production (e.g. milk) or life. Avoidance of losses creates economic and/or nutritional benefits for nomadic farmers and their families.</td></tr>
<tr><td>Service problem area:</td><td colspan="3">☒ Adaptation ☐ Sustainable landscapes</td></tr>
<tr><td>Geographic coverage:</td><td colspan="3">Northern Ferlo Region Senegal</td></tr>
<tr><td>Problem specification:</td><td colspan="3">Nomadic herders are having problems in finding water for their animals</td></tr>
<tr><td colspan="4">EXPECTED CHANGES</td></tr>
<tr><td>Impacts:</td><td colspan="3">• Nomadic farmers find water more easily;
• Reduced losses of animals (economic benefits)</td></tr>
<tr><td>Outcomes:</td><td colspan="3">• National agency for water resources (DGPRE) provides the information to their departments and they will contact NGOs for dissemination
• DGPRE will host the system- their capacity to be improved to use the system</td></tr>
<tr><td>Outputs:</td><td colspan="3">• Monitoring Information system in place
• GPRE trained and TA provided
• People trained
• NGOs trained</td></tr>
<tr><td>Major inputs/activities:</td><td colspan="3">• System development: equipment and resources
• Training and capacity building: technical personnel
• Meetings and communication: money for event organization, facilities, personnel</td></tr>
<tr><td rowspan="2">Implementing partners:</td><td>PARTNER</td><td>EXPECTED ROLE</td><td>STRATEGY</td></tr>
<tr><td>DGPRE and its local departments</td><td>• Input in system development
• Host the system
• Disseminate information to NGOs</td><td>MOU on collaboration and tech assistance</td></tr>
<tr><td rowspan="2">Other partners:</td><td>PARTNER</td><td>EXPECTED ROLE</td><td>STRATEGY</td></tr>
<tr><td>NGOs</td><td>Disseminate information to farmers</td><td>• Conference and meetings with NGOs
• Assist in development of ways how to pass on the information</td></tr>
<tr><td rowspan="3">Risks:</td><td colspan="2">RISK:</td><td>MITIGATION MEASURES:</td></tr>
<tr><td colspan="2">NGOs not able to find effective and low-cost way to pass the information to farmers in time.</td><td>Under development at this stage.</td></tr>
<tr><td colspan="2">Strategy of reaching NGOs through DPRE may not be effective.</td><td>Hub engage NGOs directly.</td></tr>
<tr><td>Assumptions:</td><td colspan="3">• DGPRE will use this information as agreed in the MoU.
• NGOs will provide information to nomadic farmers
• Nomadic farmers using the information to find out the water</td></tr>
</table>

ISSUE ANALYSIS:			
Unintended consequences:	If effective, service may decrease incentives to diversification of agricultural activities.	Lack of development of stabile income sources for nomadic farmers.	TBD. Rainfall projection models widely vary. Possibly 'fixing' certain herds in place and intensifying with cultivated pastures.
Potential transboundary issues:	N/A	N/A	N/A
Gender issues:	N/A	N/A	N/A
Environmental issues:	N/A	N/A	N/A
Conflict issues:	N/A	N/A	N/A
USERS			
User(s):	USER	EXPECTED ROLE	STRATEGY
	DGPRE	Use the product-disseminate	Training, Co-development
	Local level departments	Use information	Meeting and communication
INTERMEDIARIES			
Intermediaries (next users):	INTERMEDIARY	EXPECTED ROLE:	STRATEGY:
	NGOs	Upscale the information to the farmers	DGPRE will involve them? Why not involve NGOs directly?
BENEFICIARIES			
Beneficiaries:	BENEFICIARIES	EXPECTED ROLE	STRATEGY
	Nomadic farmers	Use the information to find out water for their livestock	Required information reaches to them

SERVICE INDICATORS:		
CORE USAID-Reporting Indicators (*check all applicable*)	☒	EG.11-1 Number of people trained in climate change adaptation supported by USG assistance
	☒	EG.11-2 Number of institutions with improved capacity to address climate change risks as supported by USG assistance
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	☐	STIR.12 Number of peer-reviewed scientific publications resulting from USG support to research and implementation programs

requirements or contract, check all applicable).		
OPTIONAL: Hub-specific indicator	N/A	
NOTES:	Service design is still being finalized. It is expected that theory of change will be modified by September 2017.	
THEORY OF CHANGE DIAGRAM (optional)	DIAGRAM INCLUDED: ☐ YES ☒ NO	

Graphic ToC Template